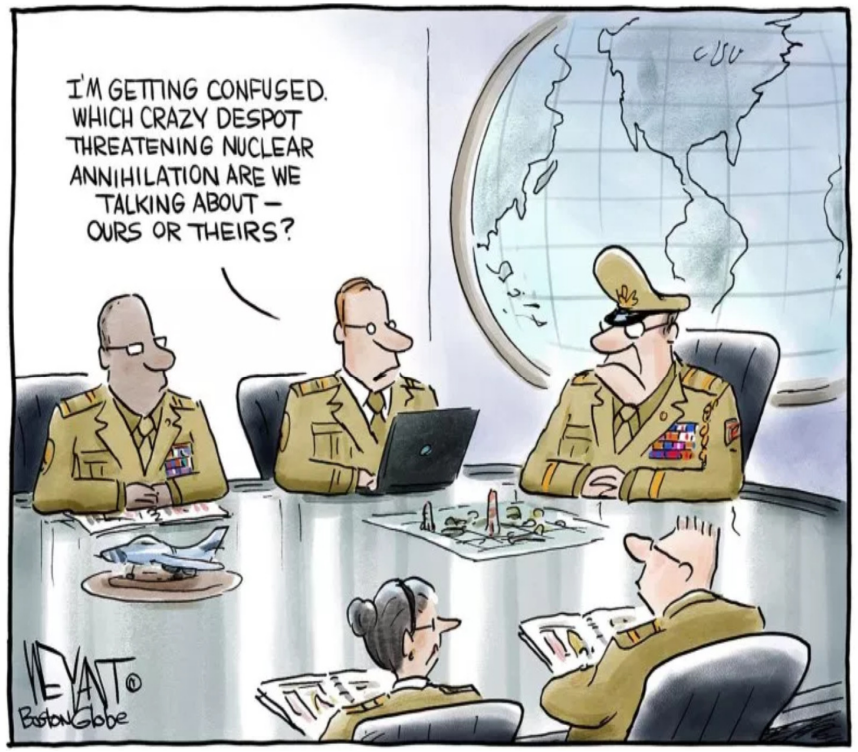
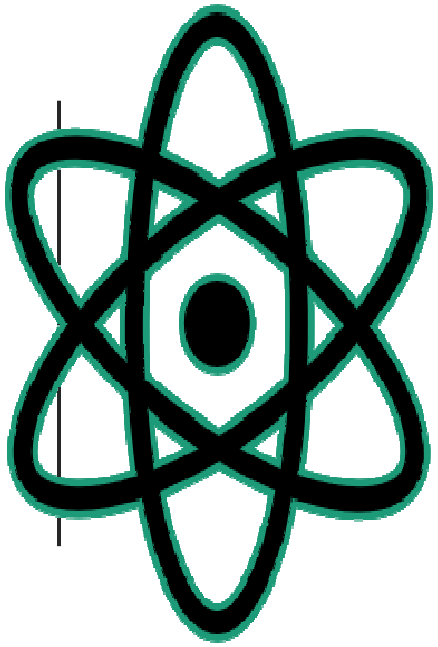
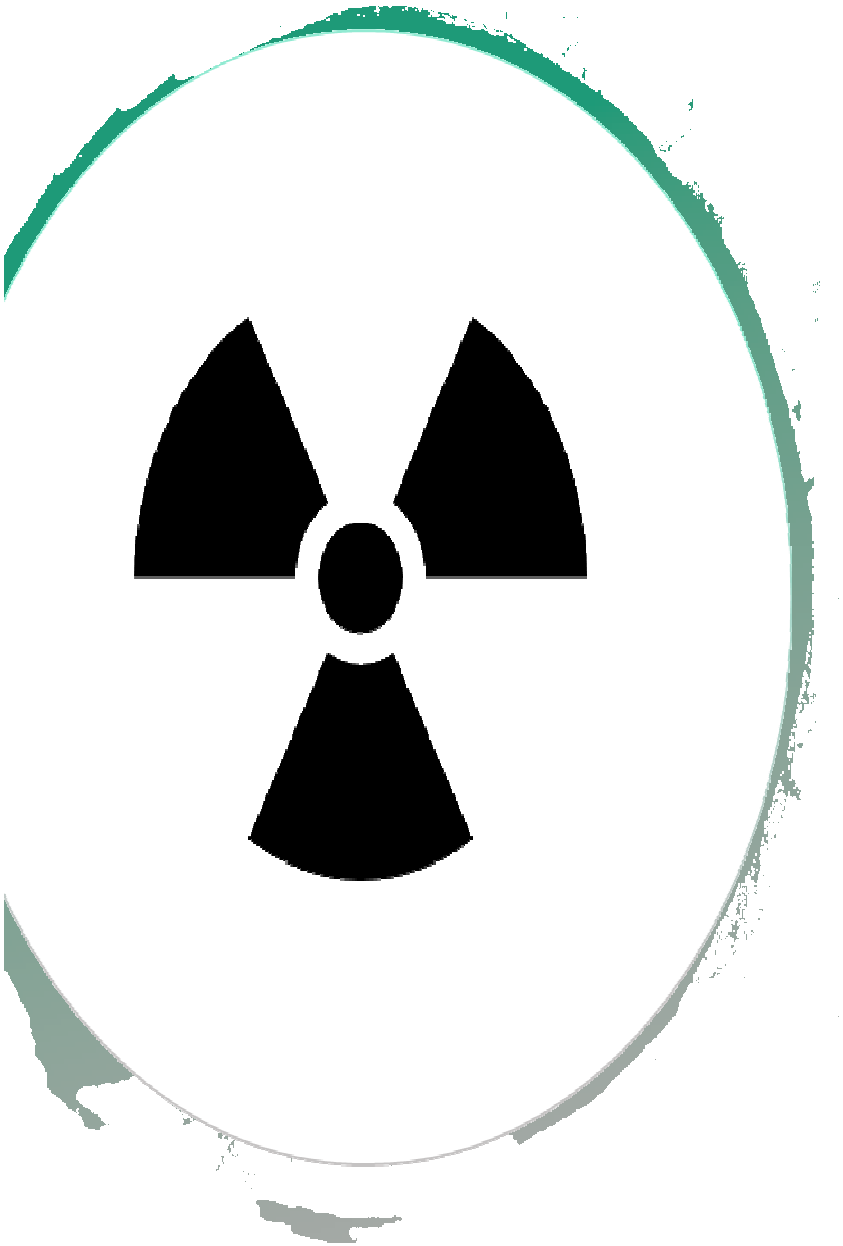




Nuclear Negotiations: Back to the Future

Joya Chatterjee



Why Nuclear Weapons

- **Security position**: 1%-4% of national GDF are spent on this, Allies, Regional power, World Power
- **Economic positions**: ability to give sanctions/have sanctions
- **Social position**: NPT membership, UN leaders, country relations US relations with North Korea vs US relations with Israel/UK/France
- **Symbolic position** : prestige. No concidence that the UN general assembly five permanent members: China, France, Russian Federation, UK, and the US have nuclear arsenals
- **Domestic incentive**: Domestic unrest, democracy, some folks keep it alive through bureaucracy
- **Domestic Capability**: Economic level, economic capability, Level of development, effort, competance
- **Supply Network**: Technology diffusion, recreation of old technology, assistance

