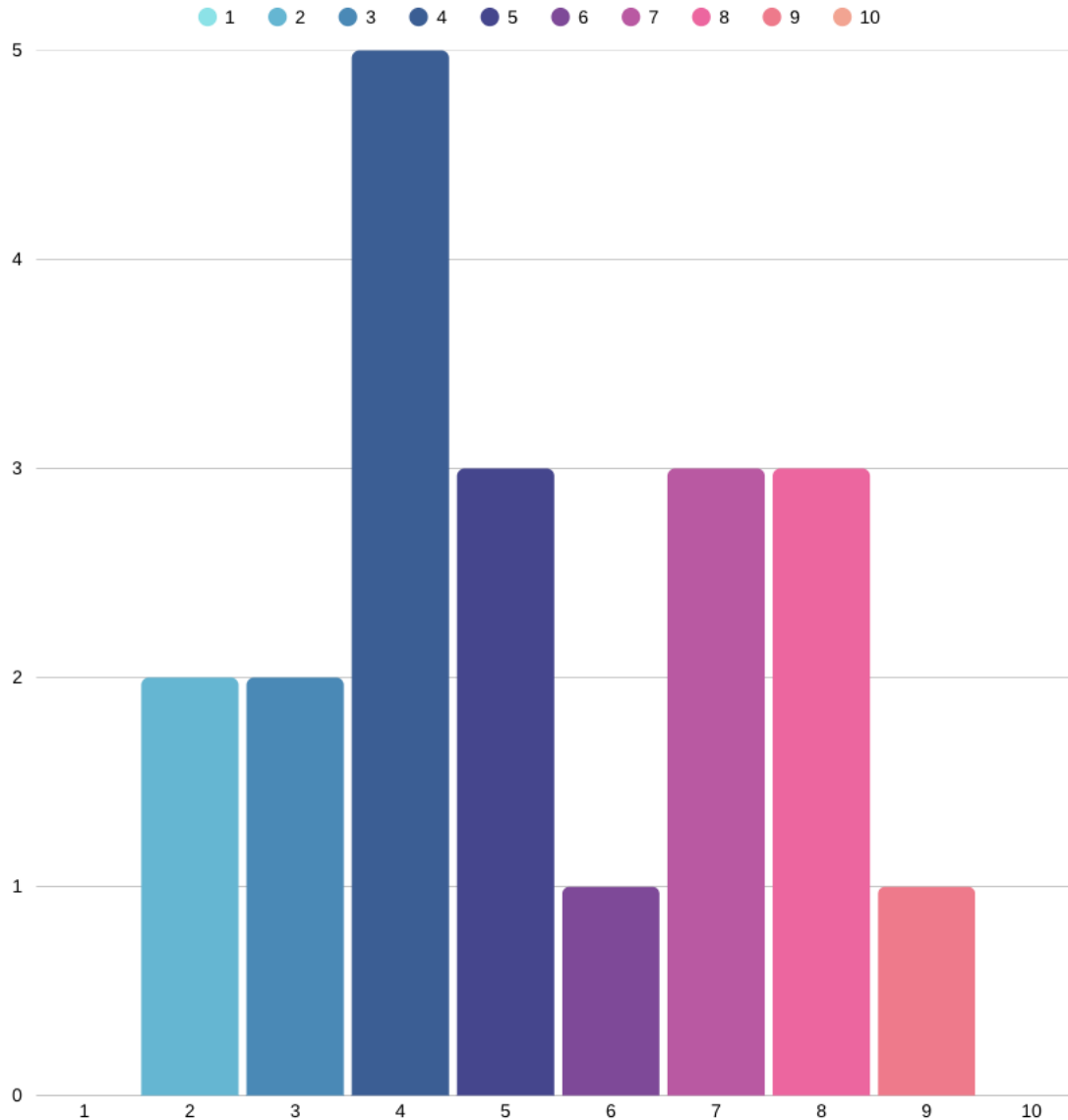


NUCLEAR DETERRENCE

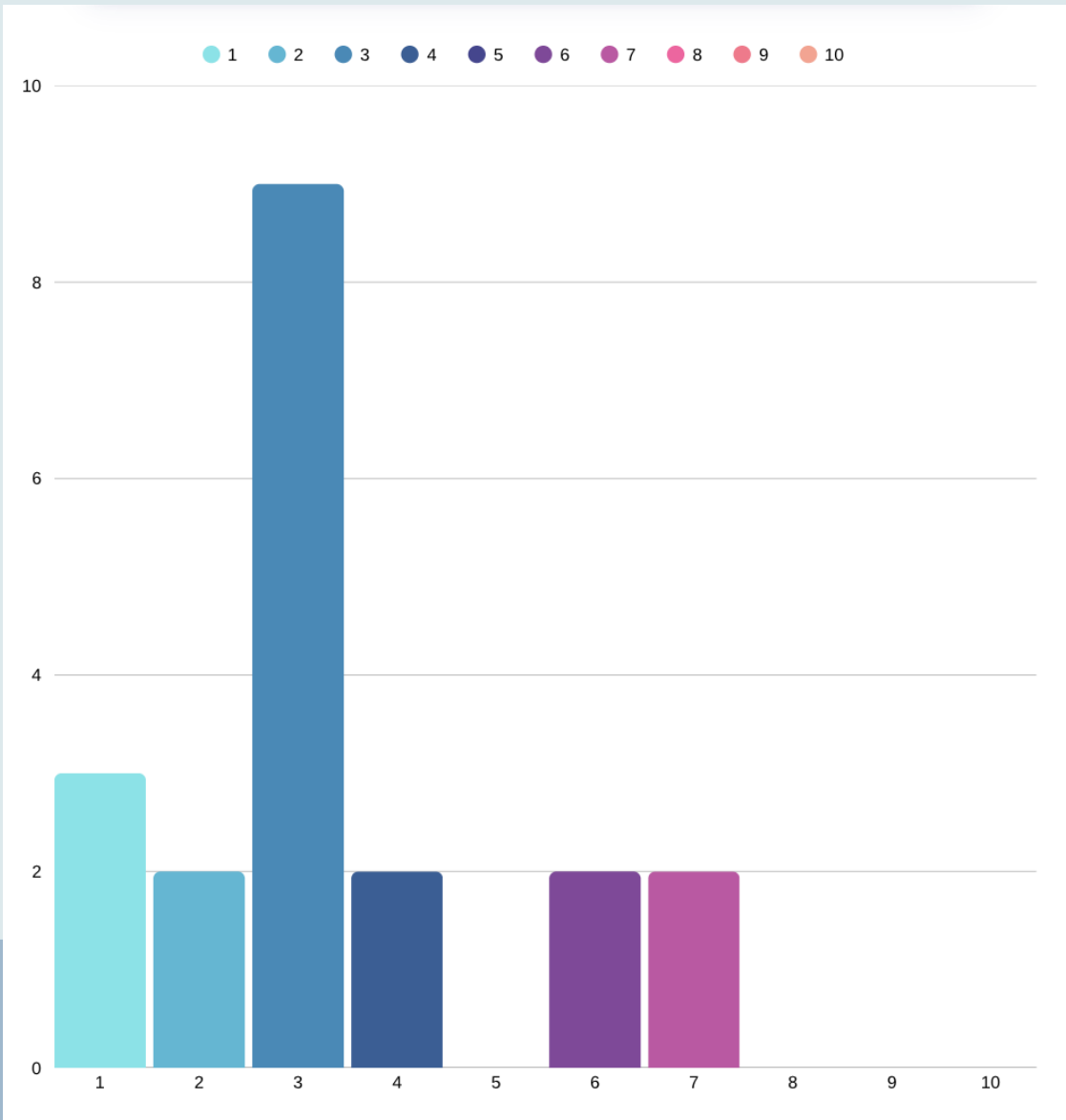
A presentation by
Henry Sokolski
Executive Director
Nonproliferation Policy Education Center
www.npolicy.org

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On a scale of 1-10 (10 being nuclear deterrence always works and 1 being it probably never works), how would you rate the probability that nuclear deterrence will prevent Russian and Chinese aggression?



**On a scale of 1-10
(10 being
nuclear deterrence
always works and
1 being it probably
never works), how
would you rate the
probability that
nuclear deterrence
will prevent
Iranian and Iranian
proxy aggression?**



Promise

Question 1:

Why is examining nuclear deterrence is necessary?

Answer 1:

If nuclear weapons deter aggression, more and better nuclear weapons in more hands would be better.

If not, numbers, qualities, policies and and who and how many possess all matter

Question 2:

What can be learned from the efforts to deter during WWII?

Answer 2:

- 1. You can't deter attacks you can't survive.**
- 2. Deterring horrific weapons attacks is more likely if you can retaliate with similar horrific weapons yourself.**
- 3. If you don't know exactly how you'll be attacked, you must defend against a wide range of threats to deter assault.**

Question 3:

What were the first thoughts on nuclear deterrence?

Answer 3:

- **Nuclear aggressors will always win.**
- **Cities are the primary targets.**
- **There are no effective defenses.**
- **International control of nuclear energy is imperative to protect civilization**

Question 4:

What does creating and maintaining a robust nuclear deterrent force require?

Answer 4:

A robust nuclear deterrent force must overcome six hurdles.

Question 5:

How sound are the most popular current views on deterrence and the first use of nuclear arms?

Answer 5:

Not very.

WHAT DOES THE WORD DETERRENCE MEAN?

