

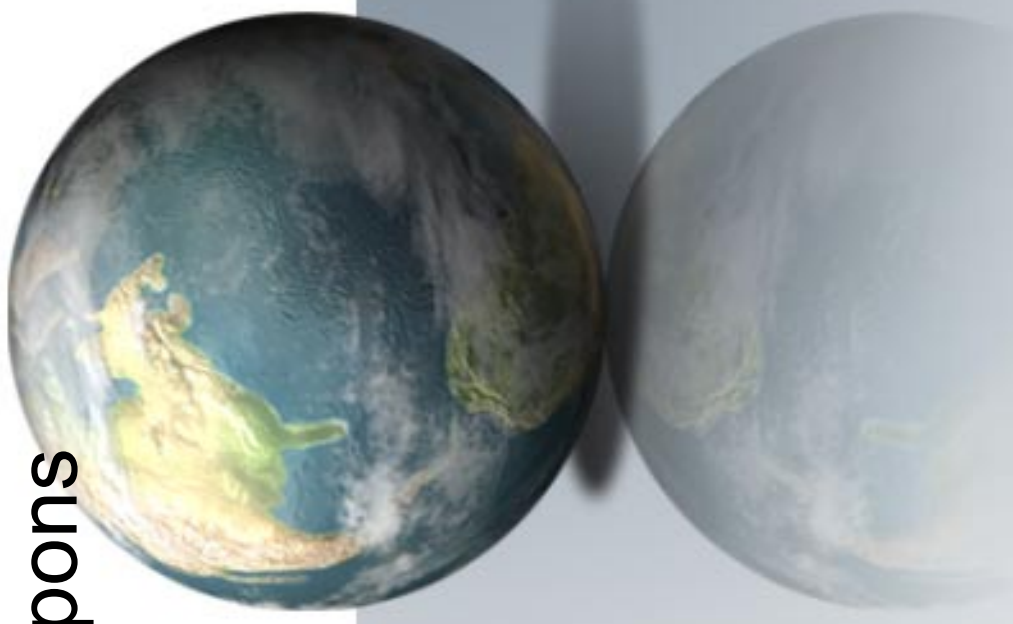
# How Serious is the “WMD Terrorism” Threat?: Terrorist Motivations and Capabilities for Using Chemical, Biological, Radiological, and Nuclear Weapons

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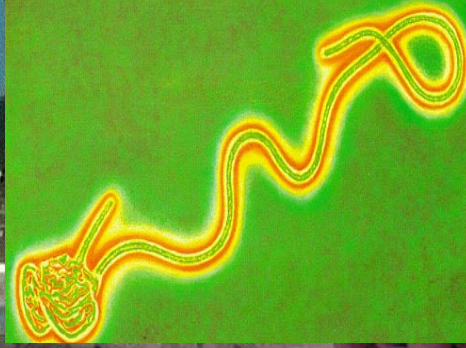
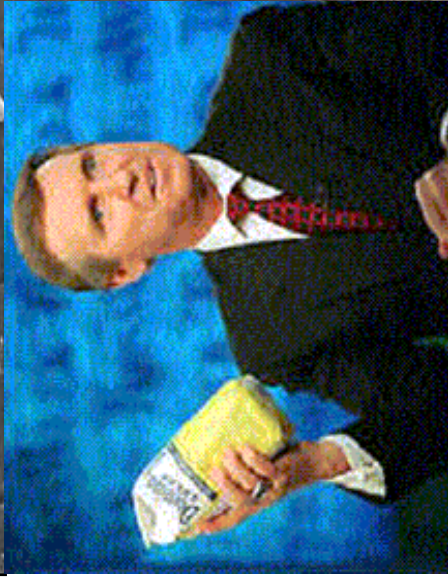
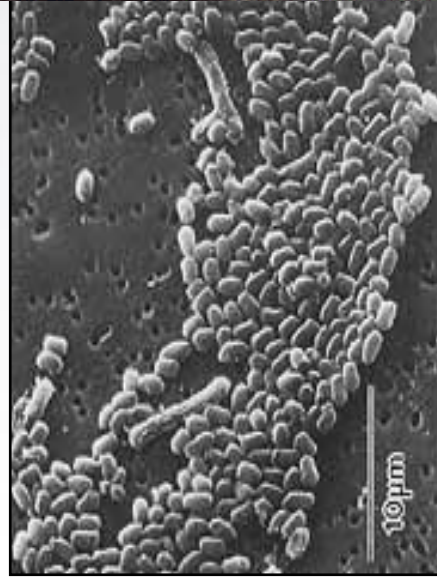
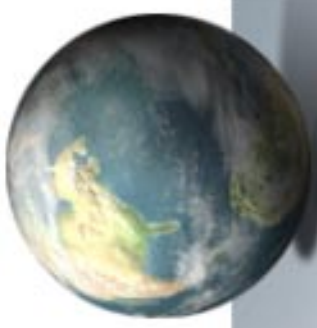
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**September 28, 2005**

