

What is the nuclear arms race history essay



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In this IA we will try find out how the origin, the peak and the end of the nuclear arms race. The nuclear arms race was a struggle for supremacy in nuclear warfare between the United States, the Soviet Union, and their respective allies during the Cold War.

In addition to the American and Soviet nuclear stockpiles, other countries developed nuclear weapons, though none engaged in warhead manufacture on nearly the same scale as the two superpowers.

This topic was chosen because of its enormous weight during the Cold War, as well as being a very famous topic to talk about (especially when it comes to history) and generally due to the preposterous thought that all life on this planet could have been destroyed just because one nation disliked the other nation.

The investigation will focus on:

The origin of the race (this will include the creation of the first nuclear weapon, which kick started the race, as well as shift in the world powers). A brief mention will be made about spy wars during the period.

The peak of the race (this will include the peak in the terms of the production and destructive capabilities of nukes e. g. hydrogen bombs, thermonuclear devices and ICBMs). A brief mention will be made about nuclear scare.

The end of the race (this will include MAD, the collapse of U. S. S. R and nuclear disarmament). A brief mention will be made about the negative affect upon the economy of both superpowers.

Note: There will be mention of all major nuclear detonations in the world e. g. Trinity, RDS-1, Castel Bravo, and Tsar Bomba. This investigation will only include nuclear arms race conducted between U. S. S. R and U. S. A and within the time period of 1945 to 1991.

Summary of evidence

September 17, 1942, Manhattan Project[1]:

The Manhattan Project was a secret military project created to produce the first US nuclear weapon.

July 17, 1945, Potsdam Conference[2]:

The Potsdam Conference, a meeting of the victorious leaders of the Allies in Europe, attempted to confront the delicate balance of power of the opposing governmental structures, democracy and communism.

July 16, 1945, Trinity[3]:

First fission device test, first plutonium implosion detonation.

August 6, 1945, Little Boy[4]:

Bombing of Hiroshima, Japan, first detonation of an enriched uranium gun-type device, first use of a nuclear device in military combat.

August 9, 1945, Fat Man[5]:

Bombing of Nagasaki, Japan, and the last use of a nuclear device in military combat.

August 29, 1949, RDS-1[6]:

First fission weapon test by the USSR.

November 1, 1952, Ivy Mike[7]:

First cryogenic fusion fuel “ staged” thermonuclear weapon, primarily a test device and not weaponized.

August 12, 1953, Joe 4[8]:

First fusion weapon test by the USSR (not “ staged”).

March 1, 1954, Castel Bravo[9]:

First dry fusion fuel “ staged” thermonuclear weapon; a serious nuclear accident occurred.

November 22, 1955, RDS-37[10]:

First “ staged” thermonuclear weapon test by the USSR (deployable).

October 31, 1961, Tsar Bomba[11]:

Largest thermonuclear weapon ever tested, however was scaled down from its initial 100 Mt (mega tons) design by 50%.

Important People:

Robert Oppenheimer[12]: director of the Manhattan project, American physicist Robert Oppenheimer was responsible for collecting, coordinating, and leading the team that developed and detonated the first atomic bomb.

Klaus Fuchs[13]: German physicist, and Communist Party member, was employed by the United Kingdom atomic energy program during World War II, and was sent to work on the Manhattan Project at Los Alamos.

Theodore Hall[14]: was an American physicist and an atomic spy for the Soviet Union, who, during his work on US efforts to develop the first atomic bomb during World War II, gave a detailed description

Nikita Khrushchev[15]: led the Soviet Union during part of the Cold War. He served as First Secretary of the Communist Party of the Soviet Union from 1953 to 1964, and as Chairman of the Council of Ministers, or Premier, from 1958 to 1964

Theodore Roosevelt[16]: was the 26th President of the United States of America.

Harry Truman[17]: was the 33rd President of the United States.

Joseph Stalin[18]: was the Premier of the Soviet Union from 6 May 1941 to 5 March 1953.

Evaluation of Sources

Spartacus Educational, s. v. “ Nuclear Arms Race,” accessed May 18, 2012, <http://www.spartacus.schoolnet.co.uk/COLDnucleararms.htm>

Establish by John Simkin, in September 1997. Spartacus Educational website provides a series of historical encyclopedias. Entries usually include a narrative, illustrations and primary sources. The text within each entry is linked to other relevant pages in encyclopedia. In this way it is possible to research individual people and events in great detail. The sources are also hyper-linked so the student is able to find about the writer, artist, newspaper and organization that produced the material.

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Youtube, s. v. " The Truth Game," accessed May 21, 2012, http://www.youtube.com/watch?v=wjLgbeUwK_c

John Pilger's documentary which looks at world-wide propaganda surrounding the nuclear arms race. When the two American atomic bombs were dropped on Hiroshima and Nagasaki in 1945, they were code-named Fat Man and Little Boy, and President Truman announced after the event: The experiment has been an overwhelming success. These, says Pilger, were words used to describe the awful and horrific carnage of nuclear war. By using reassuring, even soothing language, this new kind of propaganda created acceptable images of war and the illusion that we could live securely with nuclear weapons.