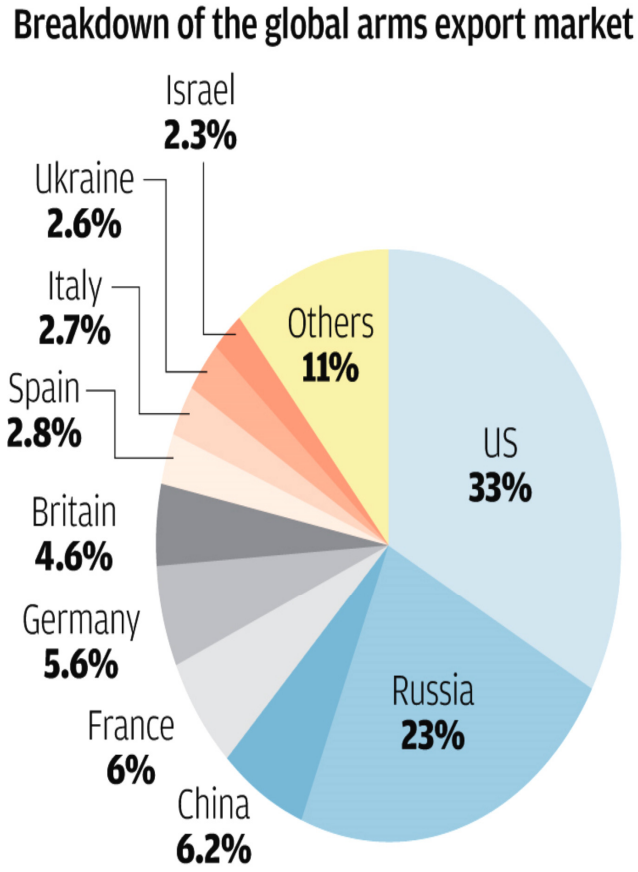
Is The Issue Nuclear Strategy Or Arms Control?

2 mysteries

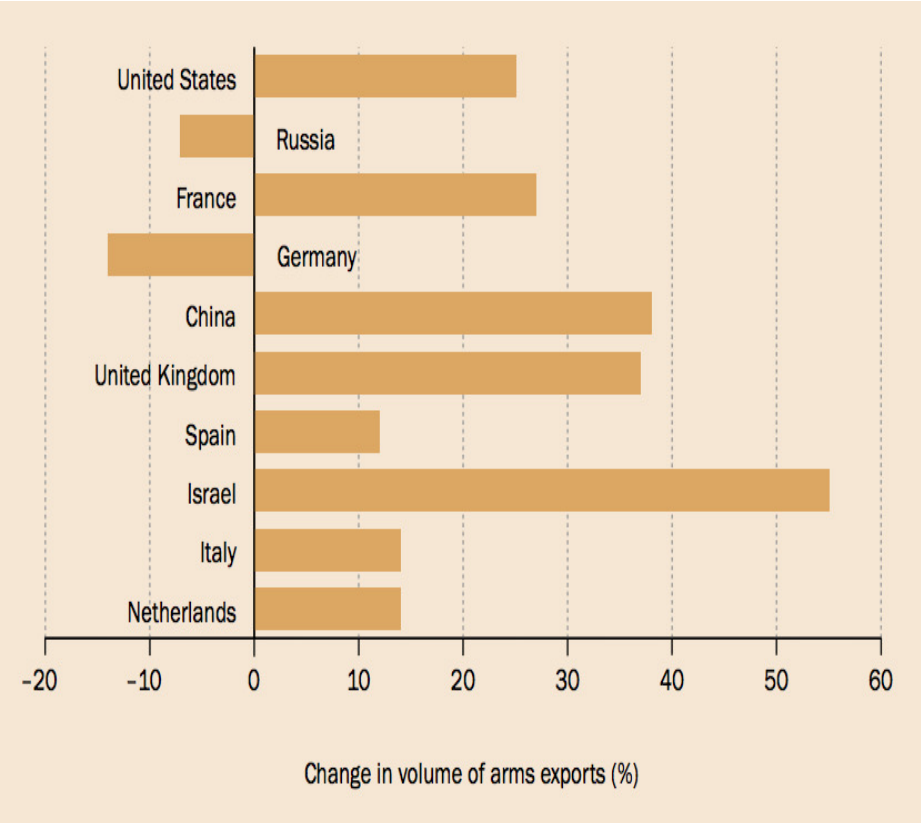
- Nuclear non use
- The missing arms race

Its much bigger than arms control

- After the Cold War, arms control and disarmament emerged out of the Liberal Project
  - The Liberal Project and Human Rights: The Theory and Practice of a New World Order
- **Now we face :**
- Rejection of science
- Rise of populism
- Decline of the Liberal Project
- Fueled by social media
  - Pros and cons
  - people are apathetic about arms control or arms disarmament now



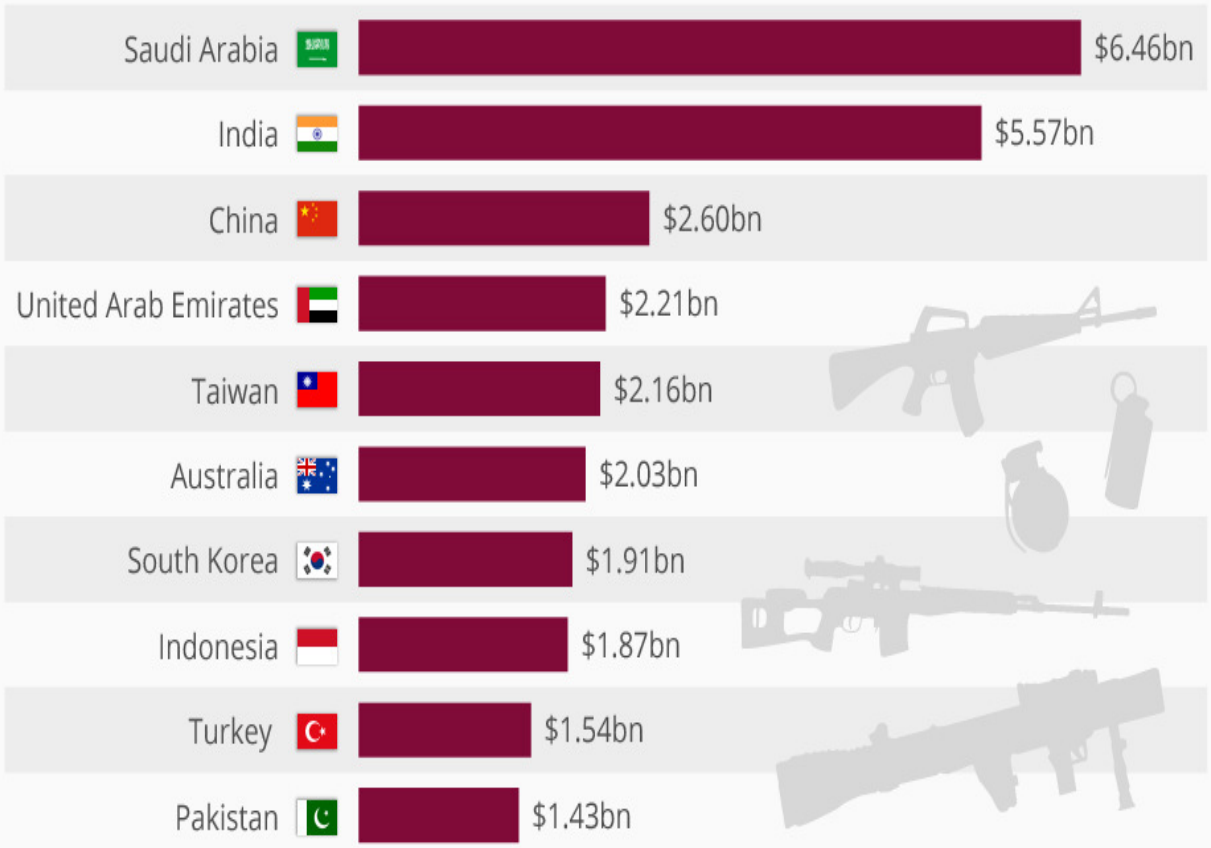
Sales of weapons around the world continue to rise in 2017 with US exports sharply up
Figures are for 2012 to 2016 Source: SIPRI