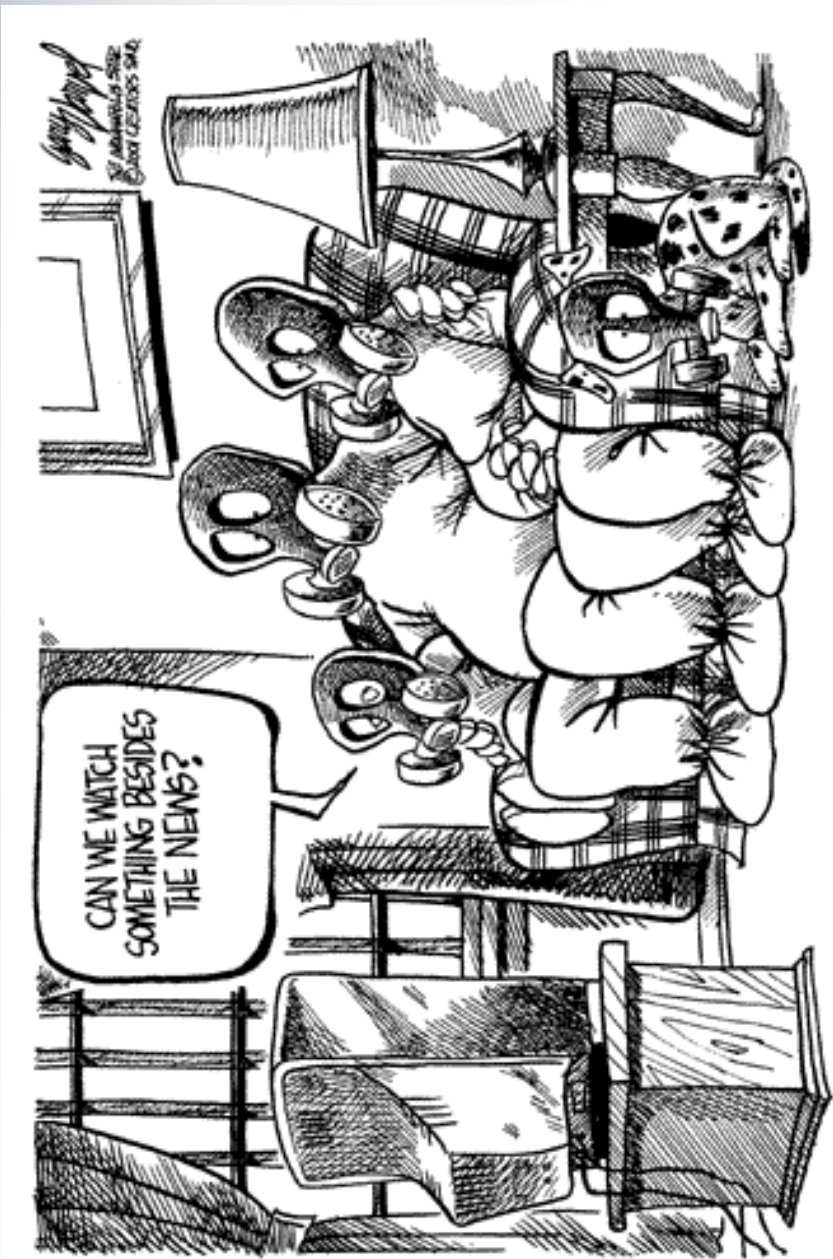
# WMD Terrorism



# Hype



# Hype



# Hype

- Security condition upgrades
- Government warnings



# Hype or Threat?

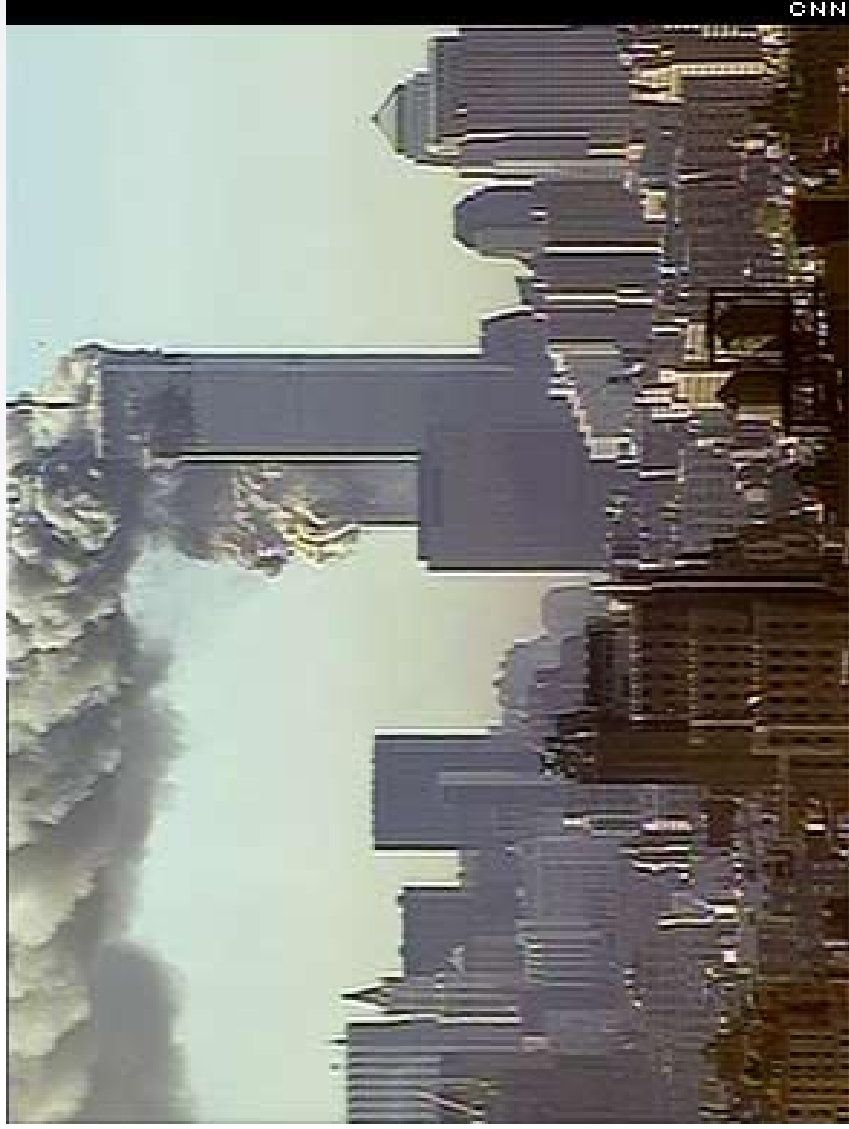
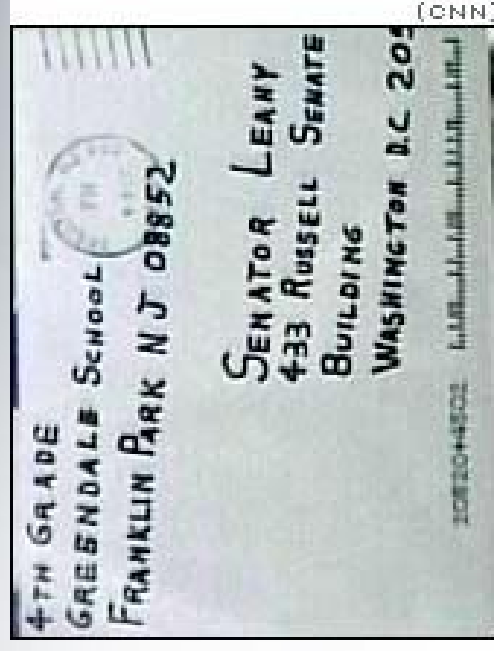
- Media want to inform us but inevitably sensationalize things.
- After Sept 11, government officials don't want to be accused of being complacent or not warning public, so tend to dwell on worst-case scenarios.



# Conflating Events?



# Conflating Events Again?



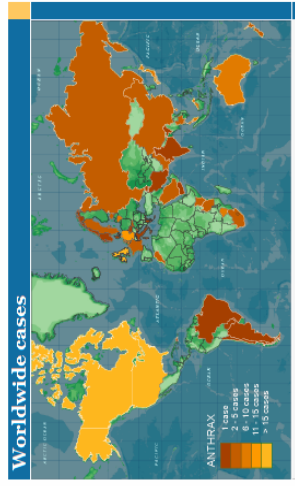




<b>Cases by Selected Agents</b>
<b>Biological</b>
<a href="#">Anthrax bacteria</a>
<a href="#">Botulinum Toxin</a>
<a href="#">Yersinia pestis (Plague)</a>
<a href="#">Ricin</a>
<a href="#">Smallpox Virus</a>
<b>Chemical</b>
<a href="#">Cyanide</a>
<a href="#">Mustard Gas</a>
<a href="#">Sarin</a>
<b>Perpetrator Profiles</b>
<b>Cases by Region</b>
<a href="#">USA and Canada</a>
<a href="#">Latin America</a>
<a href="#">Russia and NIS</a>
<a href="#">Middle East and North Africa</a>
<a href="#">Sub-Saharan Africa</a>
<a href="#">Asia</a>
<a href="#">Australia and Oceania</a>
<a href="#">Europe</a>

**New Cases**

- Prague, Czech Republic** 23 May 2003  
Cyanide  
 On 23 May 2003, police arrested a 30-year-old man suspected of extortion relating to threatened cyanide poisonings.
- Wellington, New Zealand** 28 Mar 2003  
Cyanide  
 On 28 March 2003, in Wellington, New Zealand, two letters arrived at the New Zealand Herald containing cyanide-laced items; it made threats against cinemas and water supplies in New Zealand, as well as food and beverage supplies.
- Boise, United States** 14 Mar 2003  
Anthrax bacteria  
 On 14 March 2003, the governor's wing of the Statehouse in Boise, Idaho, received a letter containing a suspicious white powder.
- Wellington, New Zealand** 4 Mar 2003  
Cyanide  
 On 4 March 2003, in Wellington, New Zealand, the New Zealand Herald received a letter threatening cyanide attacks in Wellington and Auckland.
- Wellington, New Zealand** 21 Feb 2003  
Cyanide  
 On 21 February 2003, police in New Zealand intercepted a letter containing cyanide crystals sent to the British diplomatic mission in Wellington.
- Little Rock, United States** 19 Feb 2003  
Ricin  
 On 3 March 2003, FBI agents arrested Bertier Ray Riddle in Omaha, Arkansas on suspicion that he sent an envelope to the FBI field office in Little Rock that claimed to contain ricin.
- Bandar Seri Begawan, Brunei** 11 Feb 2003  
Anthrax bacteria  
 On 11 February 2003, Chief of Mission Robert Tons at the U.S. embassy in Brunei opened a letter containing a white powder labeled "anthrax".
- New York, United States** 11 Feb 2003  
Anthrax bacteria  
 On 11 February 2003, a secretary at the Manhattan offices of ESPN opened a letter which spilled a white powdery substance on her hands.
- Chicago, United States** 3 Feb 2003  
unknown  
 On 3 February 2003, the Federal Bureau of Investigation (FBI) office in Rockford, Illinois received an anonymous letter stating that a woman in Schaumburg possessed a "deadly biological agent" and was going to kill thousands by releasing it into the Chicago area.
- Los Angeles, United States** Feb 2003  
Anthrax bacteria  
 On 13 March 2003, Stanley Chester Jaroszenski Jr.



