1960-1964
## Terms

<table>
<thead>
<tr>
<th>Counter-force targeting</th>
<th>Counter-value (city) targeting</th>
<th>Assured destruction</th>
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</thead>
<tbody>
<tr>
<td>PA&amp;E</td>
<td>Systems analysis</td>
<td>2 ½ war strategy</td>
</tr>
<tr>
<td>Wars of national liberation</td>
<td>Counter-insurgency</td>
<td>Cost-effectiveness</td>
</tr>
<tr>
<td>Strategic triad</td>
<td>SSBN/SLBM</td>
<td>LTBT</td>
</tr>
<tr>
<td>PPBS</td>
<td>Escalation ladder</td>
<td>Special forces</td>
</tr>
<tr>
<td>Hot-Line</td>
<td>EMT</td>
<td>DIA</td>
</tr>
<tr>
<td>Finite deterrence</td>
<td>Damage limitation</td>
<td></td>
</tr>
</tbody>
</table>

17.471 American National Security Policy
Key Shifts in National Security Policy

- **Flexible Response**
  - Creating new options for defense & deterrence – symmetry
  - General purpose force for escalation control
  - Special forces for counter-insurgency

- **PPBS/Systems Analysis**
  - New approach to defense budgeting and management
  - Focus on missions not services

- **Strategic Triad & Assured Destruction**
  - *systematic evolution of US SNF*
Flexible Response

- **Nuclear weapons do not solve all national security problems**
  - matching force to mission
  - **Rebuild conventional forces**
    - Gen Max. Taylor = Special Military Advisor to Pres. Kennedy
      - 1962-1964: Chair JCS
      - 1964-1967; Amb. To S. Vietnam

- **Counter-insurgency & guerrilla war**
  - *jungle warfare schools in Panama and Ft. Bragg, NC*
  - to train US and foreign forces
  - counter-insurgency

- **Conflict control (escalation control)**
  - signaling, bargaining with military forces
  - matching means with goals
  - limited war (Schelling & game theory)

- **2 ½ war strategy**
  - 1 Europe/Soviet Union
  - 1 PRC
  - ½ elsewhere
Goal: break old institutional & special interest control over defense allocations & resources

- Increase civilian control over defense spending & weapons acquisition

Analyze military requirements and costs simultaneously

Explicit consideration of alternative means of accomplishing a mission
Strategic Doctrine I

**Damage Limitation**

- Counterforce Targeting
  - Strategic Force Targeting
- Active Defense
  - ABM
  - Air Defense
- Passive Defense
  - Civil Defense
## Counterforce Mission

### Number of Warheads per Target

(95% probability of kill)

<table>
<thead>
<tr>
<th>CEP</th>
<th>Yield 500kt</th>
<th>Yield 1Mt</th>
<th>Yield 5Mt</th>
</tr>
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<tbody>
<tr>
<td>.1 miles</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>.5 miles</td>
<td>9</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>1 mile</td>
<td>36</td>
<td>23</td>
<td>8</td>
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</tbody>
</table>

* Assumes target hardness = 300 psi
Nike-X ABM

- Nuclear anti-missiles
- Exo-atmosphere intercept
- Atmospheric intercept
Strategic Doctrine II

Assured Destruction

- Deterrence via secure second strike capability
  - City Targeting (counter value targeting)
  - Strategic triad

- How Much is Enough?
Lethal Area for a 14kt Nuclear Blast
Lethal Area for a 200kt Nuclear Blast
Lethal Area for a 1mt Nuclear Blast
Lethal Effects Against Soft Targets

\[ \text{EMT} = \sum y^{2/3} \]

Yield (MT)

Lethal Area (sq mi.)
Assured Destruction

% of Target Type Destroyed

Equivalent Megatons

0 100 500 1000 1500

0 10 20 30 40 50 60

Population

Industry
Triad Sensitivity

Probability Analysis
Strategic Triad

SNDVs Needed to Kill 400 Targets
95% Confidence

Number of Weapons

Scenario

A B C D

SLBM ICBM Bomber

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### Strategic Balance - 1961

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>Soviet Union</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICBMs</td>
<td>100</td>
<td>5</td>
</tr>
<tr>
<td>SLBMs</td>
<td>48</td>
<td>150 SR-SLBMs</td>
</tr>
<tr>
<td>Bombers</td>
<td>600</td>
<td>210</td>
</tr>
<tr>
<td>Weapons</td>
<td>1800</td>
<td>&lt;375</td>
</tr>
</tbody>
</table>
US & Soviet Strategic Forces

Year

Number of Warheads


US USSR

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Events

- French A-bomb (1960)
- Congo Crisis (1960)
- U2 Shoot Down (1960)
- Bay of Pigs (4/1961)
- Vietnam (1961)
- Berlin Wall (8/61)
- Cuban Missile Crisis (1962)
- LTBT (1962)
- Vietnam Coup (1963)
- Hot-Line Agreement (1963)
- Kennedy Assassinated (1963)
- China A-bomb (1964)
- Vietnam (1964)
END
Cuba (1961-1962)

Bay of Pigs
B52 Bomber
Minuteman ICBM
# Strategic Balance -1970

<table>
<thead>
<tr>
<th></th>
<th>US</th>
<th>Soviet Union</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICBMs/RVs</td>
<td>1054/1074 (30)</td>
<td>1420/1420 (0)</td>
</tr>
<tr>
<td>(MIRVs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SSBNs[SLBM]s/</td>
<td>41[656]/800 (160)</td>
<td>20/289/289 (0)</td>
</tr>
<tr>
<td>RVs(MIRVs)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bombers/Weapons</td>
<td>465/2200</td>
<td>140/200</td>
</tr>
<tr>
<td>Weapons</td>
<td>4074</td>
<td>1849</td>
</tr>
</tbody>
</table>