The Manhattan

Project

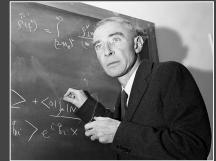
Youth Nuclear Peace Summit 2023 Grant Park High School

What is the Manhattan Project?

Background

- launched in 1939 to develop first atomic bombs through nuclear fission (Brittanica, 2023)
 - race against German scientists with similar aim
- War Department received joint responsibility after United States entered WWII (Brittanica, 2023)
 - Albert Einstein presented military potential to Pres. Franklin D. Roosevelt (Brittanica, 2023)
 - led by J. Robert Oppenheimer and Enrico Fermi, help from Allied forces (United Energy Workers HealthCare, 2023)
- combined policy establish with Canada and Great Britain in 1943 (United Energy Workers HealthCare, 2023)





Members of Manhattan Project - some of the University of Chicago team

"Father of Atomic Bomb"



First Atomic Bombs

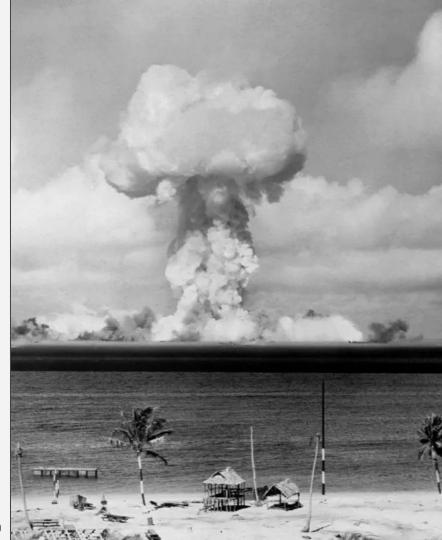
- Trinity (nuclear test) : Alamogordo air base
- Hiroshima (Little Boy): uranium-235, 140,000 people killed (History.com, Editors, 2023)
- Nagasaki (Fat Man): plutonium implosion bomb similar to Trinity, 64,000 people killed (History.com, Editors, 2023)

The Ethical Dilemmas of the Manhattan Team



The Scientists' Dilemmas

- during the development of the atomic bomb:
 - reservations on bomb usage
 - arms race (Brancchini, 1997; Hansen, 2023)
 - Japan given chance to surrender (Brancchini, 1997; Hansen, 2023; Gwynne, 2020)
 - Franck report from June 1945 (Brancchini, 1997)





The Scientists' Dilemmas (cont.)

- \circ support of bomb
 - only solution to Japan (Brancchini, 1997)
 - defensive act after Pearl
 Harbour (Brancchini, 1997)
 - objected usage of 2nd bomb so quickly after (Brancchini, 1997)



The Scientists' Dilemmas (cont.)

- after WWII:
 - guilt over creation
 - Wilson: "To this day I can't understand why none of us walked away," (Poskanzer, 2023)
 - Weisskopf: "Our beloved physics was pushed into the darkest part of reality." (Gwynne, 2020)
 - many led education effort about nuclear dangers (Hansen, 2023)

The Pilot

- Claude Eatherly pilot that dropped bomb on Hiroshima (Harrington, 2020)
 - "guiltlessly guilty" (Harrington, 2020)
 - "cogs in the atomic machine" (Harrington, 2020)
 - o guilt led to crime (Harrington, 2020)
 - intended to be caught (Harrington, 2020)
 - accountability (Harrington, 2020)

"His remorse highlighted the ethical quandary of winning a righteous war that nevertheless cost such a huge toll in human lives." (Harrington, 2020)







The Truman Show

- Harry S. Truman (33rd President of the United States)
 - believed the bombings of Nagasaki and Hiroshima were completely justified, saving numerous lives (MCEVOY, 2023)

"The president cannot duck hard problems [...] the bomb should be used to end the war quickly and save countless lives" (Truman, 1948)

- Truman chose to drop the bomb despite:
 - intercepted Japanese communications about surrendering (Iskander, 2022)
 - scientists learning that Germany was not close to developing the atomic bomb (Iskander, 2022)

Truman vs. Oppenheimer

- after the bombing of Nagasaki
 Oppenheimer's mood changed
 believed the second bombing
 - Was not necessary (Bella, 2023)
 - caused conflict with Truman
 - *"I feel I have blood on my hands"* (Oppenheimer, 1945)
 - believed Oppenheimer was overreacting (Bella, 2023)
 - Truman did not want to see Oppenheimer in his office ever again (Bella, 2023)