**Interactive Map**

<b>Biological</b>	<b>Chemical</b>	<b>Nuclear</b>	<b>Radiological</b>
Anthrax bacteria Botulinum Toxin Yersinia pestis (Plague) Ricin Smallpox Virus	Cyanide Mustard Gas Sarin		

- Hover the mouse over the country for the number of cases
- Click the country to see the cases

**About the Database**

CNS has recently re-designed the interface to the Monterey WMD Terrorism Database. If you have any questions, comments, or concerns, please contact:

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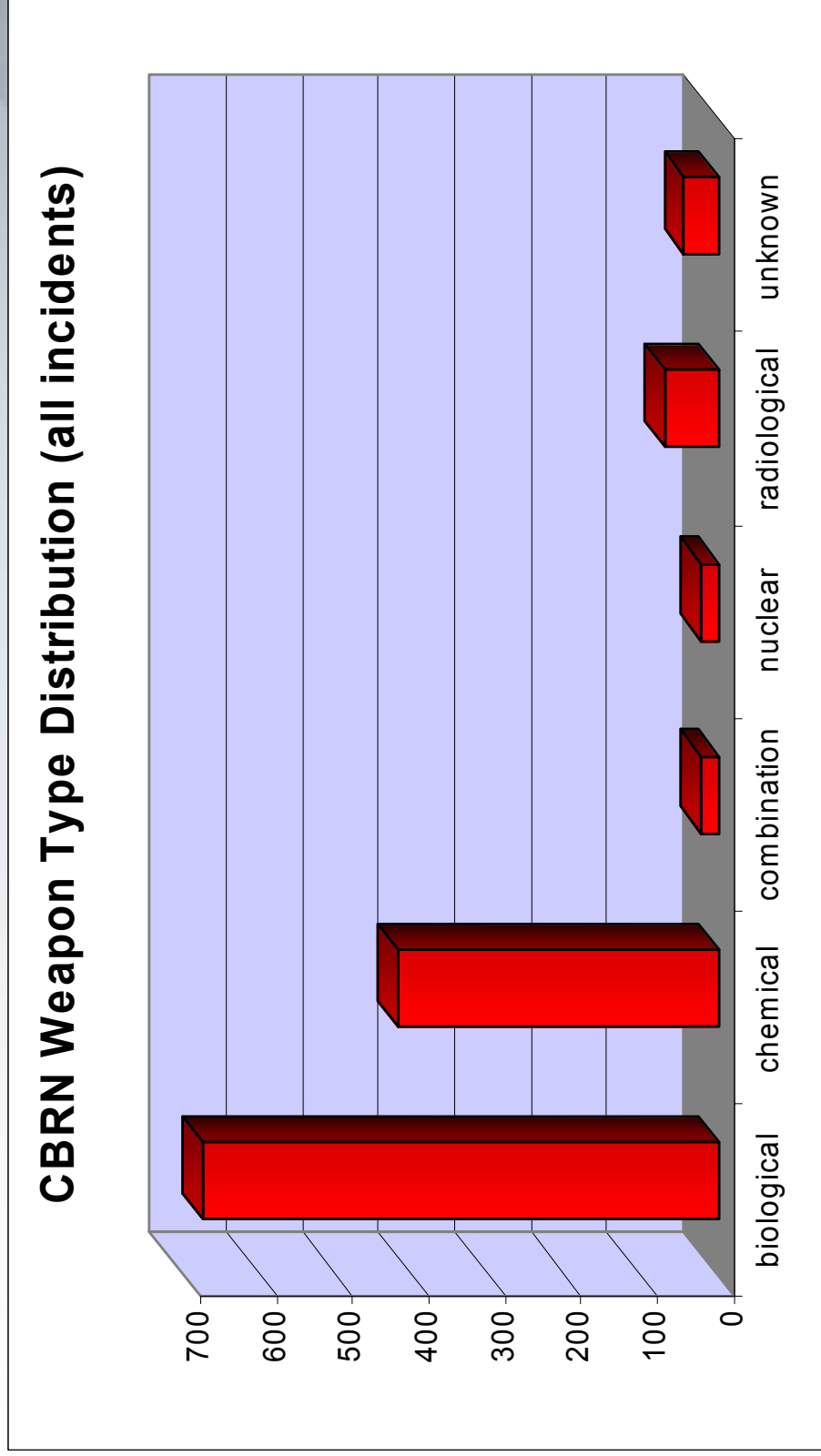
The [Chemical and Biological Weapons Nonproliferation Program \(CBWNP\)](#) at CNS systematically monitors incidents around the world involving the acquisition and/or use by sub-state actors of weapons of mass destruction (WMD), defined as

# Incidents per Year



Year	Excluding Hoaxes	Hoaxes	Total
1999	53	76	129
2000	77	27	104
2001	68	239	307
2002	56	68	124
2003	54	41	95
2004	28	17	45
2005	37	32	69