THERE ARE COUNTLESS TYPES OF NUCLEAR DETERRENCE

Finite deterrence

Maximum deterrence

Existential deterrence

Extended deterrence

General deterrence

Flexible deterrence

Minimum deterrence

Graduated deterrence

Proportional deterrence

Specific deterrence

Minimal deterrence

Classical deterrence

Minimum credible deterrence

Perfect deterrence

AND A VARIETY OF NUCLEAR DETERRENCE DOCTRINES

Assured Destruction

Preventative/Preemptive Nuclear War

Mutual Assured Destruction

Nuclear De-escalation

Flexible Response

Option Enhancing Policy

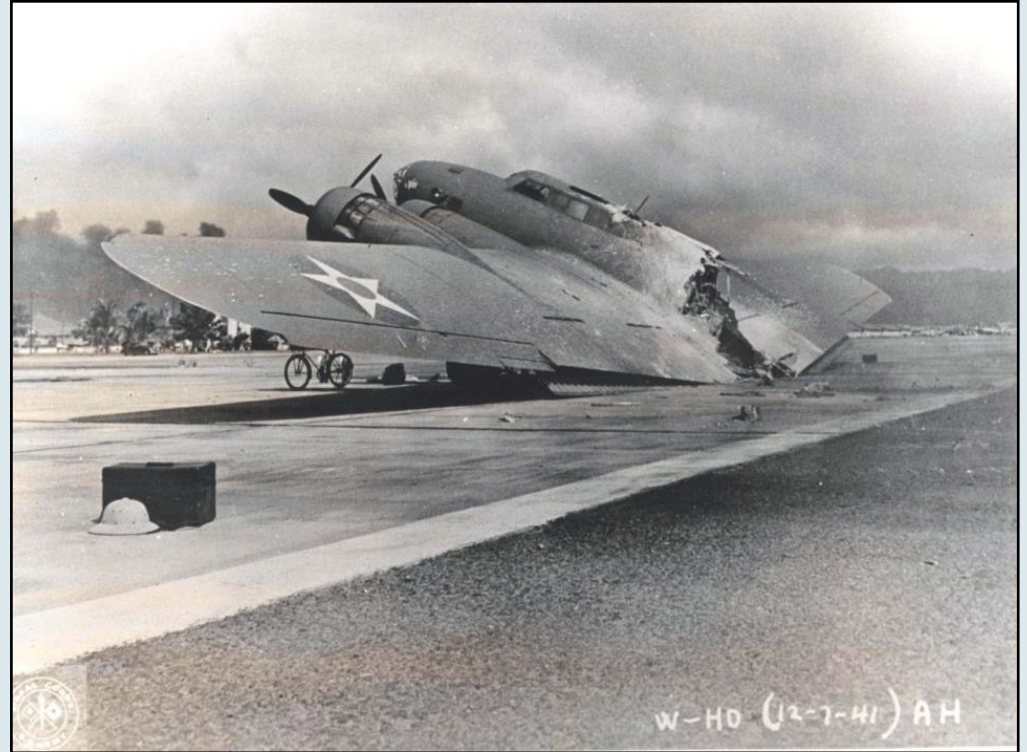
Graduated Response

Deterrence Only Strategy

II. WHAT CAN BE LEARNED FROM THE FIRST CONSCIOUS MILITARY EFFORTS AT DETECTING?

THE SECOND WORLD WAR

AERIAL DETERRENCE: BEING POISED TO STRIKE CAN INCREASE VULNERABILITY



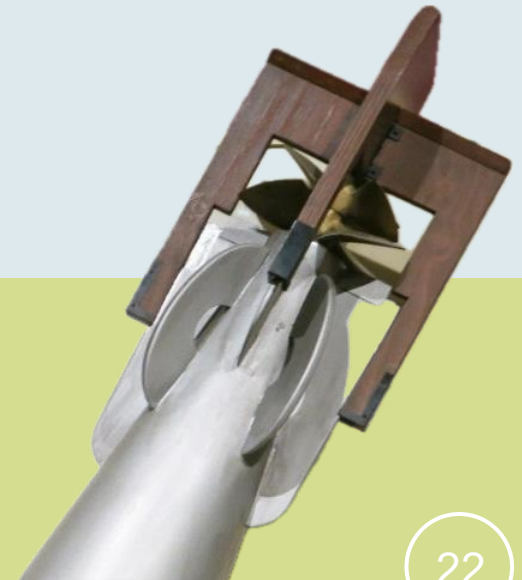
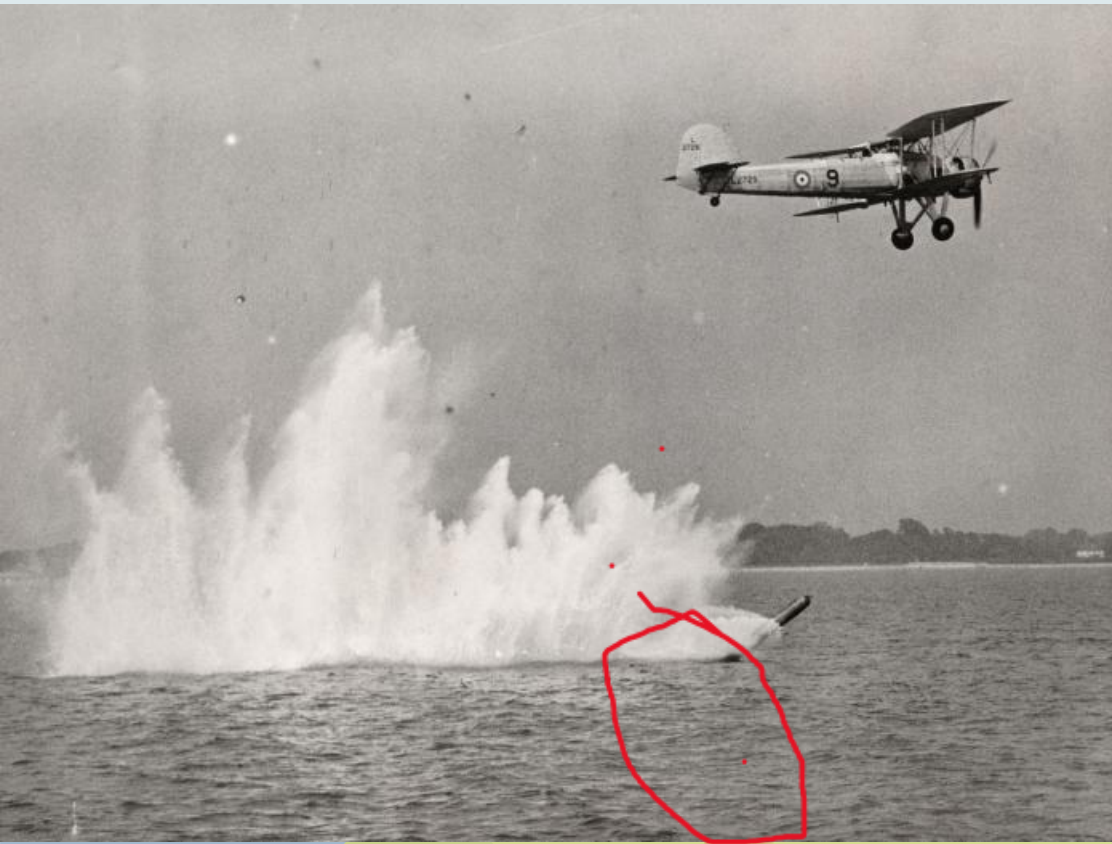
B-17 bombers at Clark Air Base in the Philippines

NAVAL DETERRENCE: DITTO

