

HST-415-14

The End of the Cold War

The Late-Cold War Arms Race

- *Detente*: Gradual easing of Cold War tensions after Cuban Missile Crisis, esp. By 1970s
- **Many treaties**: Partial test Ban treaty (no atmospheric nuclear testing); Outer Space treaty: no WMDs in space or in the moon; Nuclear Non-Proliferation treaty: limiting spread of nuclear weapons; Strategic Arms Limitation Talks: how many weapons we have deployed -- have to be verifiable; Anti-Ballistic Missile Treaty: US and USSR limit ABM systems to one site per country; Biological Weapons Convention: banning the production and use of biological weapons (no verification!)
- *Arms Control*: Diplomatic efforts to mitigate and slow Cold War arms race
- Compare with earlier international control and disarmament movements -- seen as more realistic, less idealistic
- Track II diplomacy: scientists meeting unofficially to pre-discuss possible treaties, a way to float new ideas
 - Pugwash Conferences: scientists given more important policy roles stuff like that
 - Figure out who the scientist minder was -- like in the Queen's Gambit (with the Russian grandmaster)
- Complicated politics: ending the Vietnam war, opening up China and exploiting Sino-Soviet split
- Soviet Union buoyed by oil revenues, finally gets to point of nuclear parity with the USA
- Warhead development essentially hits zenith
- Soviet-Afghan War (1979-89): Afghan were friends w Soviets but then started appealing to Americans

Ronald Reagan's Cold War II

- Takes office in 1981
- Ends detente: for both domestic and international reasons
- Pushes idea that USA has fallen behind USSR, is newly threatened, must have huge nuclear increases
- Pushed for increasing the American nuclear threat towards USSR: producing B-1 bombers, deploying MX missiles, etc.

European Nuclear Tensions

- In 1970s-1980s: SLBMs and intermediate range missiles in Europe make the USSR very nervous: very little warning time before a decapitating strike on Moscow
- Soviets worry Pershing II missiles are first strike weapons
- Soviet generals not entirely confident in Soviet leaders ability to make the final decision that quickly
- Not confident that their command control system will be able to survive a first strike

Systema Perimetr (Dead Hand)

- In time of extreme crisis, Soviet Premier can designate generals to make the decision about using the bomb
- Soviet generals can, if first strike seems eminent, send a dead hand alert to a hardened bunker

- In soldiers in bunker lose contact with Moscow, they have permission to launch a radio equipped communication missile
- Which signals all other Soviet ICBMs across country to launch

Anti Nuclear Weapons Sentiment Rises

- Huge demonstrations against US nuclear weapons in the USA and Western Europe - European populations resent being hosts of US weapons, targets of Soviet ones
- **Nuclear Freeze Campaign**
- Soviets are terrified that the US is going to start nuclear war - Project Ryan searches for evidence

Strategic Defense Initiative

- In 1970s, US pursued numerous novel anti-ballistic missile systems, including space-based ones
- In 1983: teller tells Reagan about alleged breakthroughs in one method - the nuclear pumped X-ray laser
- Reagan gives speech in march 1983 announcing the strategic defense initiative, a space-based anti-ballistic missile shield
- Hundreds of billions of dollars spent on SDI program (Star Wars by critics)
- Major criticisms: 1. Not clear it could ever be made to work; 2. Completely overhyped by Teller and the other Livermore scientists; 3. Even if it did work, no guarantee that it would work perfectly (would not be hard to fool); 4. Looks to the USSR like a first strike weapon - a shield that destroys the balance of deterrence

War Scares

- November 1979: NORAD early warning computers report Soviets have launched full attack against USA - US prepares for retaliation
- Turns out that a simulation had been loaded on accident.
- June 1980: NORAD early-warning computers report isolated missile launches from USSR
- Turns out that a 46 cent chip was malfunctioning and spitting random data into the system.
- September 1983: After numerous US probing incursions into Soviet airspace, Soviets accidentally shoot down Korean Airlines Flight 007, believing it to be a US spy plane
- Reagan's policies were aggressive
- September 1983: Soviet early warning computers report incoming nuclear attack - duty officer (Stanislav Petrov) declines to report it up the command chain. Decided not to do his job -- sometimes credited for saving the world
- November 1983: US and NATO begin major war exercise in Western Europe: Able Archer 83
- Soviets fear it is a prelude to an actual attack - waiting with a finger on the button the whole time, US dismisses fears

Nuclear Winter

- 1983: Nuclear winter: calculations relating to dust storms on mars lead carl sagan and other scientists to conclude that smoke released from nuclear war would blot out sunlight, cool planet rapidly
- If true, then nuclear weapons a doomsday device no matter what -- suicidal

Emergence of Gorbachev

- Soviet Union has an era of stagnation
- Gorbachev becomes secretary of the communist party in 1985
- A communist reformer: believed that can be made better, less afraid of the West

Road to Reykjavik

- Reagan initially completely skeptical of Gorbachev -- refuses to tone down rhetoric
- Thatcher in UK recognizes Gorbachev as someone who can be worked with
- Gorbachev trying to slow down the arms race. Cannot simultaneously reform the soviet economy and keep up arms race

Reykjavik Summit

- Gorbachev announces he will remove Soviet intermediate range missiles aimed at NATO
- Gorbachev offers to eliminate all soviet nuclear weapons
- You have to stop missile defense
- Reagan says he cannot do that. Gorbachev disappointed and ends the deal

USSR Collapses

- Gorbachev reforms: Perestroika -- reconstruction of economy, allowance of limited private enterprise, Glasnost -- openness (1988)
- Cold war over -- gorbachev between reformers and hard liners
- It is a myth that overspending on the arms race precipitated the collapse

Beyond the Cold war

The Post Soviet Republics

- Soviet union splits into many post soviet republics
- Four of these have nuclear weapons on their soil: russia (including production and command and control infrastructure), belarus, Ukraine, Kazakhstan -- all transferred to Russia by 1996
- Ukraine: made an agreement -- agrees to give up nukes if the rest of the world has their backs. This ultimately fails because people do not help out when they need help from russia

Nunn-Lugar Act

- US concerned with decaying nuclear infrastructure in post-soviet republics
- Congress passes Nunn-Lugar Cooperative threat reduction act in 1991
- CTR spends several billion dollars on securing WMD infrastructures in many countries
- Destroys silos, missiles, etc
- Megatons to Megawatts Program: converting russian plutonium to MOX fuel, used in US reactors
- Huge percent of nuclear energy came from Russia to the US

Emergence of new threats

- Did the nuclear threat change in the post cold war?
- India and Pakistan test nukes in 1998
- AQ Khan and nuclear black market exposed in 2004
- North Korea withdraws from NPT in 2003, tests a weapon in 2006, many more weapons
- Pre 9/11 fears of nuclear terrorism
- Post 9/11 fears of nuclear terrorism

Iran and Centrifuges

- Iranian nuclear issue a hot topic since we associate with 9/11

- Iran developing centrifuges for uranium enrichment -- right to peaceful technology under NPT?
- Complicated questions about Iran's NPT requirements regarding disclosing new sites, inspections
- Iran Deal: Iran agrees to limit LEU stockpiles, centrifuge work for decade
- US pulls out of Iran Deal in 2018.. Future?
- Israel assassinated one of Iran's top scientists
- "Only Nixon can go to China"