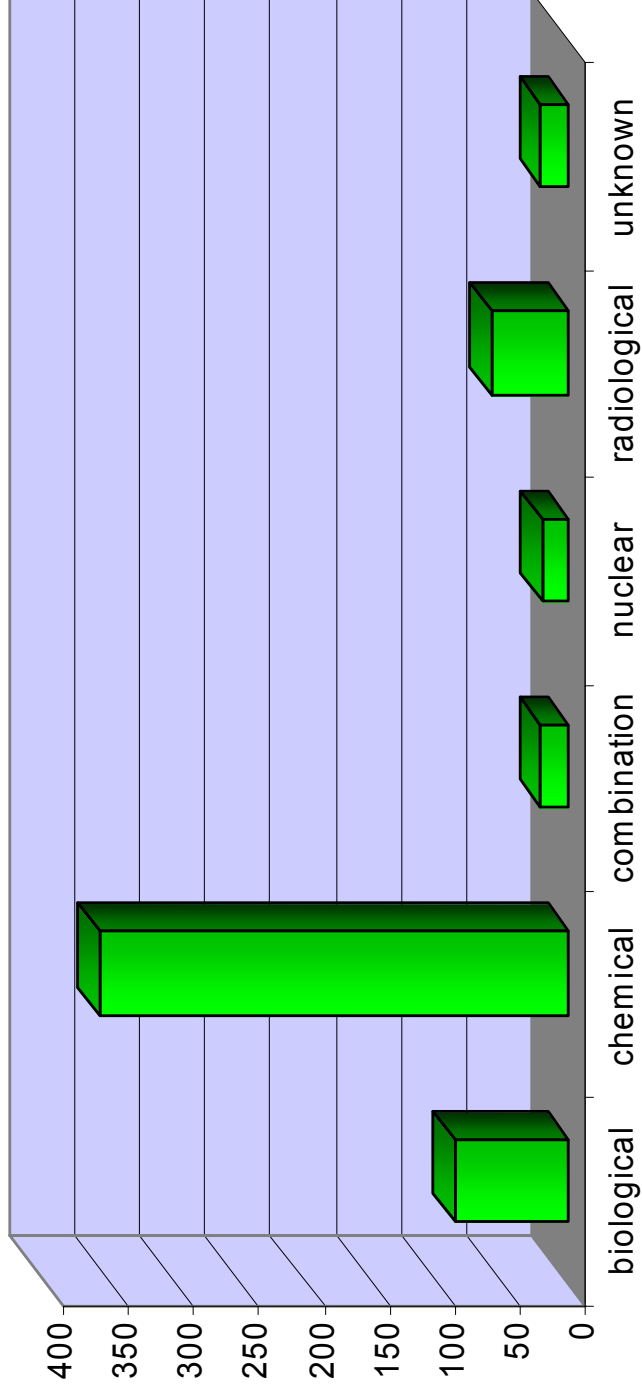
# The Empirical Record



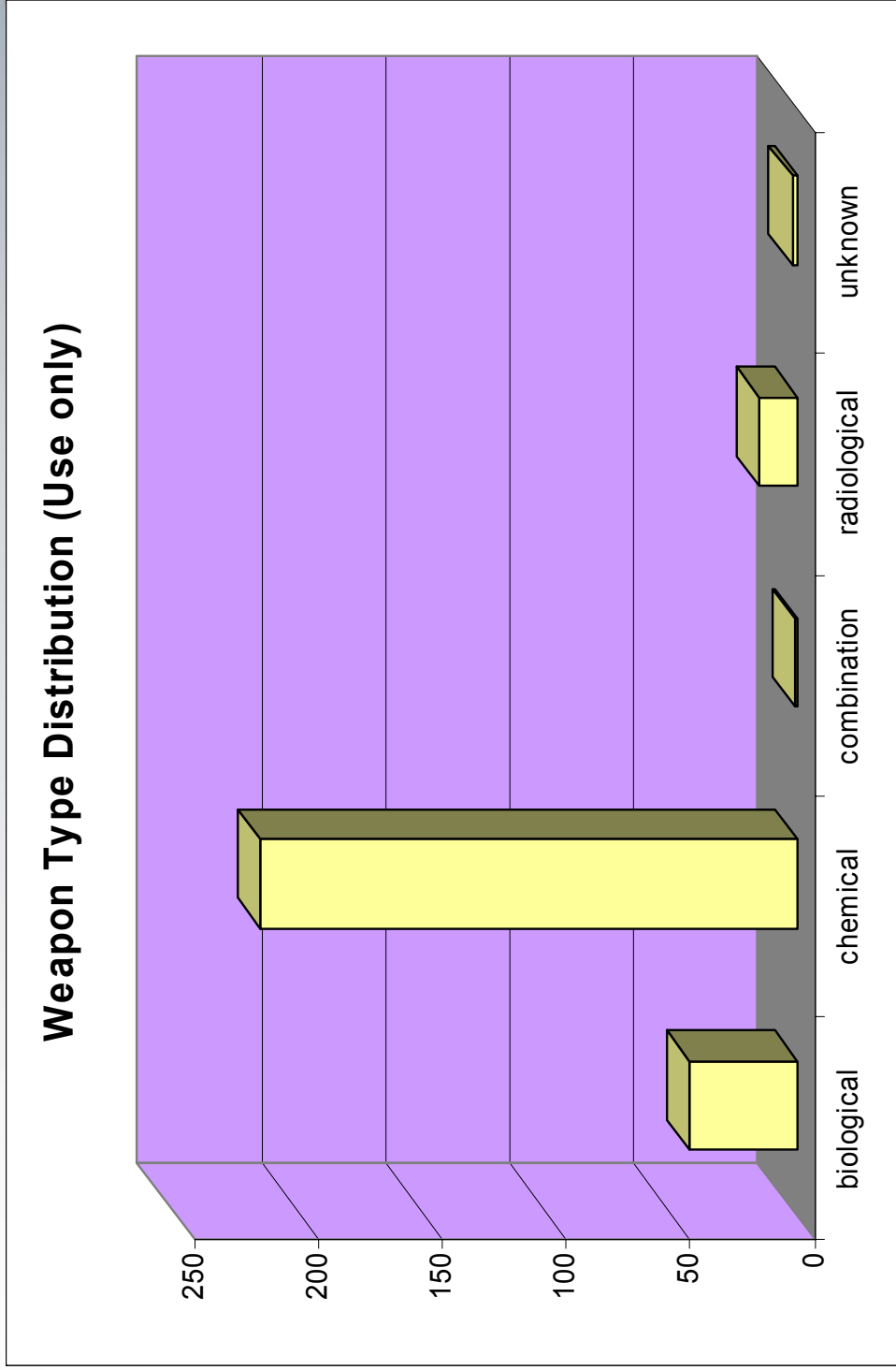
# The Empirical Record



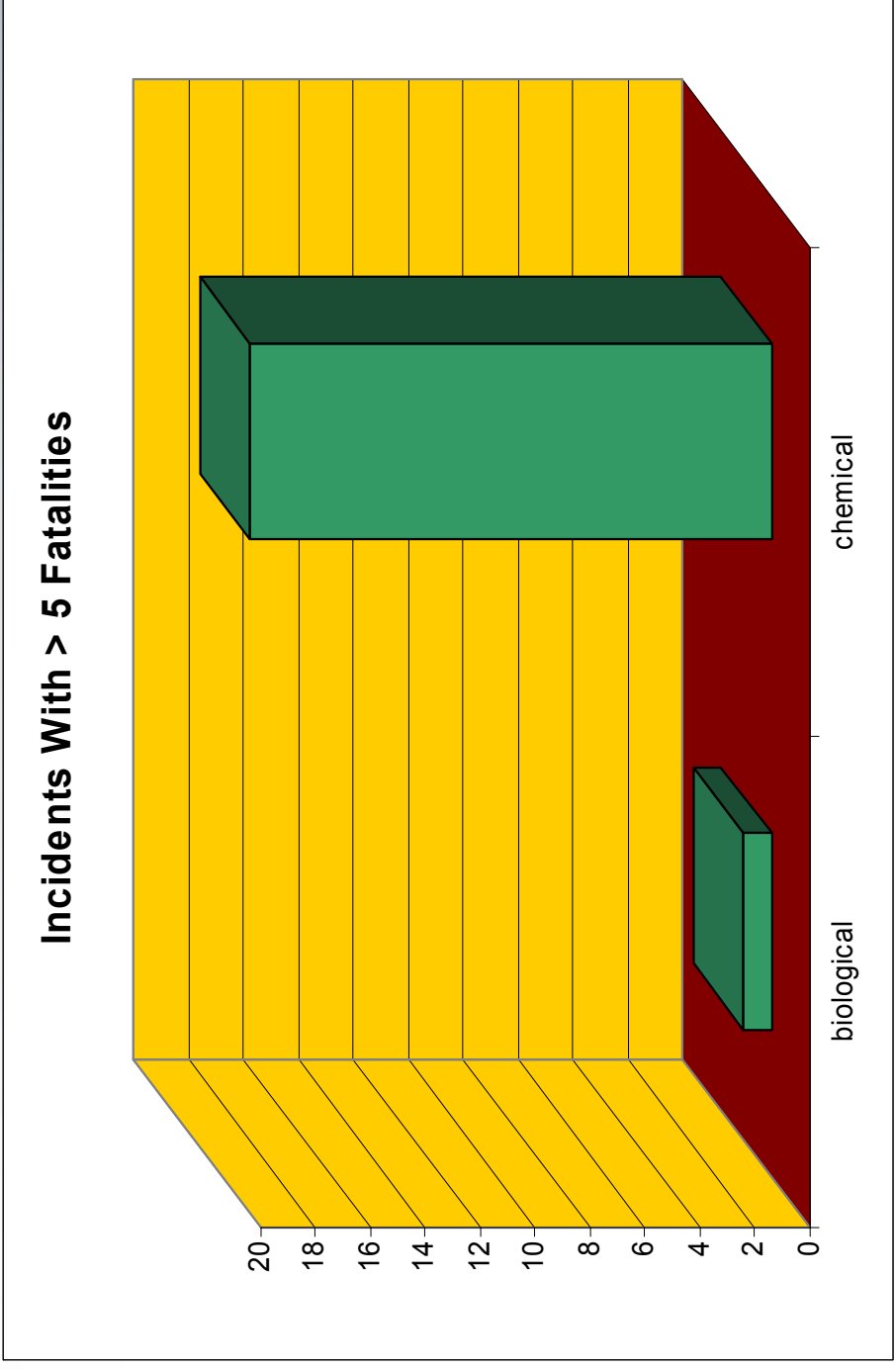
**CBRN Weapon Type Distribution  
(hoaxes / threats excluded)**