Photo # 80-G-19943 Wrecks of USS Downes & Cassin, 7 Dec. 1941



US IGNORED TARANTO ATTACK



10/1/2014

BIO CHEM DETERRENCE: SEEMED TO WORK WITH BOTH SIDES ARMED



III. WHAT WERE THE FIRST THOUGHTS ABOUT NUCLEAR DETERRENCE?

WHOEVER SHOOTS 1ST WINS



INTERNATIONAL CONTROLS ARE IMPERATIVE



**Harry Truman, Clement Attlee, and Mckenzie
King November 15, 1945**

COUNTERARGUMENTS

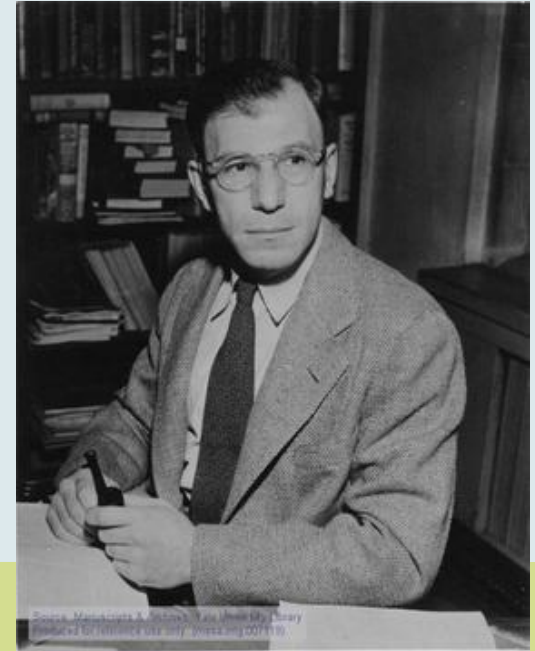
Otto Frisch, Rudolph Peierls, Bernard Brodie— nuclear deterrence targeting cities is possible, defense are not.



Frisch



Peierls



Brodie

COUNTERARGUMENTS

Jacob Viner and William L Borden—strategic forces, not cities, are the primary target, defenses and deterrence are likely, international government is not.



Viner



Borden

WHY NUCLEAR DETERRENCE IS NOT LIKE TWO MACHINE GUNNERS IN A ROOM



Gunners can use defensive barriers.



One side could have many more machine gunners.



The location of the machine gunners can be hidden.