Changes in volume of major arms exports since 2008-12 by the 10 largest exporters in 2013-17

Saudi Arabia Is The World's Biggest Arms Importer

Top defence importers worldwide in 2014



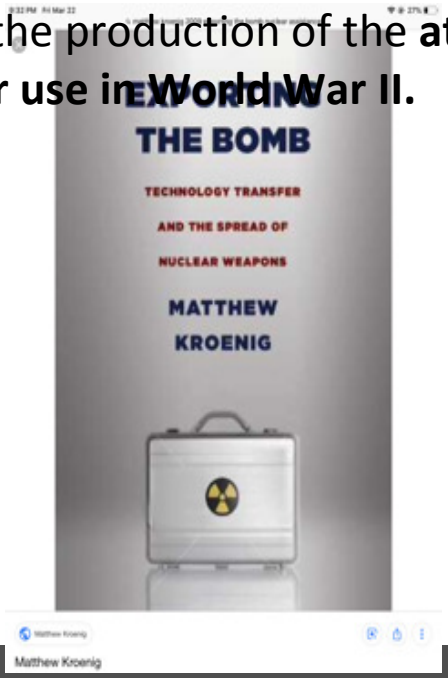
@StatistaCharts Source: IHS Jane's

statista

Created 1963-67
Installed 1967
Henry Moore (British)

Nuclear Energy at the

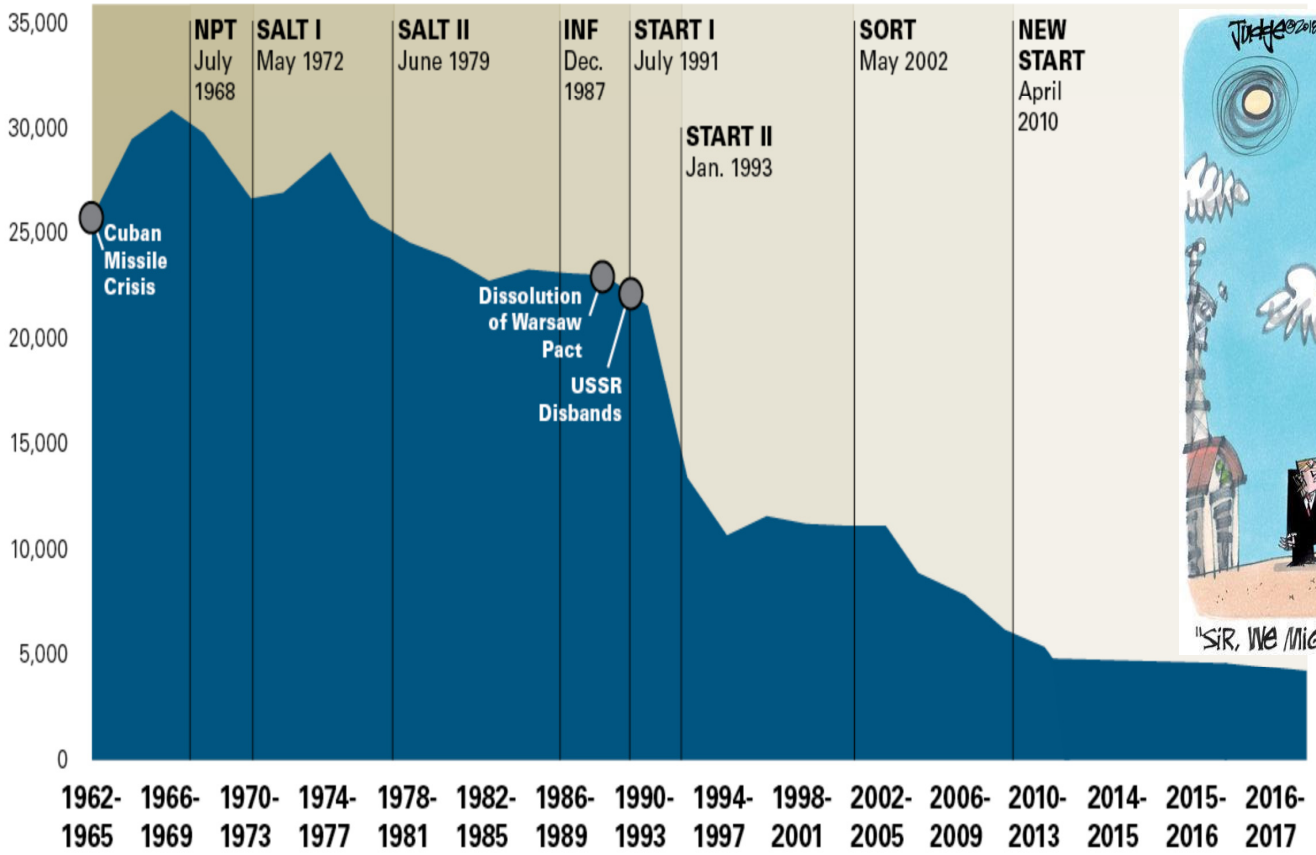
On December 2nd, 1942, a **team of scientists** led by Italian émigré Enrico Fermi set the world's first man-made, self-sustaining nuclear chain reaction in motion at Chicago Pile 1, the world's **first artificial nuclear reactor** built at the University of Chicago's Stagg Field. The event was a **decisive step** toward the creation of the **age of atomic energy**, and critically, at the time, to the production of the **atomic bomb for use in World War II.**



Matthew Kroenig

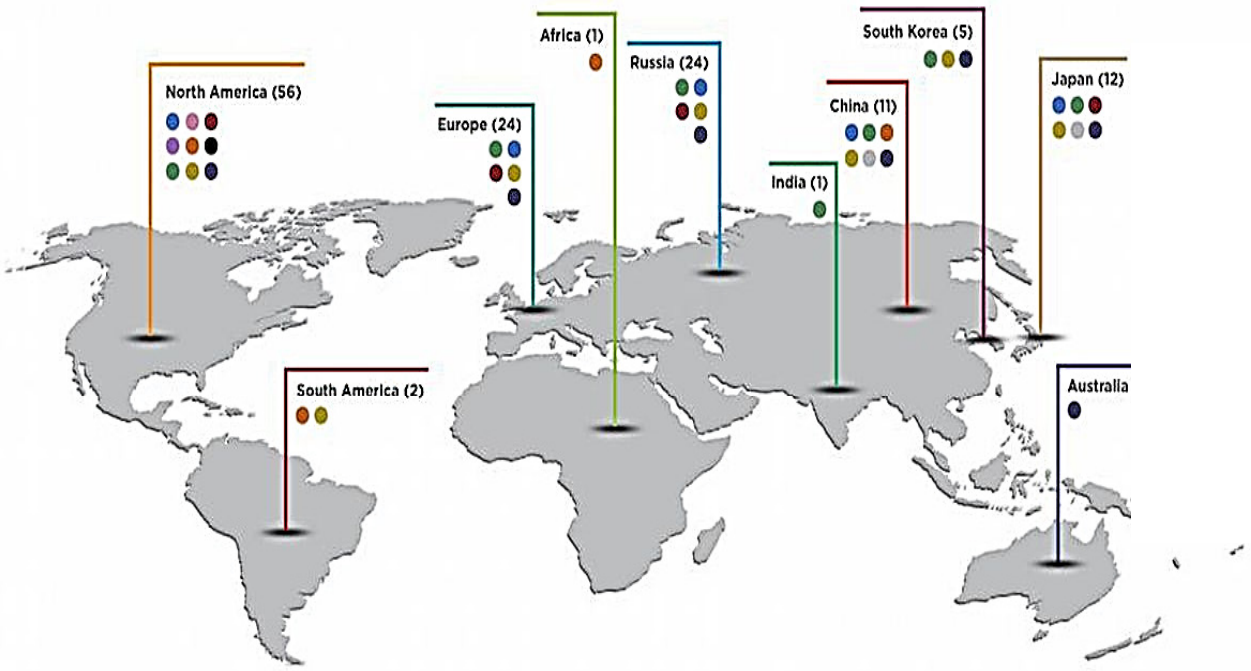
U.S. Nuclear Weapons Stockpile, 1962-2017

Since the late-1960s, the United States and Russia have signed a series of nuclear arms treaties that have contributed to steep cuts in their active and inactive nuclear warhead stockpiles.



