# The Manhattan

Project

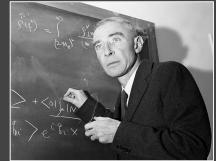
Youth Nuclear Peace Summit 2023 Grant Park High School

# 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**

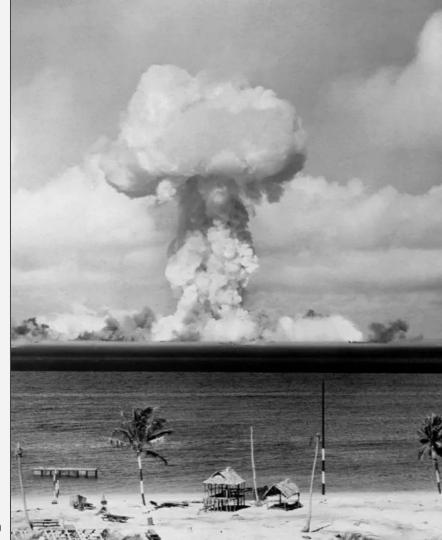
- Trinity (nuclear test) : Alamogordo air base
- Hiroshima (Little Boy): uranium-235, 140,000 people killed (History.com, Editors, 2023)
- Nagasaki (Fat Man): plutonium implosion bomb similar to Trinity, 64,000 people killed (History.com, Editors, 2023)

# 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)

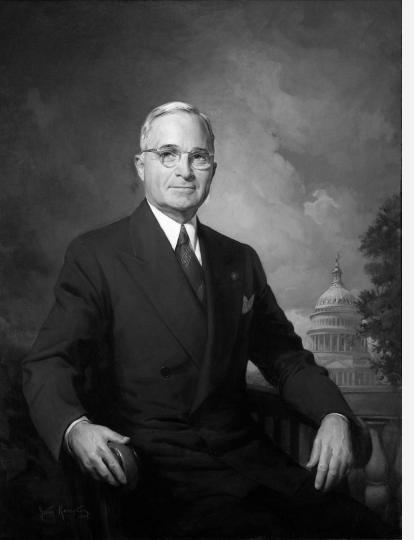
### The Pilot

- 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



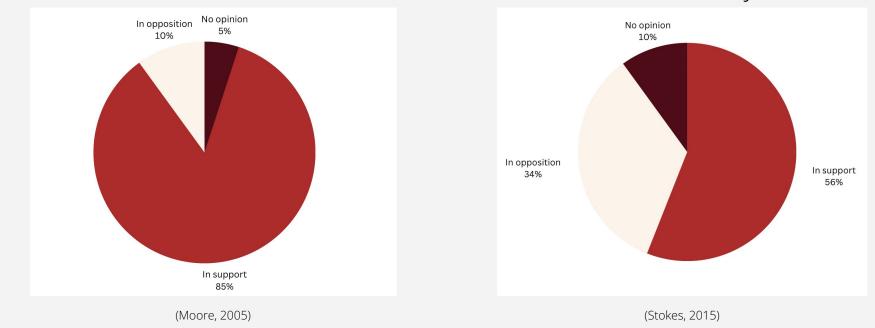




#### "The Most Controversial Issue in American History"

2015 Survey

#### 1945 Gallup Poll

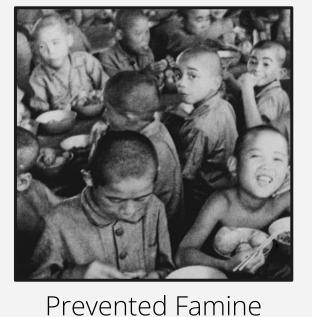


#### **Supporting Arguments**



#### 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)

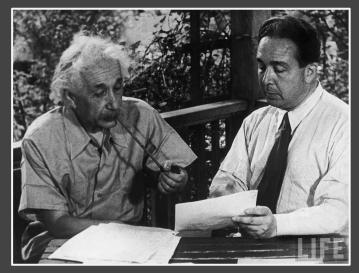


(National Park Services, 2023)



#### **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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