NEXT POPULAR THOUGHT ON NUCLEAR DETERRENCE: GETTING A FEW BOMBS CREATES AN AUTOMATIC “BALANCE OF TERROR”

Winston Churchill

**“Safety will be the sturdy
child of terror, and survival
the twin brother of
annihilation”**

March 1, 1955

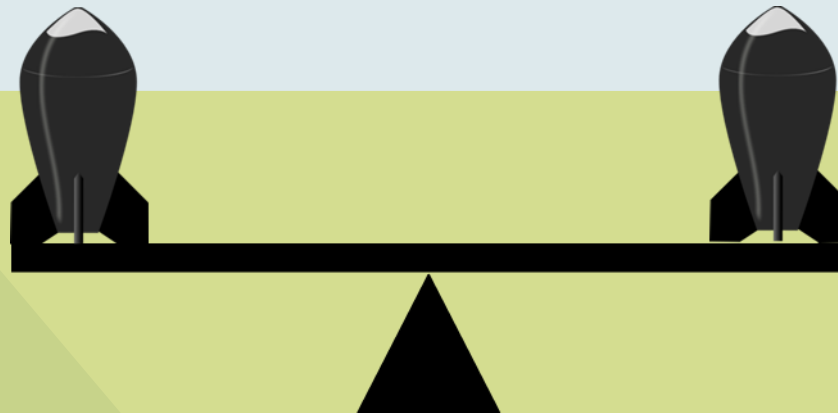
Last speech before the House
of Commons

Lester Pearson

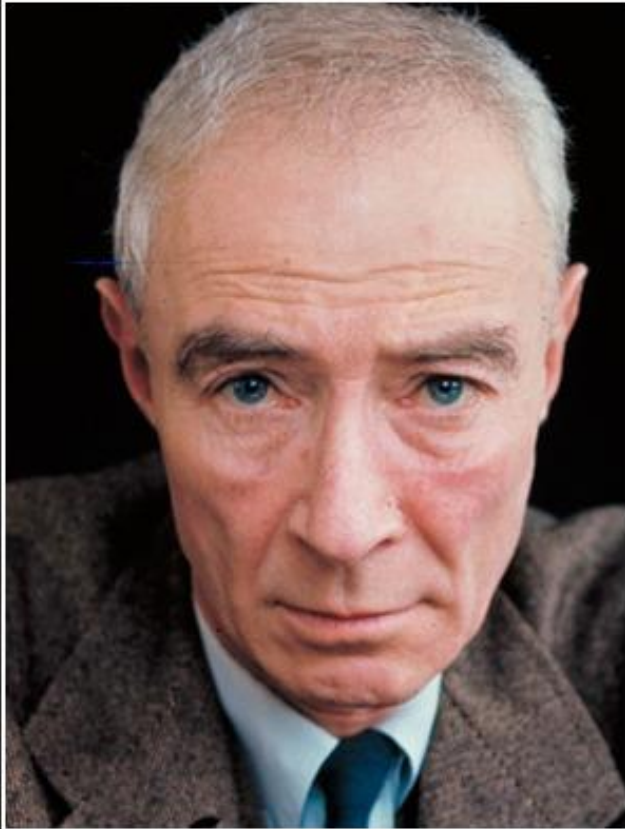
**“The balance of terror has
replaced the balance of power”**

June 1955

At the 10th anniversary of the
signing of the UN Charter

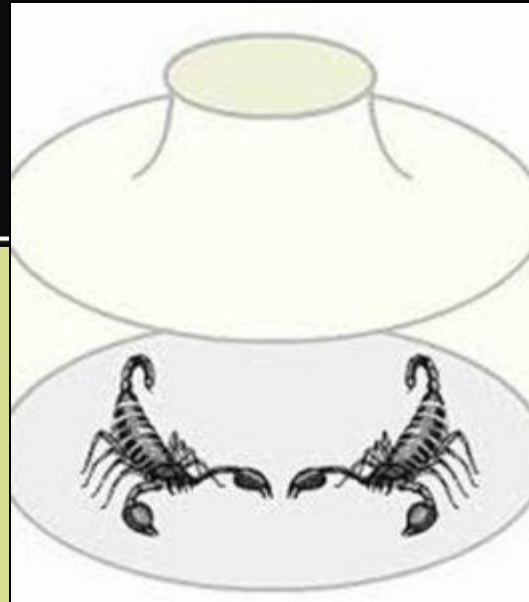


NEXT THOUGHT: NUCLEAR WAR WILL KILL BOTH SIDES



We may be likened to two scorpions
in a bottle, each capable of killing
the other, but only at the risk of his
own life.