Sources: U.S. Department of State, U.S. Department of Defense, Arms Control Association. Updated: January 19, 2017.

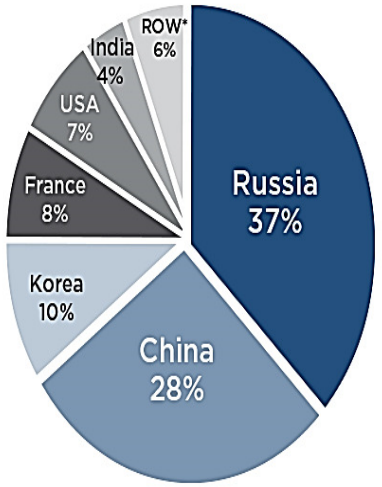
The Global Race for Advanced Nuclear



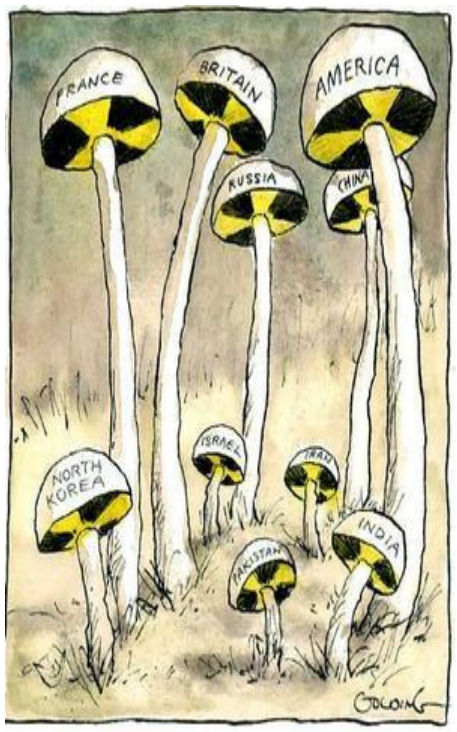
Reactor Design Types

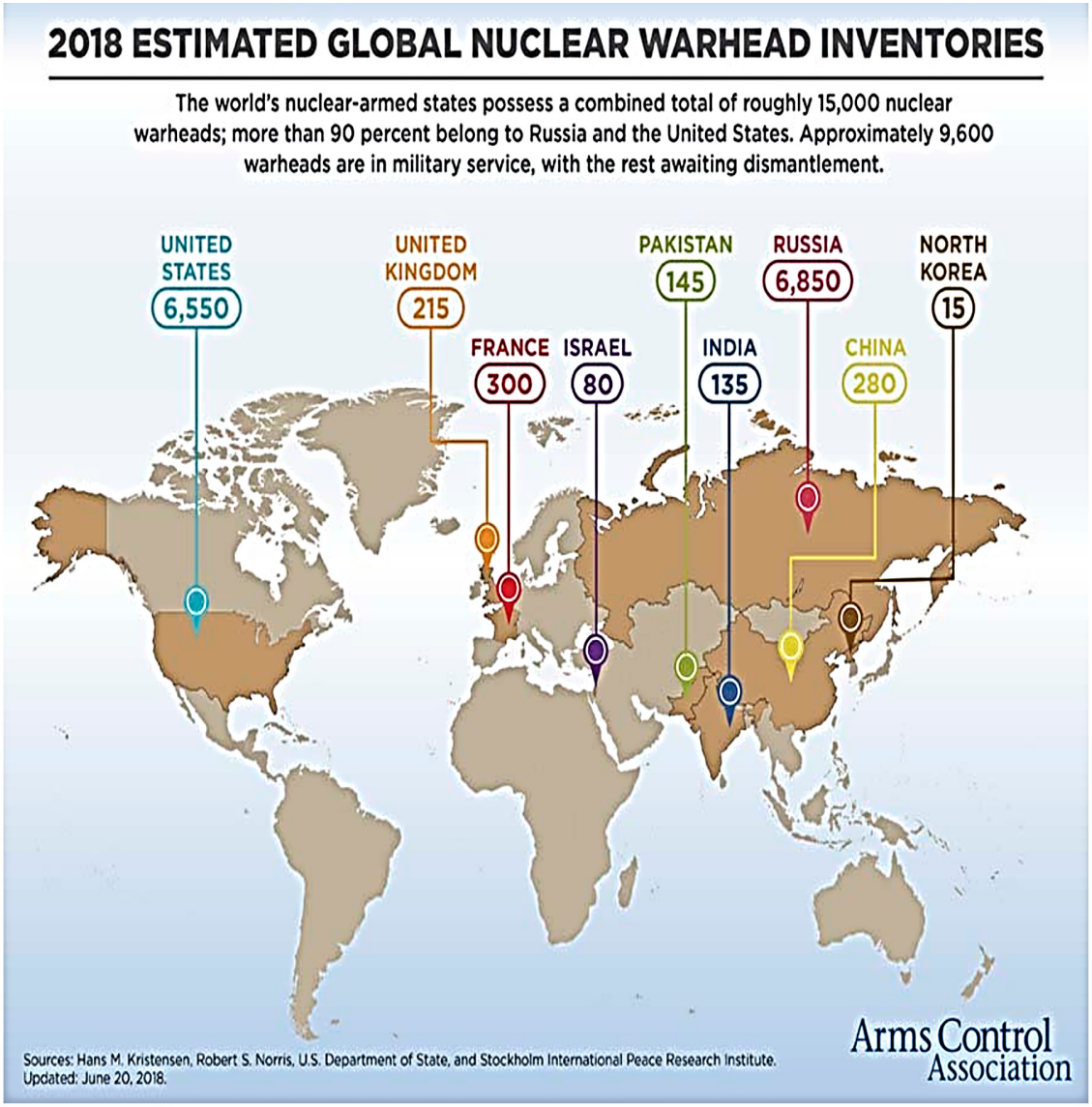
- Molten Salt Reactor
- Fluoride Salt-cooled High Temperature Reactor
- Liquid Metal-cooled Fast Reactor
- High Temperature Gas Reactor
- Pebble Bed Reactor
- Nuclear Battery Reactor
- Small Modular Reactor
- Fusion Reactor
- Super-Critical CO_2 Reactor
- Super-Critical Water-Cooled Reactor

third way
fresh thinking



Getting Back in the Game: A Strategy to Boost American Nuclear Exports


FRANCE
BRITAIN
AMERICA
RUSSIA
CHINA
NORTH KOREA
ISRAEL
INDIA
PAKISTAN


2018 ESTIMATED GLOBAL NUCLEAR WARHEAD INVENTORIES
The world's nuclear-armed states possess a combined total of roughly 15,000 nuclear warheads; more than 90 percent belong to Russia and the United States. Approximately 9,600 warheads are in military service, with the rest awaiting dismantlement.
UNITED STATES 6,550
UNITED KINGDOM 215
FRANCE 300
ISRAEL 80
PAKISTAN 145
INDIA 135
RUSSIA 6,850
CHINA 280
NORTH KOREA 15
Sources: Hans M. Kristensen, Robert S. Norris, U.S. Department of State, and Stockholm International Peace Research Institute.
Updated: June 20, 2018.
Arms Control Association