Immediate Consequences



Long-Term Consequences

- continued medical issues (Leede & O'Brien, 2021)
- Radiation Exposure Compensation Act (Leede & O'Brien, 2021)
- not included (Blume, 2023)
- still fighting



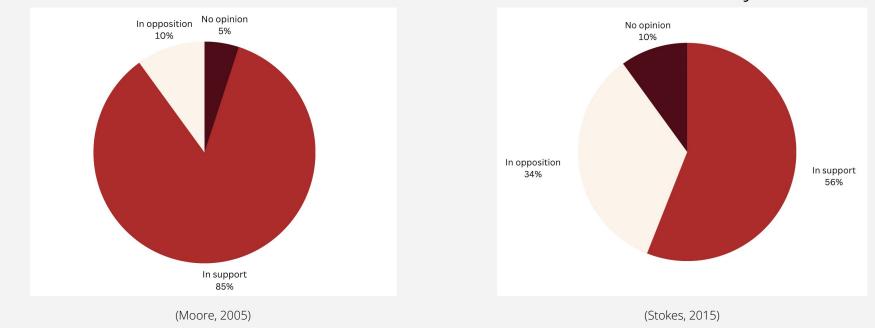




"The Most Controversial Issue in American History"

2015 Survey

1945 Gallup Poll

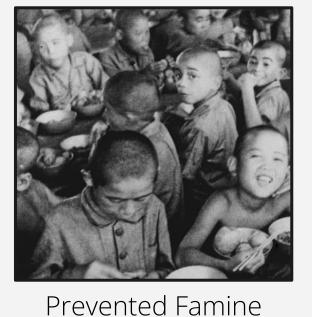


Supporting Arguments



Brutal Alternatives





Prevented Invasion

(Bebernes, 2023)

(Compton, 1946)

(Compton, 1946)

Opposing Arguments







War Crime (Atomic Heritage Foundation, 2014)



Accuracy of Projection Rate? (Atomic Heritage Foundation, 2014)

Would Japan have Surrendered?



Tsuyoshi Hasegawa

"Japan needed 'external pressure' in the form of the atomic bombs to decide to surrender"

-Sadao Asada

What We've Learned From J. Robert Oppenheimer

Responsibility Hindered

- over 130,000 working on the *Manhattan Project* (Blakemore, 2019)
- "Highly classified" (Blakemore, 2019)
 - not knowing involvement with the nuclear weapon (Blakemore, 2019)
 - no communication (Atomic Secrets, n.d.)
 - Los Alamos was kept from Americans in WWII (Atomic Secrets, n.d.)
- *"Voices of the Manhattan Project"* (Nuclear Museum, n.d.)
 - Anne McKusick (Anne McKusick Nuclear Museum, n.d.)
 - O Dieter Gruen (Dieter Gruen- Nuclear Museum, 2015)

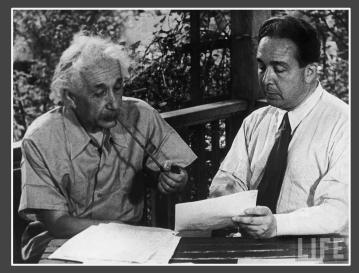


(National Park Services, 2023)



Others Advocating for Peace

- Leo Szilard
- once the Americans won the race he drafted a petition to Truman (Pete, 2019)
 - nuclear weapons to not be used in Japan (Pete, 2019)
 - 70 people signed (Pete, 2019)
 - helped begin the movement for nuclear (Pete, 2019)
- Albert Einstein
 - Signed manifesto with cofounder of *Campaign for Nuclear Disarmament* (Pete, 2019)
 - Highlights threat to humanity and the effort to prevent it (Pete, 2019)



Advocating for Peace

- Chairman of the Atomic Energy Commision (AEC) (Karpen, 2023)
- emphasized that atomic bomb needed to be regulated in the future (Karpen, 2023)
- urged US government leaders to encourage international control of nuclear power and to find ways to limit countries stockpiling nuclear weapons (Karpen, 2023)
- advocated for US to not begin nuclear arms race with Soviet Union – stance lost him his security clearance (Karpen, 2023)



(Uncredited, 1949)

Responsibility of Scientists



- 90% of scientists consider political activism a responsibility (Correa, 2023)
- duty to engage with politics, failing to speak out has consequences (Correa, 2023)
- 2.4 million will die from cancers due to atmospheric nuclear tests (ICAN Editors, 2023)

(Fox Photos, 1945)

Conclusion

The Manhattan Project has been instrumental in our understanding of nuclear weapons and the power they hold.



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