— *J. Robert Oppenheimer* —



IV. WHAT DOES A ROBUST NUCLEAR DETERRENT FORCE REQUIRE: SURMOUNTING SIX HURDLES

HURDLE 1: STABLE PEACETIME OPERATION

vulnerable, non-storable liquid fueled Jupiter in the early 1960s

vs.

solid fueled, silo-based missile in the 1970s



HURDLE 2: ABILITY TO SURVIVE A FIRST STRIKE

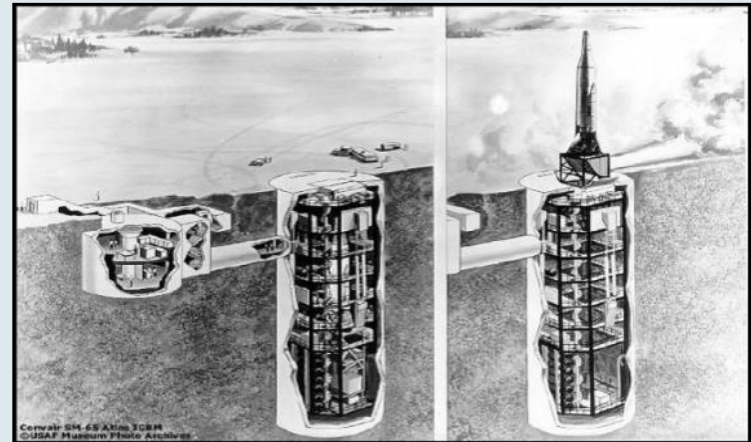
WWII Failures



Cold War Failure



HURDLE 2: SURVIVABILITY FIXES



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HURDLE 3: SECURE C³I SYSTEM

vulnerable command
centers

vs.

air-based C³I

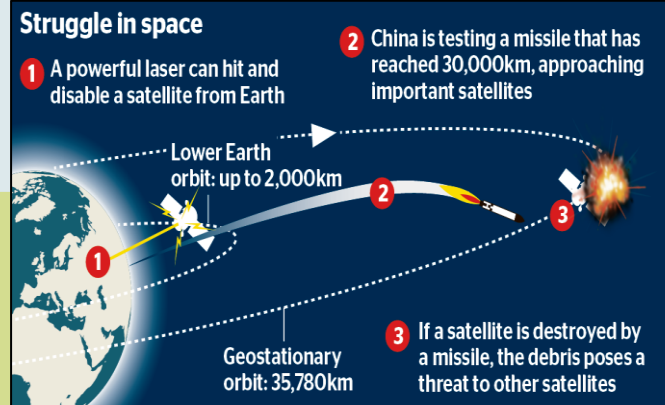
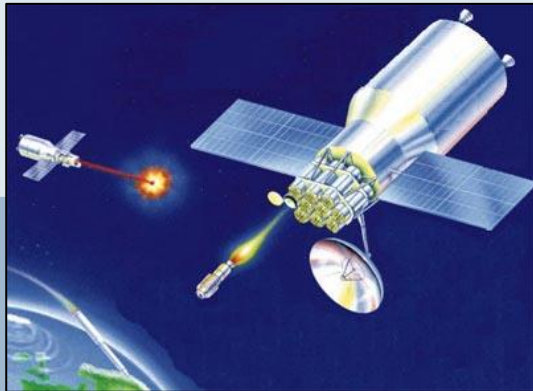


**NORAD Cheyenne Mountain
Complex**



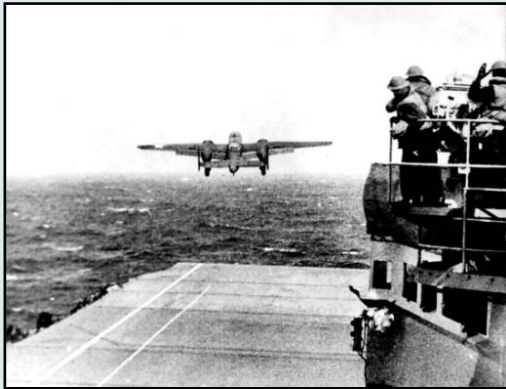
**2nd Airborne Command &
Control Squadron**

HURDLE 3: LATEST THREATS C³I



HURDLE 4: YOU NEED ENOUGH FUEL TO HIT TARGET AND/OR RETURN

Doolittle Raids: Not enough fuel; crash landed in China



**long-range
aerial refueling**



HURDLE 4: STILL IS A PROBLEM



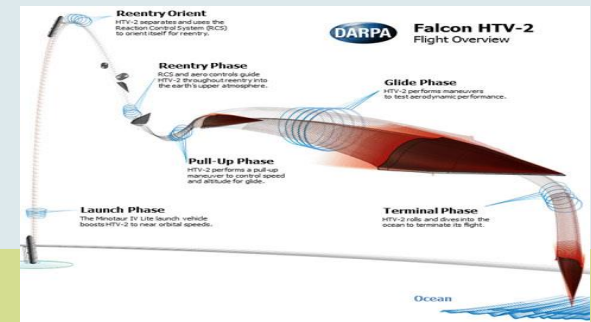
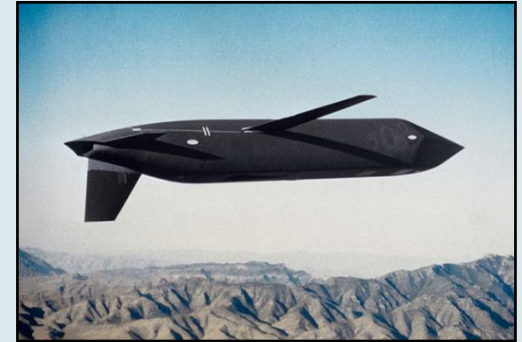
HURDLE 5: OVERCOME ENEMY AIR DEFENSES

Schweinfurt–Regensburg Mission, WWII

- Daylight raid, ball bearing works, Germany, 8/17/1943
- 376 B-17s left London, 60 shot down, 95 bombers heavily damaged, ~600 MIA, KIA.