2018 Estimated Global Nuclear Warhead Inventories

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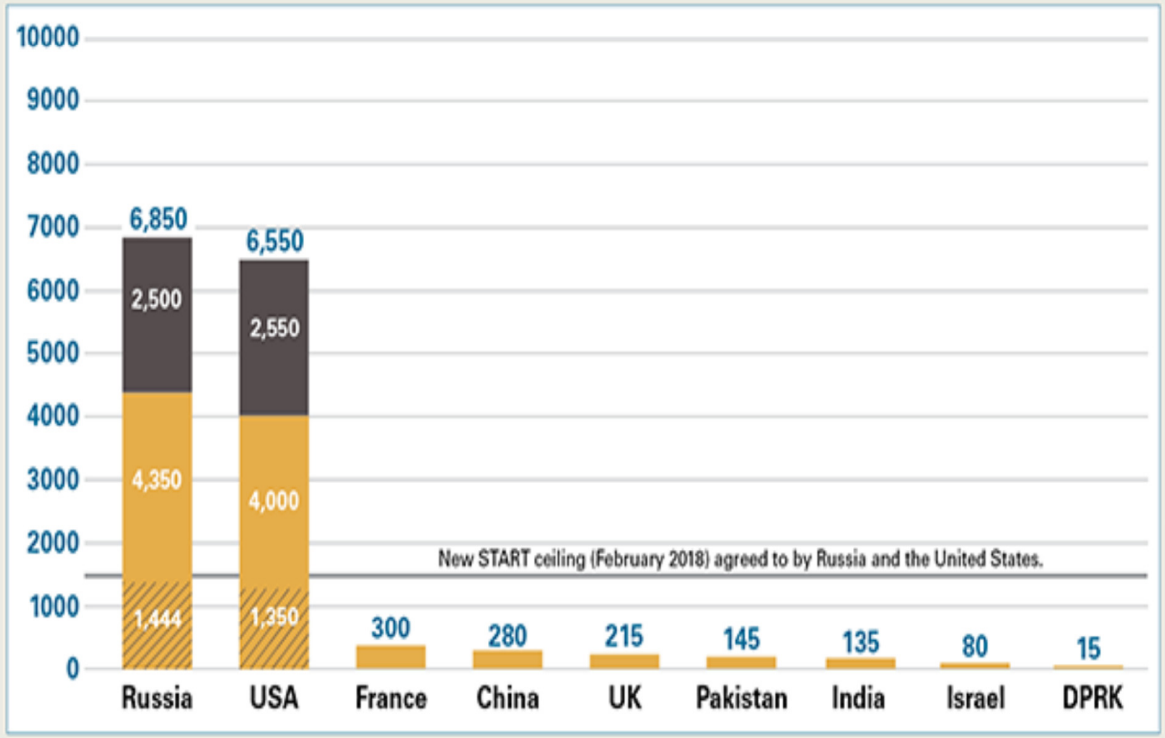


Retired: warheads no longer in the stockpile but remain intact as they await dismantlement

Stockpiled: warheads assigned for potential use on military delivery vehicles; includes active and inactive warheads.

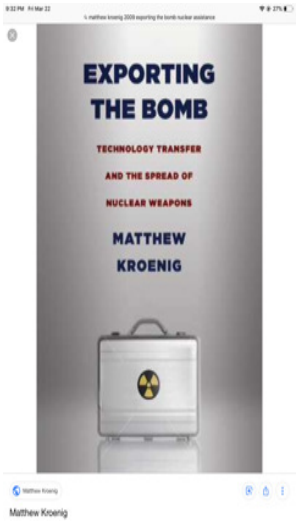
Strategic Deployed: warheads on ballistic missiles and at U.S. bomber bases. *Numbers based on New START counting rule which counts operationally deployed ballistic missile warheads and heavy bombers.*

Arms Control Association

Sources: Hans M. Kristensen and Robert S. Norris; U.S. Department of State; Stockholm International Peace Research Institute. Updated June 20, 2018.

prospective entrants to the global arms control regime:

BROOKINGS' CANDIDATES FOR MULTILATERAL ARMS CONTROL



Matthew Kroenig

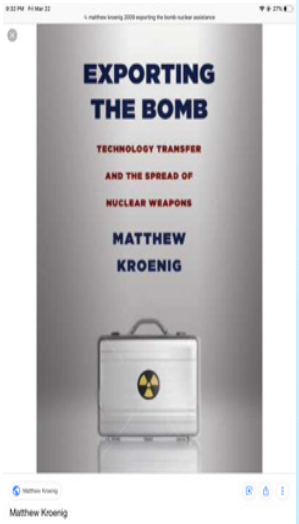
Who has helped?

Taiwan
Egypt
Brazil
Germany
Syria
France
Japan
North Korea
Israel
Pakistan
Libya
Soviet Union
Iran
China
Algeria
Italy
Iraq

1975
1980–1982
1979–1994
2004–2007
1971–1974
1959–1965
1974–1982
1997–2002
1997–2001
1987–1995
1981–1983, 1985–1986
1984, 1987, 1989, 1995
1958–1960
1986–1991
1976–1978

1940 1950 1960 1970 1980 1990 2000 2010

Kroenig, Matthew. 2009. "Exporting the Bomb: Why States Provide Sensitive Nuclear Assistance." *American*