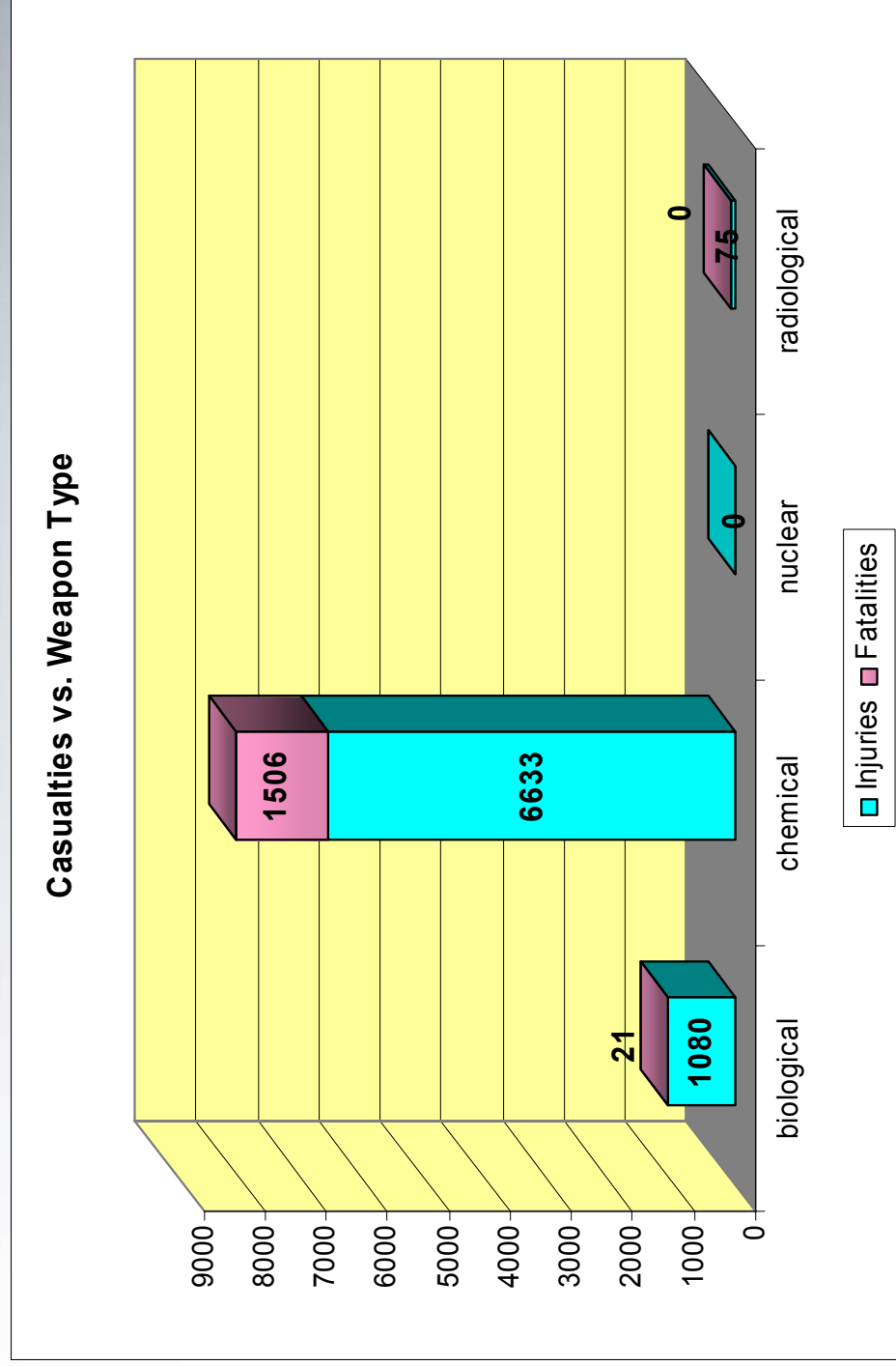
# The Empirical Record



# The Empirical Record



# The Empirical Record: Casualties

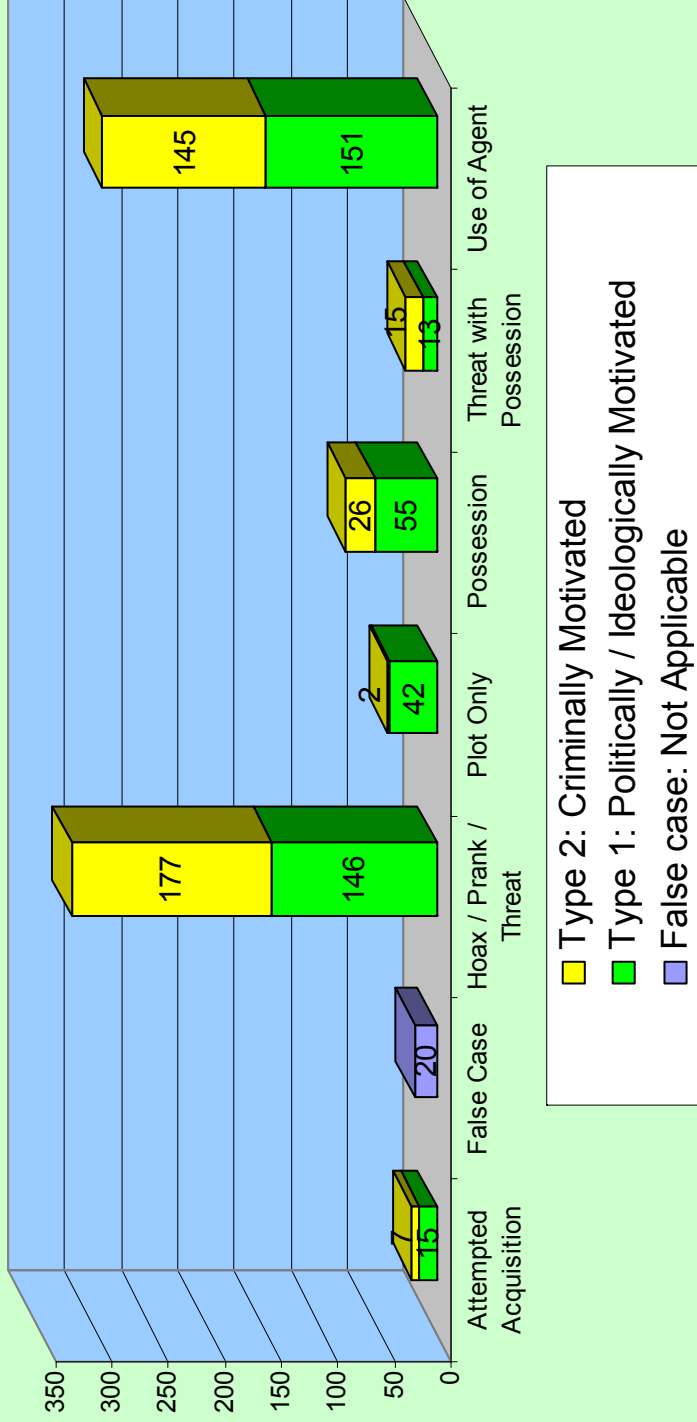




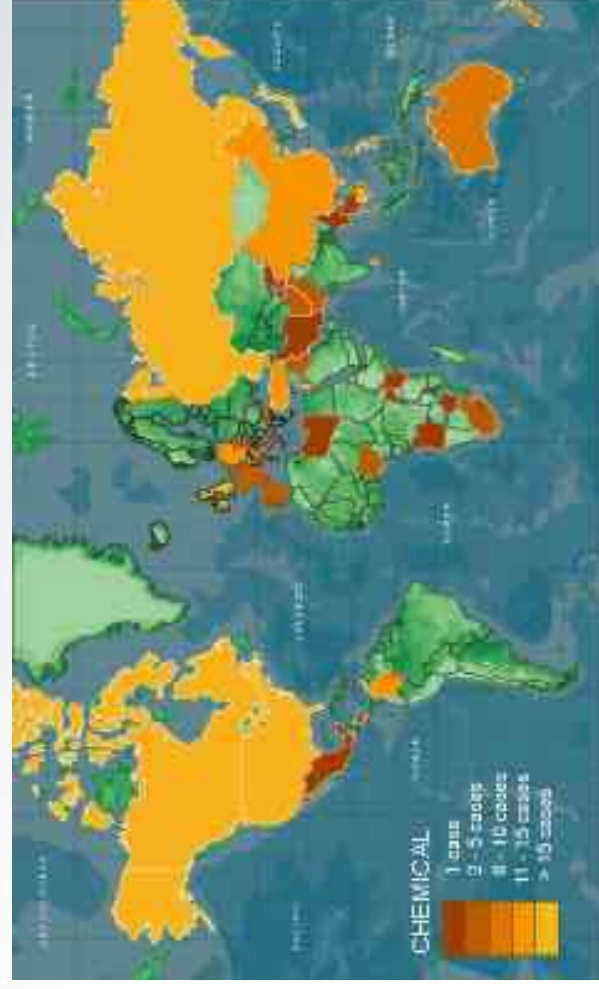
# Distribution by Event Type



Distribution - Event Type  
1975 - September 2000 (814 cases)



# The Empirical Record: Geography



Chemical Incident Distribution



## Number of cases by Group Type

<a href="#">all</a>	<a href="#">biological</a>	<a href="#">chemical</a>	<a href="#">combination</a>	<a href="#">nuclear</a>	<a href="#">radiological</a>	<a href="#">unknown</a>
Criminal Organization			■		10	2 %
Left-wing			■	■	36	7 %
Lone actor (s)			■	■	79	15 %
N/A			■		7	1 %
Nationalists / Separatists			■	■	100	18 %
Religious (cults)			■	■	40	7 %
Religious (fundamentalists)			■	■	54	10 %