HURDLE 5: OVERCOME ENEMY AIR DEFENSES



GOLDEN DOME: A DEFENSE DOMINANT WORLD?



HURDLE 6: DESTROYING THE TARGET DESPITE PASSIVE DEFENSES

fixed silos and command centers are vulnerable

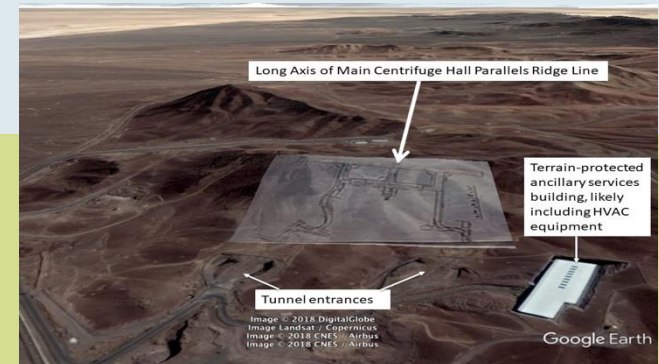


HURDLE 6: DESTROYING THE TARGET DESPITE PASSIVE DEFENSES

Latest presidential command plane



HURDLE 6: DESTROYING THE TARGET DESPITE PASSIVE DEFENSES



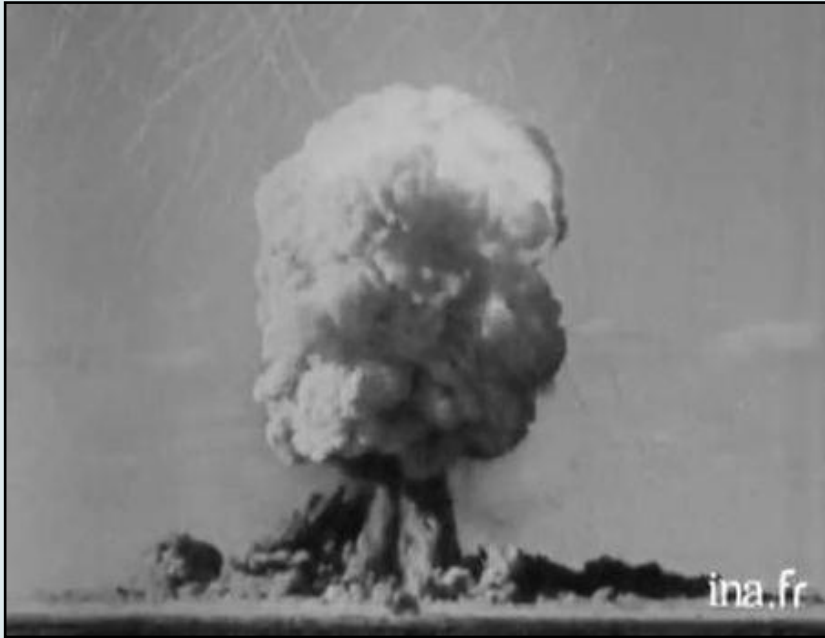
HURDLE 7: CLEARING THESE HURDLES INTO THE FUTURE—A BIT LIKE KEEPING YOUR WEIGHT DOWN AFTER AGE 30



