

# Analysis of Deterrence

CDR (s) Harrison Schramm  
Naval Postgraduate School

# Report Documentation Page

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# Agenda

- What is deterrence?
- A review of Analytic Methods
- Case Studies
- Implications and prospects for deterrence



# Motivation



“(I want) to take the lessons of the past in nuclear deterrence and apply them moving forward” – ADM Mike Mullen

“the instruments of war do have a role to play in preserving the peace. And yet this truth must coexist with another - that no matter how justified, war promises human tragedy.”

-- President Obama’s Nobel Peace speech





# Deterrence:

## Is..

- A **coercive** strategy which aims to *maintain the status quo* by forcing an adversary to re-consider the costs and benefits of their actions
- Requires:
  - The ability to inflict harm to something the adversary values
  - The Will to inflict this harm
  - **Effective communication** of the ability and will
- Can sum these up in one word: **CREDIBILITY**

## Is challenging to study because...

- We only gain partial information about effectiveness.
  - When we (or others are attacked) we can conclude that our deterrence was insufficient
  - When attacks do not happen, it *may be* because of our deterrent, or another effect.
- We never truly know the motivations / utilities of our adversaries.
  - Their private utilities are probably 'unknowable'

No one wants to be in the position of finding a problem both important for study and without good analytic methods to tackle it. - Jervis



# Analytic Methods

- Critical Thinking / Systems Analysis
  - Kent's First Strike Stability
- Statistical Analysis: fitting models to datasets
  - Difficulties: Coding data, model specification, descriptive statistics. Presupposes model format.
  - Huth, Signoriono
- Game Theory
  - Difficulties: presupposes an ability to compute utilities
  - Schelling, Zagare and Kilgour
- History
  - Difficulties: May not be applicable to future campaigns
  - Meersheimer, Keegan, others



# General Conclusions

- Deterrence requires all the levers of national power – it is not simply a military problem – (all methods)
- Deterrence is most likely to fail when:
  - At least one side perceives the campaign will be ‘quick’ and ‘easy’ (History, Strike Stability)
  - At least one side perceives the campaign feels that they are in a ‘use or lose’ situation (History, Game Theory)
  - Deterrence postures irrelevant if not effectively communicated (History, Statistics)
  - Communication Fails (History)
- The objective of deterrence cannot be ‘Everything – Everywhere’ – we should prioritize what we wish to deter.



# Who is deterrable?

## Deterrable

- Nations that seek to minimize costs
- Nations that feel secure in their nuclear (and other) deterrents

## Not deterrable

- Groups who do not seek to minimize costs
  - Because they don't count them
  - Because they have ideological imperatives to act
  - Because they seek conflict
- Nations who feel they are in a use / loose situation.



# Nuclear Deterrence: The Gold Standard?

- Kent's model of Nuclear Deterrence
  - Advantages: tractable, simple, elegant
  - Disadvantages: Measures the 'costs' of attacking first versus the 'costs' of attacking second
  - The closer this ratio is to unity, the more stable the system is.
- Sources of Stability:
    - Clear Communications
    - Assured Retaliation
  - Sources of Instability:
    - “Splendid First Strike”
    - Deterrence capability made irrelevant:
      - Communication lapses i.e. Saddam Hussein
    - “Mandates” – Political or personal motives that force a solution
      - Germany WWII?



# Kent's Model of deterrence

**First strike Stability Index:**

$$FSSI = \frac{C_{A,1}}{C_{A,2}} \cdot \frac{C_{B,1}}{C_{B,2}}$$

**Where: C represents costs; several definitions have been used**

**Ratios don't tell the whole story; magnitude of potential costs key as well.**



# True or False?

No nuclear armed nation has entered in to direct, force-on-force 'Shooting War' with another nuclear armed nation?



**False!**

**1969 Sino-Soviet Conflict**

**1999 Kargil War (India / Pakistan)**



# How do Nations Measure Costs / Utility?

- (at least) Three metrics:
- Utility among the community of Nations:
  - Declaratory Statements (NPR, Treaties, etc)
  - Measurable, or at least predictable
- Domestic Utility:
  - Demographics, politics
  - Also measurable or at least predictable
- Utility to the ruling elites:
  - Difficult to measure
- For small groups or 'rogues' consequence is measured against the leaders, not the nation writ large.
- Data Sources: Huth (1988), EUGene, POLITY datasets.