Right-wing			■		26	5 %
Single-issue			■	■	33	6 %
Unknown			■	■	157	29 %
<b>Total</b>					<b>542</b>	<b>100 %</b>

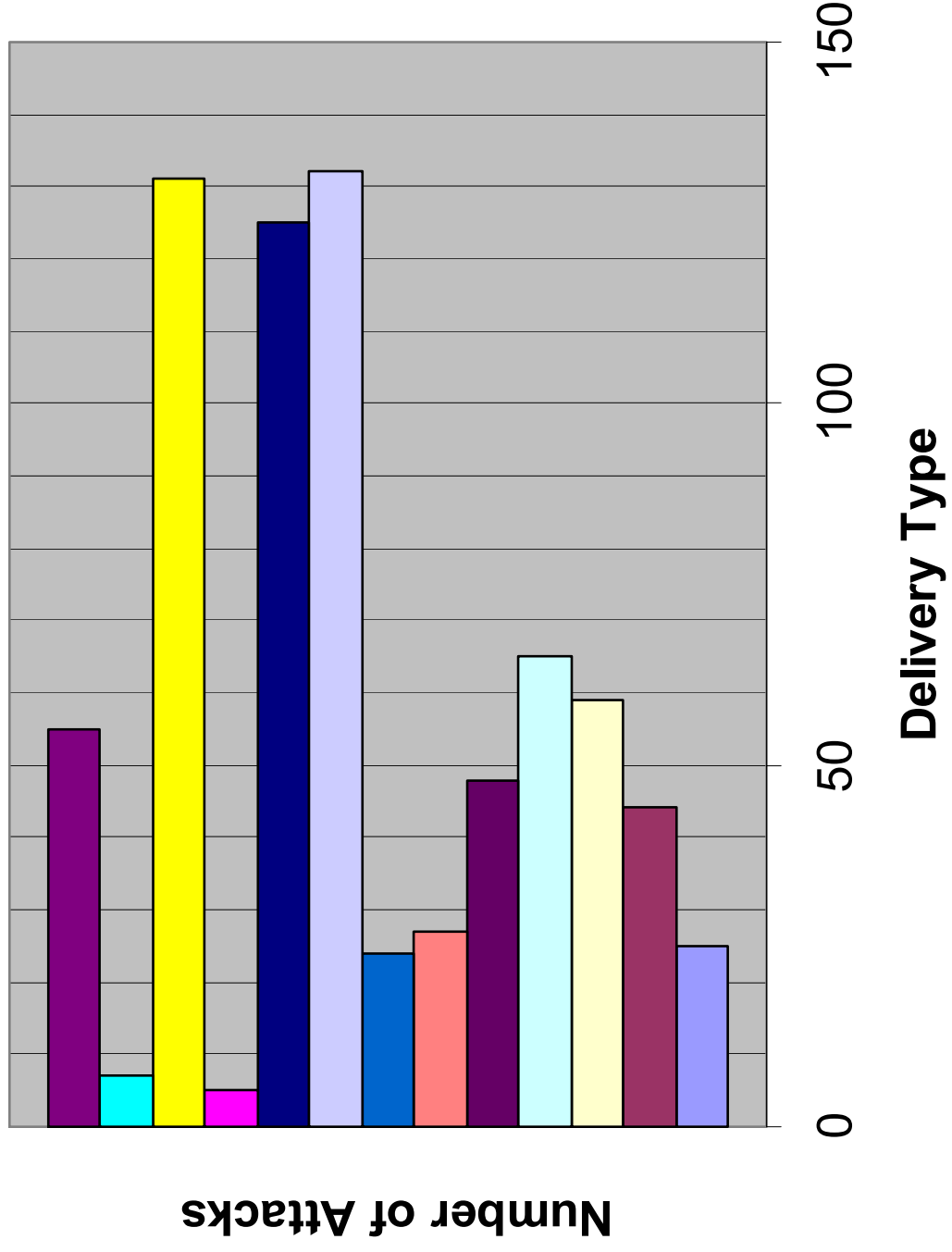


## Number of cases by Motive

<a href="#">all</a>	<a href="#">biological</a>	<a href="#">chemical</a>	<a href="#">combination</a>	<a href="#">nuclear</a>	<a href="#">radiological</a>	<a href="#">unknown</a>
False Case						1 0%
To Act Because of an Ideology/Belief System						162 30%
To Act on a Personal/Professional Grudge						15 3%
To Establish Ethno-Nationalist Sovereignty						98 18%
To Express Abortion-Related Sentiment						39 7%
To Extort Money/Pure Financial Gain						41 8%
To Fulfill Individualized Objective						43 8%
To Protest Treatment of Animals						9 2%
To Support Other Single-Issue						25 5%
Unknown						110 20%
<b>Total</b>						<b>543 100%</b>