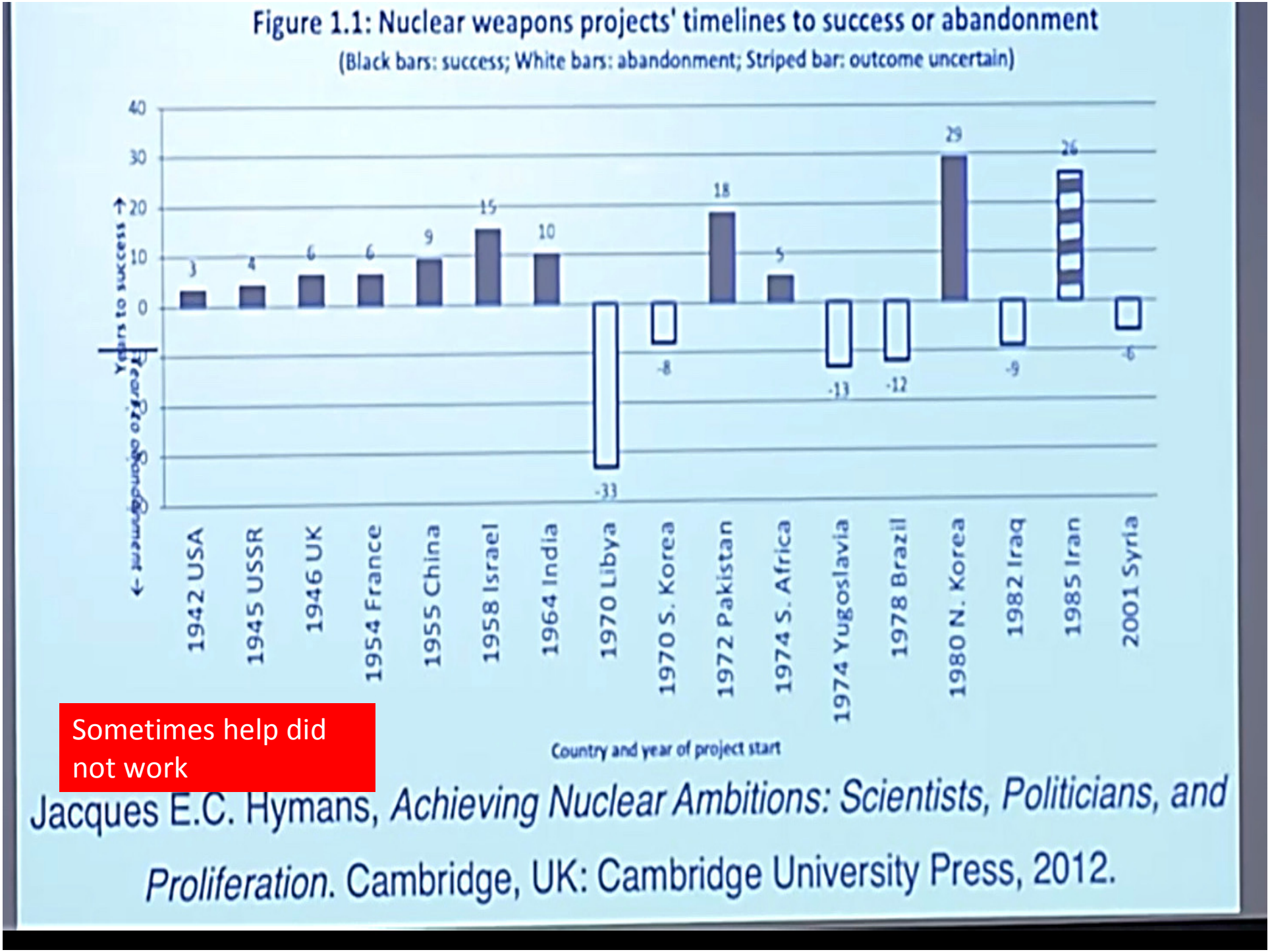


Matthew Kroenig

Who has helped?

Taiwan
1975
Egypt
1980–1982
Brazil
1979–1994
Germany
Syria
2004–2007
France
1971–1974
Japan
1959–1965
1974–1982
North Korea
1997–2002
United Kingdom
Israel
Pakistan
1997–2001
Libya
1987–1995
1981–1985, 1994–1996
Iran
Soviet Union
1984, 1987, 1989, 1996
1958–1960
China
United States
Algeria
1986–1991
Italy
1976–1978
India
Iraq
South Africa
1940
1950
1960
1970
1980
1990
2000

Kroenig, Matthew. 2009. "Exporting the Bomb: Why States Provide Sensitive Nuclear Assistance." *America*



Sometimes help did not work

Jacques E.C. Hymans, *Achieving Nuclear Ambitions: Scientists, Politicians, and Proliferation*. Cambridge, UK: Cambridge University Press, 2012.

Safeguards to Prevent Nuclear Proliferation *(Updated September 2018)*

- **Most countries participate in international initiatives designed to limit the proliferation of nuclear weapons.**
- **The international safeguards system has since 1970 successfully prevented the diversion of fissile materials into weapons.**
- **Its scope has been widened to address undeclared nuclear activities.**
- **The IAEA undertakes regular inspections of civil nuclear facilities and audits the movement of nuclear materials through them.**
- **Safeguards are backed by diplomatic and economic measures**
- Over almost 50 years the International Atomic Energy Agency's (IAEA) safeguards system under the Nuclear

Safeguards problems 1980s-90s http://www.world-nuclear.org/information-library

- Iraq, Iran and North Korea illustrate both the strengths and weaknesses of international safeguards.
- Iraq and Iran had set up elaborate equipment elsewhere in an attempt to enrich uranium, in Iraq's case, to weapons grade
- North Korea used research reactors (not commercial electricity-generating reactors) and a reprocessing plant to produce some weapons-grade plutonium.
- The weakness of the NPT regime lay in the fact that no obvious diversion of material was involved. The uranium used as fuel probably came from indigenous sources, and the key nuclear facilities concerned were built by the countries themselves without being declared to the IAEA or placed safeguards arrangements.
- Iraq, as an NPT party, had to declare all facilities but did not Nor, more recently, did Iran
- In North Korea, the activities concerned took place before the conclusion of its NPT safeguards agreement, using a Russian "research" reactor and clandestine reprocessing plant.

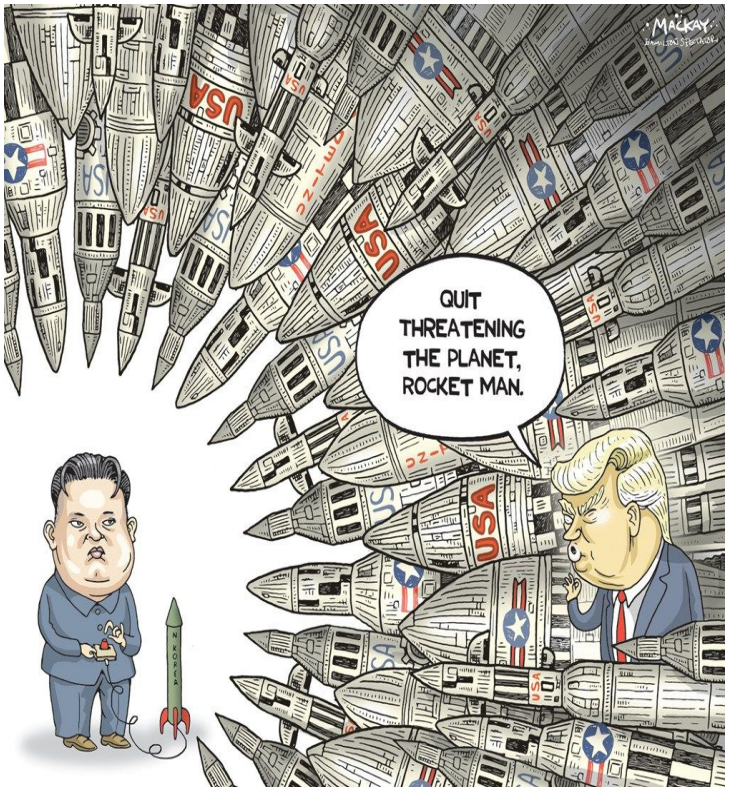
Just when we thought we took care of all the weapons of mass destruction (Iran/Iraq)