VI. WHAT ARE THE MOST POPULAR VIEWS OF NUCLEAR DETERRENCE ABOUT?

FINITE DETERRENCE AND NO FIRST USE

FINITE DETERRENCE: A FRENCH THINKING



**1st French Nuclear Test, *Blue jerboa*,
Feb. 13, 1960**



Pierre Marie Gallois

FINITE DETERRENCE: U.S. NAVY IDEA

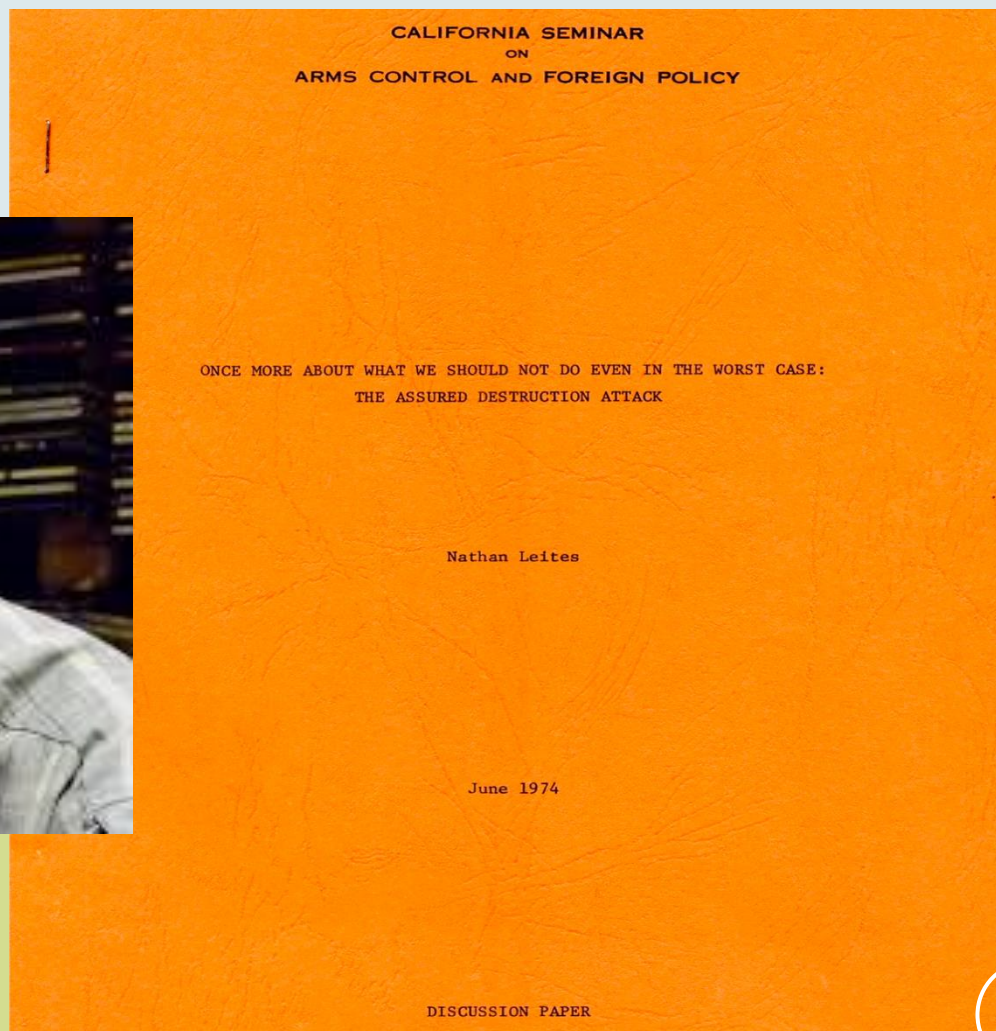


Polaris SLBM

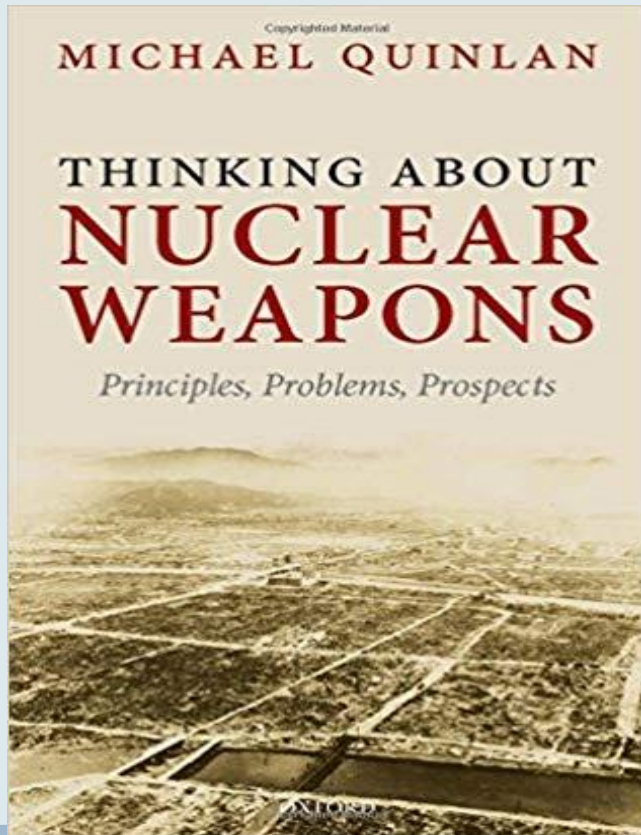


Arleigh Burke

ONCE MORE ABOUT WHAT WE SHOULD NOT DO EVEN IN THE WORST CASE: THE ASSURED DESTRUCTION ATTACK



QUINLAN QUESTIONED NO FIRST USE



PLAUSIBLE PAST CASES OF NUCLEAR DETERRENCE: DIFFICULT TO BELIEVE THAT NONE ARE VALID AT ALL

- The Korean War (1950-1953)
- Suez (1956)
- Berlin Crisis of 1960
- The Cuban Missile Crisis? (1962)
- Israeli Nuclear Weapons and the 1973 “October War”
- Were nuclear weapons essential to fortify NATO and other alliances?



CURRENT AND FUTURE CASES OF NUCLEAR DETERRENCE FAILURE?



10/1/2014