# Delivery Type for CBRN Attacks





# Key Motivational Factors



## Relevant determinants of terrorist behavior:

### Factors Relating to the Nature of the Group

Ideology, Organizational Structure, Organizational Dynamics, Organizational Lifecycle Status, Demographics, Resources, Operational Capabilities

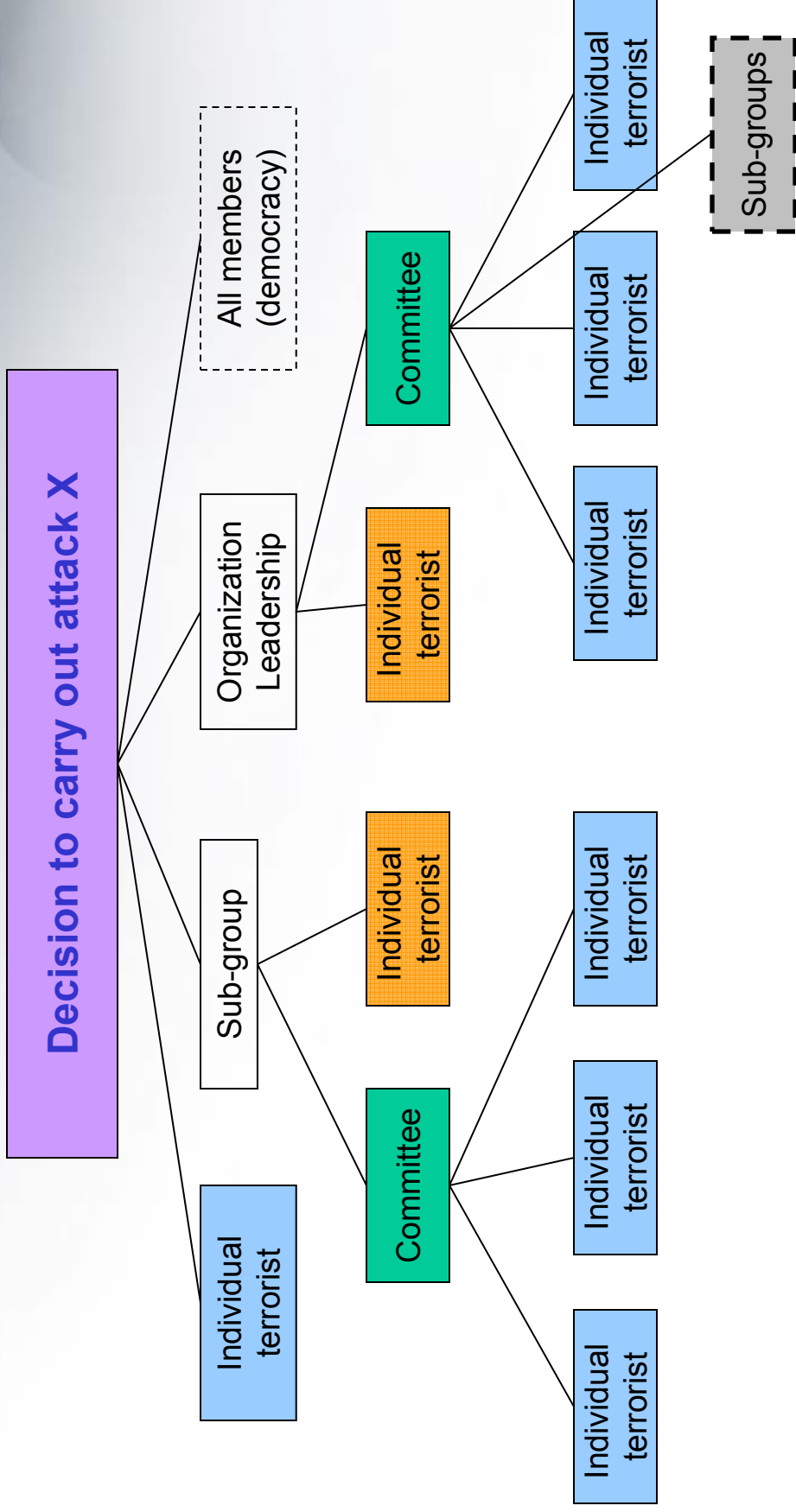
### Factors External to the Group

Historical Events, Relations w/ External Actors (media; other extremists; state apparatus; targeted audience; non-targeted audience; supporters), Security Environment, (Potential) Target Characteristics

### Factors Relating to Decision-Making

General Planning Characteristics (risk thresholds; time horizons), Perceptual Filter, Operational Objectives

# Who makes the Decisions?







# Capabilities



## Main questions:

- Do terrorists currently have the capability to engage in true WMD attacks?
- Is the capability of terrorists with regard to WMD increasing?
- If terrorists' WMD capabilities are increasing, what is the rate of this change?

# Capabilities



## Broad Trends

- Terrorist capabilities in general are increasing
- Societal changes can increase vulnerabilities and facilitate terrorist capabilities

# Capabilities



- Organizational Capabilities
- Logistical Resources
- Financial Resources
- Knowledge/Skill Acquisition
- Materials and Technology Acquisition
  - C,B,R, and N differ
- Initial Production of Agent
  - C,B,R, and N differ
- Weaponization of Agent
  - C,B,R, and N differ

# Desiderata

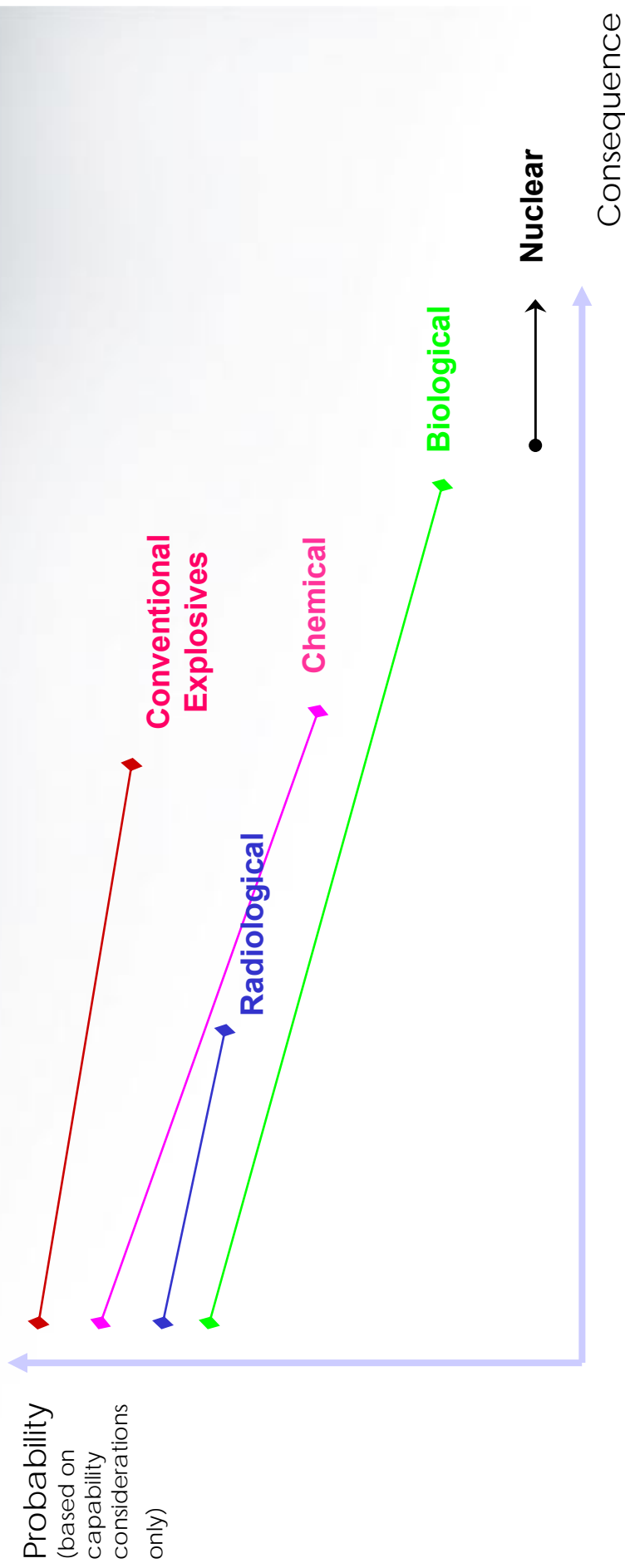
- Insiders
- State sponsorship
- Attacks on Facilities



