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The Manhattan Project

Senior Division

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“Powerful enemies must be out-fought and out-produced. It is not enough to turn out just a few more planes, a few more tanks, a few more guns, a few more ships than can be turned out by our enemies. We must out-produce them overwhelmingly, so that there can be no question of our ability to provide a crushing superiority of equipment in any theatre of the world war.”

-President Roosevelt (Addressing the public, 1942) (PBS, 2007)

In the beginning of 1939, a time when Americans were just beginning to rebound from The Great Depression, and talk about joining World War II was circulating, several scientists, including Albert Einstein, told President Franklin Roosevelt about Germany's attempts to purify uranium 235, to be used for a nuclear bomb. President Roosevelt then approved of the United States' own nuclear proposal, the Manhattan Project. The event lead into a strategic move of protection and power. When President Harry S. Truman implemented the Manhattan Project in 1941, the affair left a legacy of the government budget prioritizing the military and its endeavors, while entering the U.S. into the nuclear era.

Before the Bomb

Right after President Franklin Roosevelt was inaugurated in 1933, he implemented the New Deal in order to combat the devastating economic situation (History.com, 2009). The New Deal consisted of government programs and jobs to help the American people. At this time, Americans were still struggling with the impact of the Great Depression. The New Deal did help with unemployment rates, however it did not bring prosperity to the public, as Roosevelt had hoped (PBS, 1994). Of the American work force, 17% were still unemployed (PBS, 1994).

Since the wounds of World War I were still evident, Congress had since then passed the Neutrality Act of 1935. This act “banned export of arms, ammunition or implements of war to

belligerent nations” (PBS, 1994). In 1939, Roosevelt wanted to prepare a defense force for the worst case scenario. At this time during the war, multiple countries had already been invaded by Germany, and almost all of those same countries had surrendered. He went before Congress and asked them to repeal the Neutrality Act of 1935. Later in 1939, he went before Congress again, and Congress approved the Pittman Bill (PBS, 1994). This bill permitted the selling of arms to nations that could pay in cash. 1939 was the time Roosevelt changed the American economy to a pro-military economy.

President Roosevelt declared the United States as the "Arsenal of Democracy (PBS, 1994)." He had industrialists come into the government and take over the war departments. The United States was to remain neutral in the war, unless attacked, however the country was to supply for allies. The infiltration of industrialists in the government had a huge impact on government spending and prioritizing. All of Roosevelt's actions set up for a pro-military government agenda. This was to prepare the United States as a country of undeniable power.

Roosevelt refused to have the U.S. be bullied and intimidated by Germany. He wanted the United States to have the reputation of being one of the global powers. He firmly believed in his words, "Speak softly and carry a big stick. (Franklin Roosevelt, 1901)" This meant he would use his words as a persuasion tactic, but when necessary he would use force to back the country up. To have this force, he believed there need to be a strong military. Therefore more money and time needed to be invested into the military. President Harry S. Truman was also in favor of the pro-military agenda and supported Roosevelt's beliefs on the matter of military. This shifted the country's funds to an effort of offense and protection. This step towards a pro-military government essentially set off the nuclear age and lead to the ramifications of the atomic bomb that was used in Japan.

When Harry S. Truman supported and funded the Manhattan Project he started a domino effect. Once he continued the support of a strong military, the entire government switched to funding more for the military. In 1941, “the United States achieved an unprecedented mobilization of resources, and defense spending rose to 41 percent of GDP. (Chantrill, Christopher)” GDP stands for the Gross Domestic Product and is “represents the total dollar value of all goods and services produced over a specific time period. (Investopedia Staff.)” While This effect set off the nuclear age and lead to the ramifications of the atomic bomb that was used in Japan.

The Birth of the Bomb

In 1938 a major advance was made in the world of nuclear technology. Scientists Otto Hahn, Lise Meitner and Fritz Strassman discovered how the process of nuclear fission worked. The process of nuclear fission is the primary one for nuclear energy. Scientists Leo Szilard, Eugene Wigner and Edward Teller had all fled from Germany (WWII, 2015). These scientists alerted Albert Einstein of Germany’s efforts to create a nuclear bomb. Einstein wrote to President Roosevelt on August 2, 1939 (WWII, 2015). In this letter Einstein urged Roosevelt to be wary of nuclear development in Germany. The President took these warnings to heart and in June of 1940, Roosevelt created the National Defense Research Committee (NDRC) to investigate how realistic building a nuclear bomb would be. Then, in September of 1940 the National Defense Research Committee were given the orders to initiate the “Uranium Committee” which is now known as the Manhattan Project. The Manhattan Project was a government funded project to build nuclear weapons, specifically atomic bombs, as an act of power during World War II.

We the People, Don't Want to Fight

During the 1930's isolationism had spread throughout the United States, and had gathered many supporters. Isolationists believed that the United States should not get involved with Europe or Asia conflicts, and should stay away from international politics (U.S. Department of State Office of the Historian). This ideology was widely popular due to the prominent reminder of losses from World War I. The American public was not in favor of going to war with Germany. They only allowed limited aid to go out to allies.

Newspapers also had an immense impact on the public's wants of not going to war. "During World War I, the American press had published reports of German atrocities that subsequently turned out to be false. As a result, journalists during World War II tended to approach atrocity reports with caution.(History.com, 2009)" This meant that there weren't a ton of articles about the Holocaust in the mainstream media. With "nothing" to be outraged about, the public felt confident with their beliefs in isolationism.