# Case Study: Germany vs. Britain / France “Phony War”

## Allied Decision

- Britain and France believed that WWII would be a re-fight of WWI
- Diplomatic Considerations
- Assumed that their attack against Germany could begin after:
  - Setting up Defense
  - Applying Economic Pressure
  - Defeating Italy
- Did not Foresee Blitzkrieg!

## Germany’s Decision

- Hitler’s Generals: Opposed to attacking immediately (Military Considerations)
- Hitler: Attack immediately (Political / Diplomatic Considerations)
- Impasse through winter of 1939
- Adoption of Game-Changing capability (Blitzkrieg), and attack 1940!



# Deterrence: Prospects



# Status of United States' Deterrence Today:

- Strategic Forces: Largest and most combat-ready in the world
- Afghanistan Campaign:
  - 9/11 attack to Taking of Kabul: 92 days
- Iraq Campaign:
  - From beginning to Baghdad: 41 Days
- But...

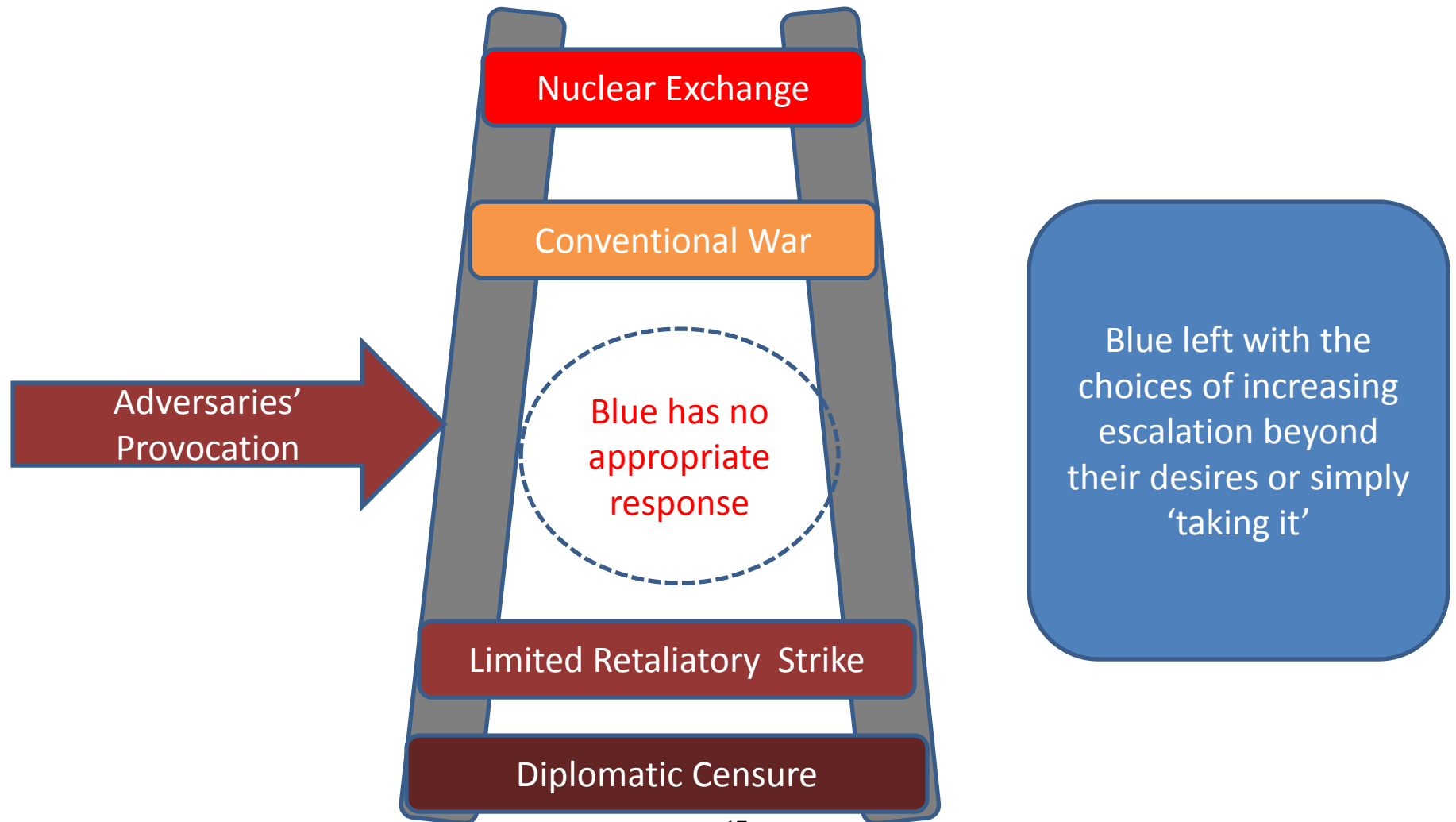


# Deterrence: Other Domains

- Nuclear Terrorists
- Cyber



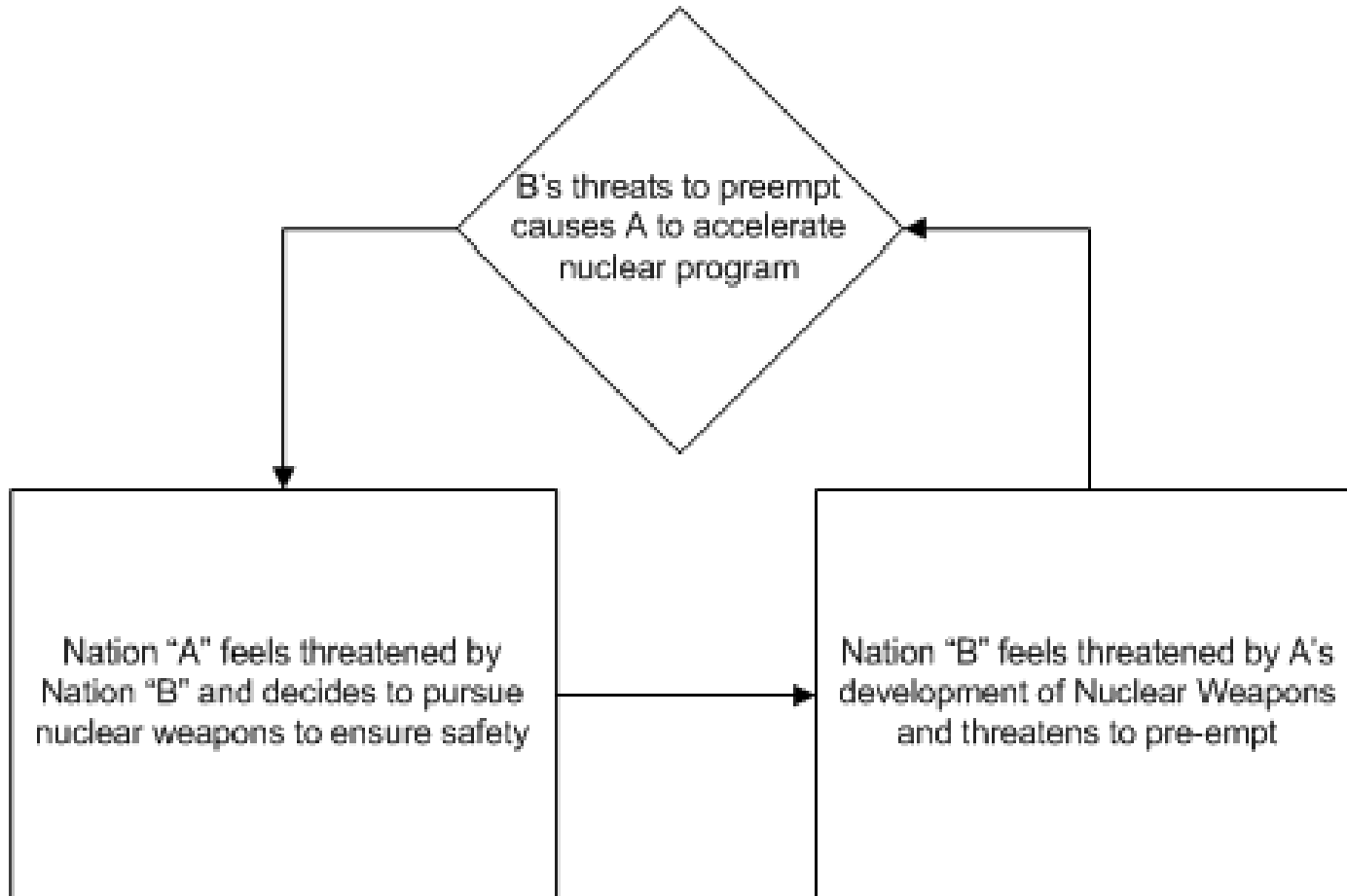
# Missing Rungs on the “ladder of Escalation”





# A Paradox (from First Strike Stability )

- “Proliferation – Escalation” Paradox:





Fin.