# CBRN Terrorism Risk Plane



$$\text{RISK} = \text{Probability} \times \text{Consequence}$$





# Terrorists and Technology



- Traditionally, terrorists have tended in their use of weapons and tactics to be both:
  - Conservative
    - “Path of least resistance” – terrorists generally seek to use the easiest, cheapest, tried-and-true methods
  - Imitative
    - Terrorists often utilize the successful tactics and weapons types of other groups (albeit with some localization, e.g. Mao to Carlos Marighella)
- Why?
  - Most groups have **limited resources** and there are costs associated with identifying, researching and implementing new technologies, in terms of time, finances, personnel etc.
  - There are also often **uncertainties** about the reliability of any new technology in terms of achieving desired effects.
  - **Soft targets** vulnerable to traditional weapons are **plentiful**.



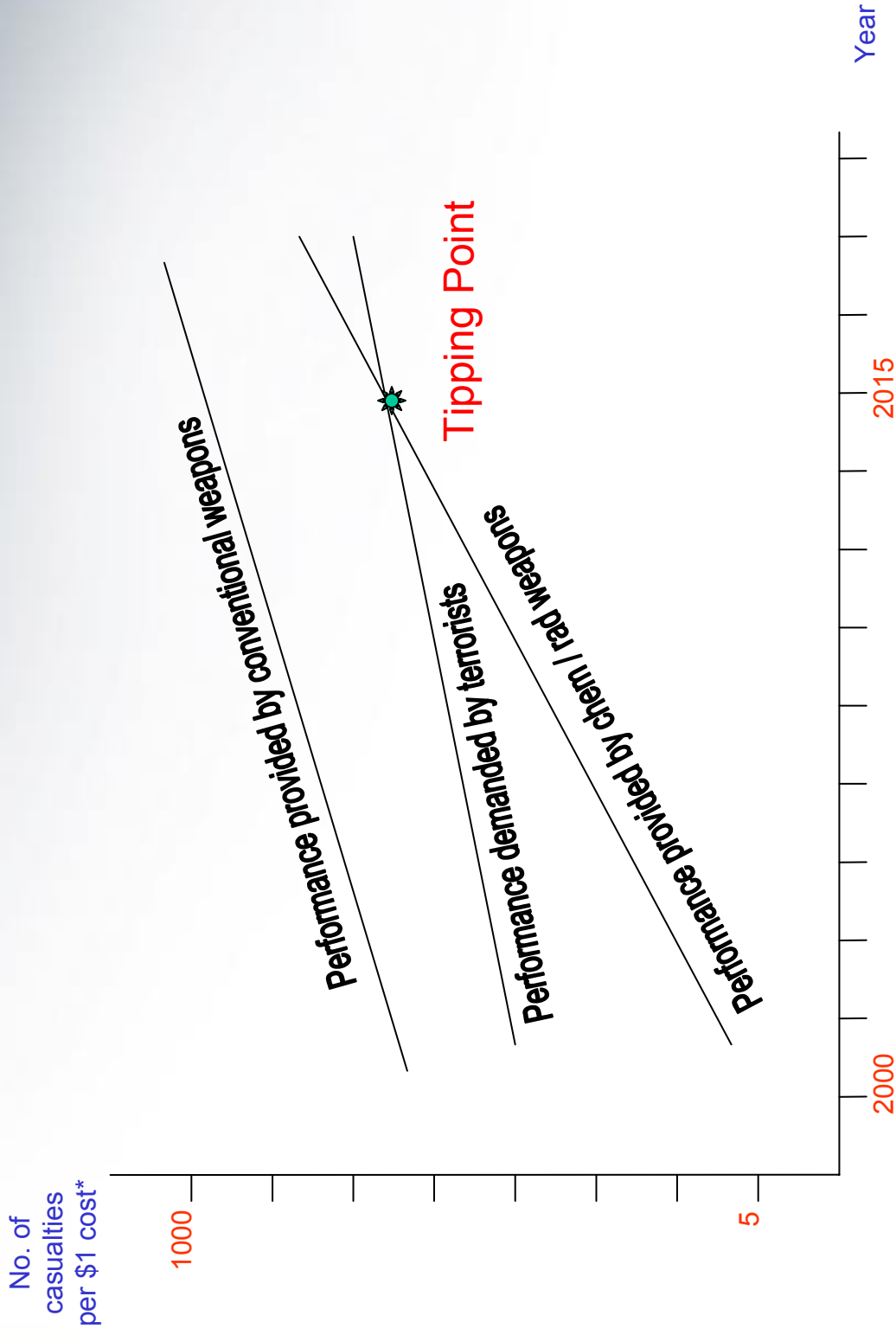
# Terrorists and Technology



- BUT, there are exceptions to the above (may be becoming more common) where terrorists will seek new technologies:
  - A. Specific ideological orientation towards innovating technologically**
    - Examples: Aum Shinrikyo sending operatives to explore the documents of Nikola Tesla in hopes of building an earthquake generating machine; in some groups ideology may drive members to push the technological envelope, such as in a conceivably violent version of the Raelian cult (who pursue human cloning and worship extraterrestrials).
  - B. Existing methods insufficient to achieve aims**
    - For example, when current weapons do not (or are perceived to not) result in enough casualties, publicity, or psychological impact.
    - New means are needed to circumvent protective measures.
  - C. Perceived competition**
    - Perceive the need to ‘stand out from the crowd’ and remain relevant.
  - D. Group has very high level of resources**
    - Allows opportunity to engage in long-term development and explore different tools (two examples: Aum and Al Qa’ida).
  - E. Costs associated with adopting new technology are lowered**
    - For example, the electronic privacy movement has enabled groups with very little resources, such as radical environmental extremists, to use the latest encryption and steganographic tools.
    - Advent of commercial biotech “kits” and commercial modified PCR.
    - Group recruiting members with advanced technical capabilities.

# The Future: More CBRN?

E. If costs associated with adopting new technology are lowered...





# Hype or Threat?

# Bad News ...



- Terrorism trends are ominous
- Significant increase in number of incidents
- Al Qa`ida – sustained enemy
- Other groups: cults, militias, lone actors?

# Bad News ...



**September 11** – confirmed that terrorists will seek to inflict mass casualties

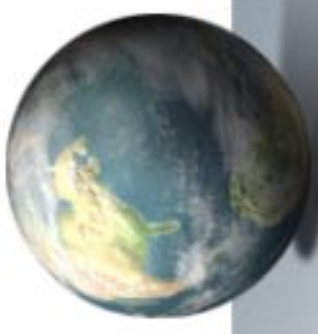
**Anthrax attacks** – showed that the capability to get the agents is there (almost)

... and we're capable

# But Some Good News



- Very few incidents involving warfare agents
- More difficult to cause **mass casualties** with WMD than often assumed – difference between AGENTS and WEAPONS!



**BUT**

*The threat must be countered before  
this becomes easier to accomplish*

# The Bottom Line



- Threat of CBRN terrorism is real, but often distorted by hype.
- Remain mindful of more boring (but deadly threats): terrorism using conventional weapons is still likely to be prominent.
- **‘Don’t Panic’**: Terrorists want us to panic – that’s why it’s called **TERRORISM**.





# The End