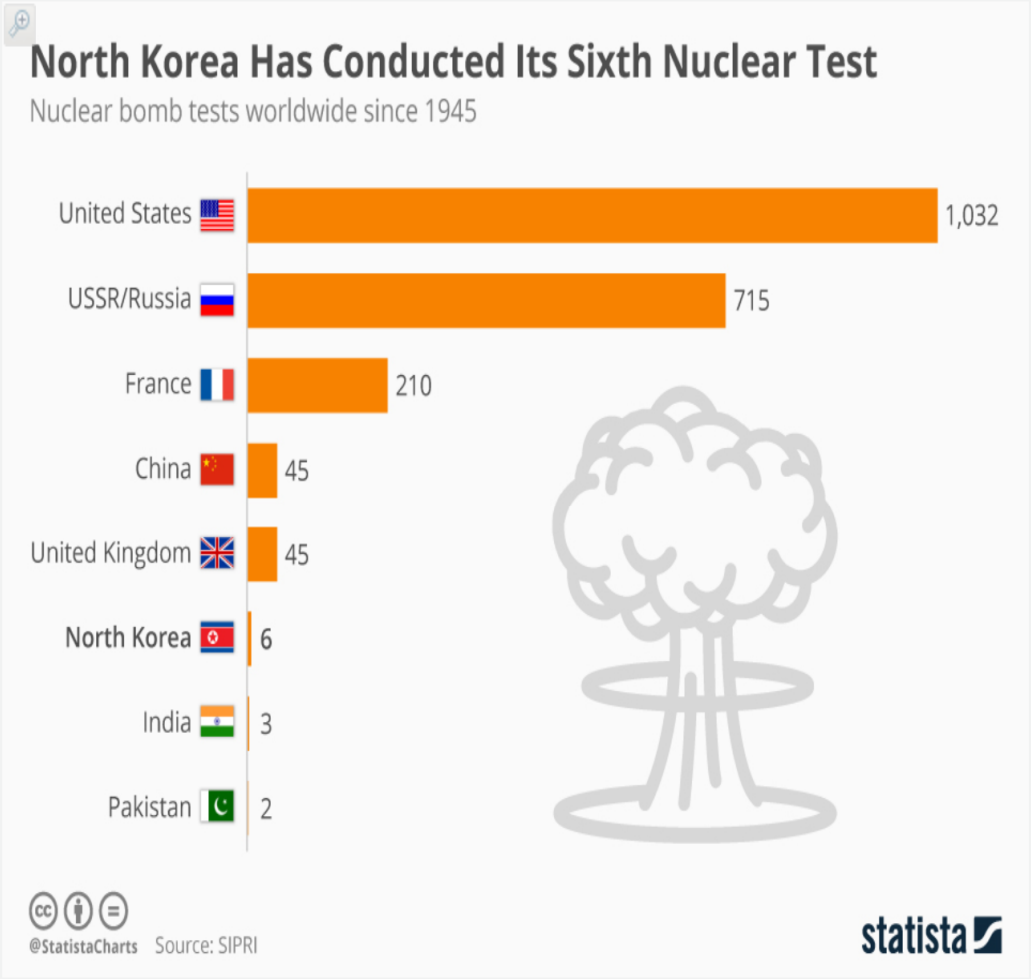
Who rears his head ……

Kim Jong-un

Reddit

Kim Jong-un watching the rocket take off looks like a Pink Floyd ...


MACKAY
QUIT THREATENING THE PLANET, ROCKET MAN.
USA
KOREA

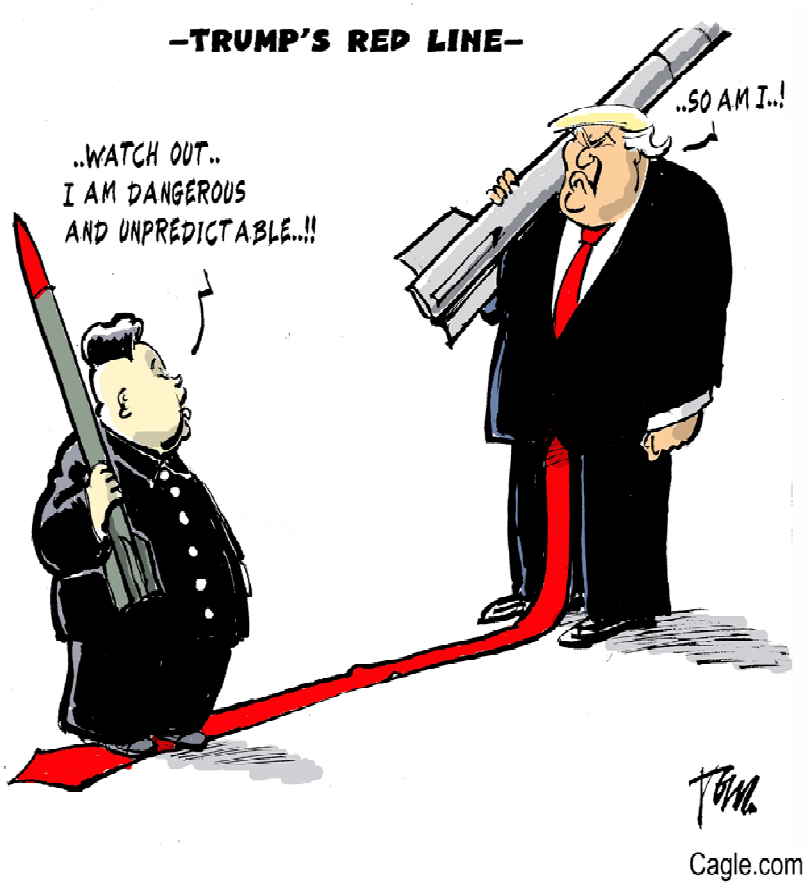

North Korea Has Conducted Its Sixth Nuclear Test
Nuclear bomb tests worldwide since 1945
United States 1,032
USSR/Russia 715
France 210
China 45
United Kingdom 45
North Korea 6
India 3
Pakistan 2
@StatistaCharts Source: SIPRI
statista

The Art of Presidential Negotiation

- No agreement
- Rejects formality, treaties, and MOU's
- Concentrates on personal power and discretion
- Eliminates role of state department, congress, and experts
- Benefits personally

Creates a crisis by building up tension, then brings it back to what was before and takes credit for solving a non issue

Art of the N.Korea
no deal



Are we expecting and Eureka moment

- Are we waiting for a disarmament?
- Are we waiting for a new idea?
- Or do we know the solution already?

Some Thoughts

- Nuclear policy isn't about nuclear policy anymore
- You cant go there from here
- Develop a bigger picture : don't study arms control to understand arms control
- More than ever before to manage a nuclear world we must become more sensitive to the world around us
- Above all…how to make policy in an era of global populism

"The President wants to know if North Korea's missiles can reach Michael Cohen."

References

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https://www.newyorker.com/news/news-desk/how-civilian-firms-fact-check-north-koreas-denuclearization-efforts

https://www.newyorker.com/news/our-columnists/after-all-the-swagger-trumps-talks-with-north-korea-collapse