Analyses

The origin

Between the years 1941 and 1945, Robert Oppenheimer began the production of what was known at the time the Manhattan Project, the construction of a weapon that would create a fission reaction and have catastrophic affects. During this time, war time ally, the Soviet Union was weary of US actions and sent Klaus Fuchs and Theodore Hall to spy on any activity that might be considerate suspicions. What they uncovered was the Manhattan Project. Stalin was informed of the project before Theodore Roosevelt's death. President Truman was in fact unknowing of the project up until his presidency. When Truman told Stalin of the atomic bomb, at the Potsdam conference, he had no idea that Soviet Union and Stalin had known about the bomb before he had.

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The atomic bomb was first utilized on August 6, 1945 when the bomb, code named " Little Boy", was dropped on Hiroshima, Japan. Three days later on August 9 1945, President Truman gave the order to drop the bomb, code named " Fat Man", on Nagasaki. The world was shocked. Oppenheimer resigned after the dropping of both bombs, having said: " Now I've become death, destroyer of worlds". Many things changed in the world after that, the county of Japan was crippled, the balance of power had been disturbed and USSR had opened its eyes in regards of developing nuclear weapons.

US estimated that USSR would not have nuclear weapons program up and running up until later half of 1950's. This was based on the belief that there was scarcity of uranium in the world and that US had the monopoly on that. However thanks to research gathered by spies and new resources coming from the satellite states the USSR got a bomb a decade sooner than anticipated.

RDS-1 was detonated by the USSR, for the second time in four years the balance was again disturbed in the world and the global panic ensued. The US and USSR spent the coming years stockpiling weapons and resources in the effort for both countries to be more prepared than the other.

The Peak

Developments of hydrogen enriched bomb began 1952, in November that year the US detonated the first of these (Ivy Mike). This was responded a year later with USSR's true hydrogen bomb (Joe 4). At this point in time espionage was not working for USSR and so domestic research began on new developments.

During this time the goal was to fire nukes from respective countries that would be able to reach the other nations and thus the research into ICBMs (Intercontinental ballistic missiles) started. The launch of satellite Sputnik, in 1957, would prove US that USSR could launch a missile that would hit anywhere in the world. This would start the era know as space race.

By the late 1950's a growing tensing between the two nations was forming, due to the idea that both the attacker and the defender will be destroyed if a nuclear war ever happened, thus the idea of MAD (mutually assured destruction) was conceived.

This period spawned a lot of social change in respective countries. US started the campaign of Red Threat. Videos in schools across North America instructed children to " duck and cover" in case if they got attacked. The Soviet Union responded by attacking the US way of life and putting up propaganda against capitalist ideals.

Nikita Khrushchev succession of Stalin, in 1953, showed much promise for a move towards peace between the two nations. Khrushchev's peaceful co-existence doctrine was however rejected by the US and forced the USSR to continue stockpiling weapons in fear of being bombed.

Thou many of their weapons were more powerful than those dropped on Japan, the US began to move from kiloton bombs to megaton bombs. Castle bravo would prove to be the most powerful nuclear weapon the US would ever detonate. It was detonated on March 1, 1954 and yielded fifteen megatons of power. The thermonuclear ability of the bomb made it much more powerful than most conventional bomb at this time. However the USSR

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was developing a megaton bomb of their own, codenamed the " Tsar Bomba" (king bomb) it was nuclear weapon that held a hundred megatons of power, however due to impracticality of the bombs production and size it was reduced to half of the explosive effect. The results were still gargantuan. Tsar Bomba was detonated on October 31, 1961. It was a single most destructive force unleashed on earth by man.

The End

The production of nuclear weapons was a major hit to both economies, both had focused so much time, and resources, towards their projects that their economic situations were beginning to feel the heat. The US moved from anti-Soviet movement to a peace and disarmament movement. This would lead to both nations starting an era of nuclear weapon disarmament. During this period many treaties were signed to stop the production of new nuclear weapons, however the goals of the Treaties were only partially successful due to control maintained by both super powers in space. Where the treaties succeeded in limiting production, they would fail when it came to disarmament.

Like many thing that year the arms race ended in 1991, with collapse of Soviet Union and mass disarmament occurred around the world.

Conclusion

In conclusion it can be said that nuclear arms race was a competition for supremacy in nuclear warfare between the United States and the Soviet Union to achieve dominance over the other nation as well as the production of nuclear weapons and capabilities to be able to unleashing destructive

power of nuclear armaments upon the opposing nation. However this would prove useless to both sides, since both side had the capability to retaliate if the other attacked and would lead to MAD. Additionally it can be mentioned that the nuclear arms race was a way for US to keep U. S. S. R producing and spending more money to eventually win in the long run, which US did.