However, on September 16, 1940 President Roosevelt signed the Selective Service and Training Act. This meant that "requires all male citizens between the ages of 26 and 35 to register for the military draft. (The History Channel Website, 2015)" Roosevelt regarded this step as a vital to having a strong military and being prepared.

"America stands at the crossroads of its destiny. Time and distance have been shortened. A few weeks have seen great nations fall. We cannot remain indifferent to the philosophy of force now rampant in the world. We must and will marshal our great potential strength to fend off war from our shores. We must and will prevent our land from becoming a victim of aggression."

-President Roosevelt, 1940 (The History Channel Website, 2015)

War Strategy Legacy

In the 21st century, the main strategy, given by the government, behind acquiring nuclear weapons was to deter other countries and super powers from using nuclear weapons (Lee, 2012). The thinking behind this strategy is that if the United States obtained more and more nuclear weapons, it would prevent others from seeking to buy and use them. It is also a power tool. It gives the U.S. power over smaller countries and can be used for manipulation or threats. Smaller countries have used nuclear weapon programs as a form of self-defence; their protection is the fact that they, too, have nuclear power (Betts, 1979). Two of the primary reasons that influence powers on whether they should or should not possess nuclear weapons are “security concerns” and “technological capabilities (Jo, 2007).” An analysis revealed that the majority of people favored national security over peace, which gathers copious amounts of support for nuclear warfare (Kristiansen, 1990). The public is worried about protecting themselves. The mindset would appear to be “by any means necessary.” Meaning that people want to be protected, regardless of the consequences of nuclear technology. Under the promise of safety is where the supporters of the nuclear age come from. On the opposite side of the spectrum there are the people who are aware about the repercussions of a nuclear disaster, and see the cons. Officials who have signed a treaty on the Non-Proliferation of Nuclear Weapons have not made changes on a regulated level, nor do they have many programs (Jo, 2007).

Nuclear Military

When Harry S. Truman supported and funded the Manhattan Project he started a domino effect. Once he continued the support of a strong military, the entire government switched to funding more for the military. In 1941, “the United States achieved an

unprecedented mobilization of resources, and defense spending rose to 41 percent of GDP.(Chantrill, Christopher)” GDP stands for the Gross Domestic Product and is “represents the total dollar value of all goods and services produced over a specific time period.” Compared to the less than 10% of GDP spent on defense spending in the previous years, this was a huge jump. While levels of GDP haven’t risen this high in a very long time, the levels of spending for defense was never as low as it had once been.

Before the Manhattan Project scientists weren’t majorly involved in the advancements of warfare. After the discovery of nuclear fission and its uses in war, being a scientist was much more valued, especially in the war industry. This means that more and more scientists were recruited for military use. The amount money allocated to the military’s budget is enormous. Nuclear advancement is not cheap. The Manhattan Project’s cost was \$20,000,000,000 (Brookings, 1998). In 2013, the U.S.’s global distribution of military expenditure made up 39% of the entire global distribution of the military expenditure (SIPRI Military Expenditure Database, 2013). The next country with the single biggest percent of global military expenditure is China with 9.5% (SIPRI Military Expenditure Database, 2013). In 2012, the percent of allocation of U.S. taxes that went to war spending was 37%; \$1,123,000,000 (SIPRI Military Expenditure Database, 2013). In the 1930’s the money spent on war proceeds was \$244,600,000 (Hanssen, 1935). The increase is ginormous. The spending on war multiplied by about 4.5 times. The military’s budget has only increased since the introduction of nuclear weapons.

Living in the Nuclear Age

The entering of the nuclear age posed, and continues to pose many great threats to the people’s health. Various studies that have been conducted show the damage that nuclear proliferation causes is directly connected to both the physical and mental health of humans.

Studies done after the atomic bombing in Hiroshima and Nagasaki exhibit the consequences of being exposed to ionizing radiation. When female survivors of the atomic bombing become pregnant, these studies conclude that the fetuses do not develop properly, and therefore brain injuries occur (Yamazaki, 1990). Further research shows that these brain injuries are linked to intellectual handicaps and body abnormalities (Yamazaki, 1990). Another very serious issue that arises is the impact the nuclear age has on a healthy society. "The unlimited expansion of arms, the continuing and even increasing level of conflict, and the frightening volume of violence are not acceptable ingredients in a quality level of human existence (Levy, 1997)." Many scientists have studied data about the mental health of people whose lives are somehow connected to nuclear weapons or technology. The term "nuclear anxiety" is applied to those who are suffering mentally from exposure to nuclear technology in any way, shape, or form. Nuclear anxiety is made up of four main factors: Nuclear Concern, Nuclear Support, Fear of the Future, and Nuclear Denial (Newcomb, 1986). The main category under which people are suffering is "Fear of the Future." A high quality of life is important to every community. By entering the nuclear age, after the Manhattan Project, for many communities it lowered the quality of life. This stems from nuclear weapons, nuclear controversy, and nuclear anxiety. This is due to the possibility of a mishap or a nuclear war. The public has constantly debated over the reasoning about nuclear weapons, and the strategy behind it.

Conclusion

The Manhattan Project has left reverberations around the world. It inducted the public to the nuclear era; an age of instability and fear. This undertaking changed the government's focus on the military in order to strengthen the nation as a global power. Prior to this massive event it became clear how the world was forever changed. A state of nuclear fear would be inoculated

into all people, deathly health conditions would damage generations to come, with no regulations on the matter, and the spark of an anti-nuclear movement. There would also be a major shift in how the government prioritizes its budget. The budget changed to pro-military. The Manhattan Project's impact was so monumental, that it will continue to affect every generation to come.

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