https://www.visualcapitalist.com/worlds-nuclear-weapons/

https://m.youtube.com/watch?v=KzkPv1Zr0Nc

https://m.youtube.com/watch?v=b6Td8vlzE9g

Discussion Questions

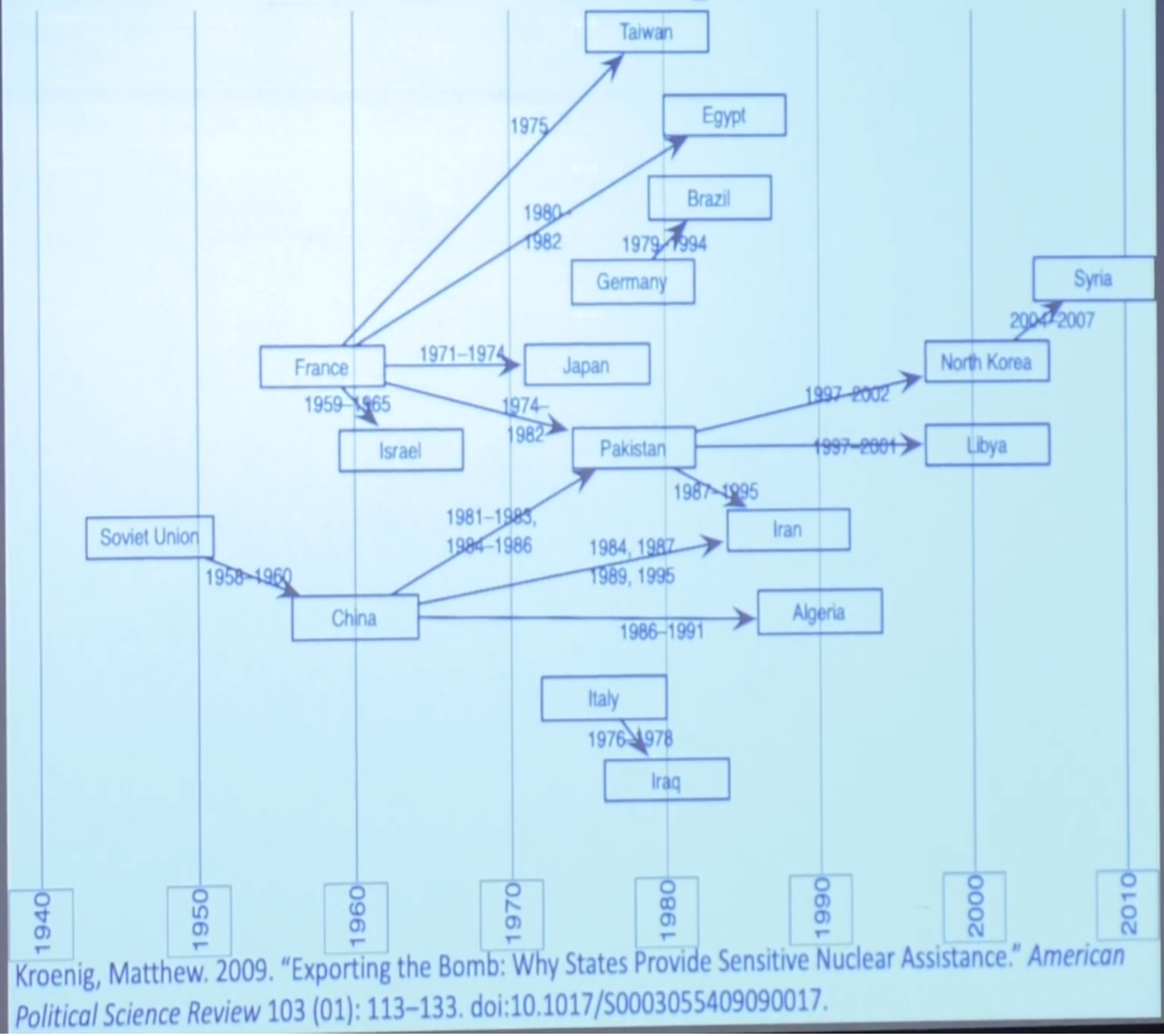
- What are the political factors driving nuclear production and negotiations today? Why are nuclear weapons still produced if there are agreements and treaties in place.
- How have nuclear agreements impacted negotiations in the past? How will Trumps withdrawal from agreements e.g JCPOA (Joint Comprehensive Plan of Action, Iran deal) impact the US and its allies.
- N.Korea is arguably the nation with the most unpredictable nuclear arsenal and capabilities…what role can the US play in disarming this threat? How can strategies for disarming be useful in this current situation?
- Developed in 1940..nuclear weaponry is a relatively recent issue in foreign policy…how has history influenced and how have nuclear negotiations evolved since the emergence in the 40's?
- Last summer Donald Trump announced the Space Force to protect American interest in outer space…how will this impact nuclear negotiations? Would it increase security

Back up slides

Nuclear Suppliers Group (NSG) http://www.world-nuclear.org/information-library

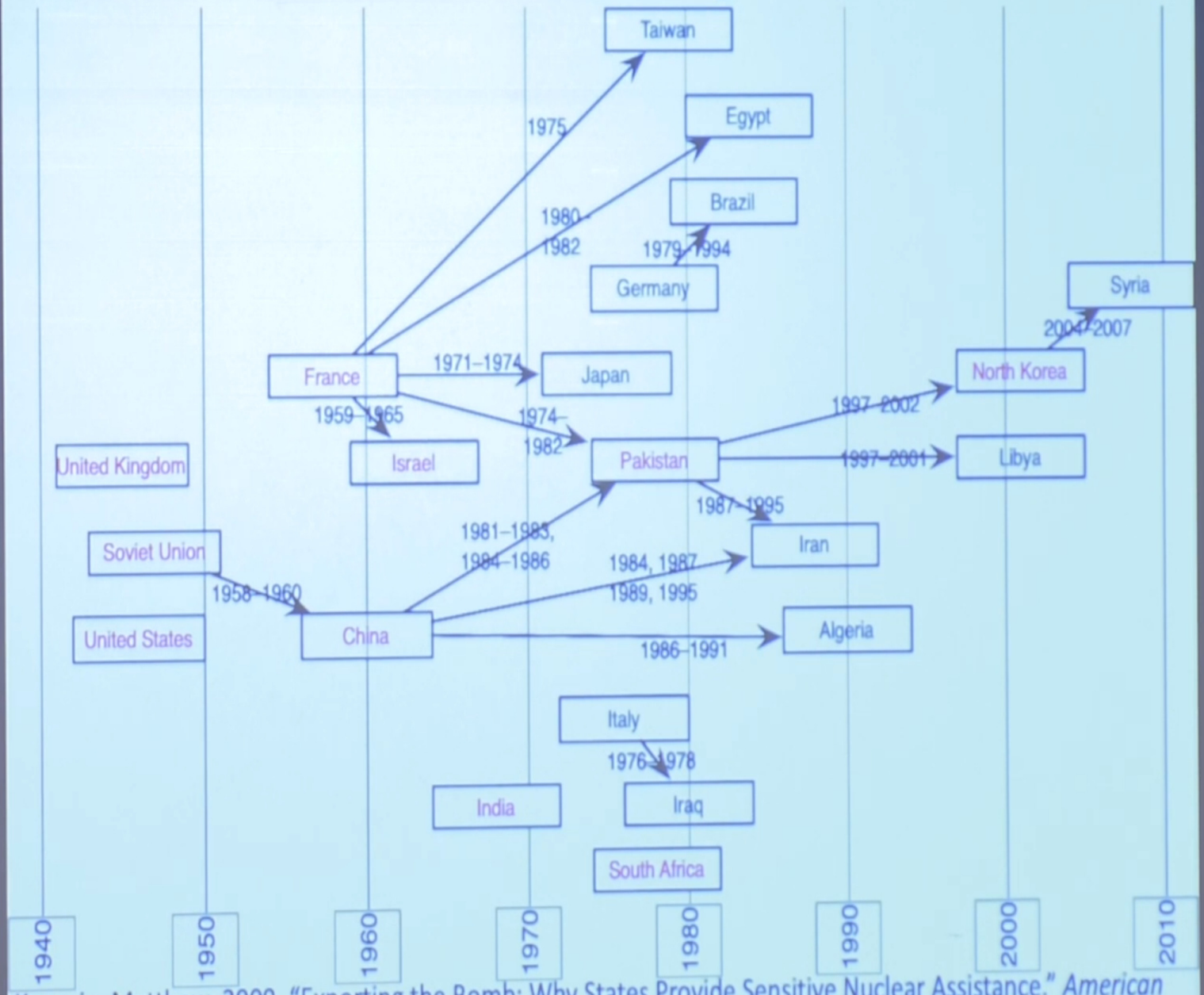
- The NSG, formerly known as the London Group or London Suppliers Group, was set up in 1974 after India exploded its first nuclear device. The main reason for the group's formation was to bring in France, a major nuclear supplier nation which was not then party to the NPT.
- The NSG Guidelines were to ensure that transfers of nuclear material or equipment would not be diverted to unsafeguarded nuclear fuel cycle or nuclear explosive activities,
- The Guidelines also recognised the need for physical protection measures in the transfer of sensitive facilities, technology and weapons-usable materials, and strengthened re-transfer provisions.
- The NSG began with seven members – the USA, the

Who has helped?



Kroenig, Matthew. 2009. "Exporting the Bomb: Why States Provide Sensitive Nuclear Assistance." *American Political Science Review* 103 (01): 113–133. doi:10.1017/S0003055409090017.

Who has helped?



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