Democratic Decay: Public Deliberation and Nuclear Weapons

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Claremont McKenna College
Democratic Decay: Public Deliberation and Nuclear Weapons

Submitted to
Professor Jordan Branch

By
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For
Senior Thesis
Spring 2024
April 22, 2024
Abstract

Many modern nations that consider themselves democracies rely on strategy of national defense involving nuclear weapons. These weapons, however, almost always require a compromise of many of the values these democracies typically claim to value and uphold in the world. Most importantly, the deliberative process that is required for democracy is removed from the decision to either launch or not launch nuclear weapons. Even if policies were changed to attempt to make the process for democratic, research shows that there is reason to believe nuclear weapons would be incompatible with democracy practically as well as theoretically. Nuclear weapons and nuclear energy accidents have been shown by research to fulfil a particular and unique place in the minds of the public. Taking the public reaction to the Three Mile Island and Fukushima nuclear accidents as case studies, I argue that democratic deliberation and communication breaks down. While the contradiction between democracy and nuclear arsenals is widely shown, many defend their use. I argue that the primary arguments for this justification are either liberal in that they argue nuclear weapons are required to protect certain values, or they are realist in that they argue nuclear weapons promote peace.
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I would like to thank Professor Branch for taking the time to be my reader and advisor during this process. I would also like to thank all my friends and family for supporting me during this project.
I. Introduction

At the height of the Cold War on June 12, 1982, over one million people swarmed central park in New York City to exercise their democratic right and protest the use of nuclear weapons and their build up in the United States\(^1\). While a worthy attempt, the US did not decrease its nuclear arsenal, but rather continued to build it up. The threat of nuclear holocaust largely remained over the heads of the world until the Cold War ended. The large nuclear arsenals held by the US and the Soviet Union were never used while the strategy of deterrence and mutually assured destruction was hailed a success. In fact, the war remained cold for its entire duration with no direct fighting between the US and the USSR. It was ultimately not a war of soldiers, but a war of ideologies with many claiming the indecisive victor was western liberal democracy.

The invention and possession of nuclear weapons by two opposing countries made the cost of war so high, that neither was willing to initiate an explicit conflict. The mutually assured destruction that defined the Cold War was successful in the sense that the war ended without any direct fighting. For this mutual assured destruction to be successful, however, the nuclear arsenals had to be shrouded in secrecy and controlled entirely by a small group of people. The nature of the nuclear weapons was such that they inherently had to be maintained and used in a way that removed democratic deliberation and values. Nuclear weapons, while they may have been necessary, existed in conflict with many of the democratic values that had been fought so tirelessly for in the Cold War.

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This paper argues that nuclear arsenals conflict with democratic values and democracy both theoretically and empirically. The values that are fundamental to liberal democracy exist in conflict with the maintenance of nuclear weapons on a theoretical level. However, making nuclear weapons more democratic would be just as difficult on a practical level as well. Nuclear weapons and nuclear holocaust inflame a particularly dangerous reaction in the minds of most people. They are classified as the most severe type of “dread risk” in psychometric research meaning communication and discussion of the topic is difficult and ineffective\(^2\). Analyzing this type of deliberation, however, is difficult given the fact that nuclear arsenals have been maintained by a very small group of people in every democratic nation to possess them.

Nuclear energy accidents, however, have extensive research on public deliberation and are classified as the only other highest severity dread risk. Analyzing the public reaction to those accidents, then, is useful to gauge how democratic deliberation on nuclear weapons might take place. By taking the public debate after the Three Mile Island and Fukushima accidents as case studies, the difficulty that having democratic deliberation is shown through a near total breakdown in efficient or useful communication in the public. While they are not nuclear weapons, they show that democracy and nuclear weapons are incompatible on a practical level and not only a theoretical one.

Democracy is espoused as a desirable institution by many who maintain that nuclear weapons are a strategic necessity. They argue that the nuclear arsenals maintained by democratic states are undemocratic aspects of those states, but that they should exist for some

particular reason. The main rationalization posed during the Cold War of the U.S. was that dismantling the nuclear arsenal would allow for the USSR to achieve global victory meaning the end of liberal democracy. Essentially, nuclear weapons were used for the protection of liberal democracy. This view is expressed by John Rawls in *Law of Peoples*. As time went on, however, the argument shifted with scholars arguing that nuclear weapons were acceptable in the hands of not just a democracy, but other states as well because the nuclear capable states were less likely to engage in war. The effect that the spread of nuclear weapons (proliferation) had was one of increasing peace and stability, a view most notably embodied by Kenneth Waltz and his defense of Nuclear Peace Theory. I will argue that despite the inconsistency with democratic values, there exist two schools of thought that justify democracies maintaining nuclear arsenals. The first school is a Rawlsian and liberal sentiment of protecting democracy and moral values while the second is a realist reasoning embodied by Waltz that believes nuclear arsenals promote peace and stability. This paper will then argue two things: The first is that nuclear arsenals are undemocratic on a theoretical level as well as on a practical level seen in the breakdown of democratic deliberation during the Three Mile Island and Fukushima accidents. The second is that despite this incompatibility, those who defend nuclear arsenals and democracy largely fall into either the liberal reasoning arguing they are needed to protect certain values or do so by realist reasoning in that they promote stability and peace because of deterrence.
II. Chapter 1: The Values of Liberal Democracy and Nuclear Weapons

In starting to discuss the incompatibilities between liberal democracy and nuclear weapons, I should first define what exactly liberal democracy is. As a starting place, the Collins dictionary defines it as a democracy based on the recognition of individual rights and freedoms, in which decisions from direct or representative processes prevail in many policy areas. In this definition, there are two clear parts. There is a liberal and a democratic part which need not necessarily go together. The representative part of this definition is the democratic part, while the recognition of freedoms and rights is the liberal part. Clearly, these two need not necessarily go together. An illiberal democracy would be a society that makes decisions based on a representative process, but which ultimately does not recognize the rights of the people. This term was defined most clearly by Fareed Zakaria and is often defined by a lack of respect for individual rights and liberties, overly centralized government, and ethnic conflict despite formal election procedures. Democracy only requires a fair election that all citizens are able to participate in. For that democracy to be a liberal democracy, however, they cannot vote for anything. Their voting power must be constrained by a respect for liberal values and processes. In all nuclear capable states today, the way that nuclear weapons are used and maintained is incompatible both the democratic and liberal requirements of liberal democracy.

Nuclear deterrence has been the dominant and, thus far, strategically effective policy of all nuclear capable nations to date. It emerged during the Cold War when there were two clear opponents resulting in a “bipolar” system. The US and USSR adopted formal policies of

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deterrence, promising to retaliate if one country acted aggressively toward the other. The nuclear response would be so devastating, that neither was ever incentivized to make any formal act of war: They deterred each other with nuclear weapons. This strategy has continued to be the official policy of all countries that are nuclear capable making a “multipolar” system and has, to date, been successful in that no country has ever used nuclear weapons as a first strike. However, I argue that this strategy ideologically conflicts with both democracy and liberal democracy.

**Nuclear Deterrence and Democracy**

The political strategy of nuclear deterrence removes numerous fundamentally required parts of democratic process. Elaine Scarry argues that this removal results in not just the absence of a democracy, but the creation of a monarchy in her book, *Thermonuclear Monarchy*\(^5\). In a democracy, citizens are where the power to make decision about policy rests, especially on the decision to declare war. These decisions come as a result of intentional deliberation from the populace. However, in the United States, Scarry shows that the president has sole and complete authority to use nuclear weapons\(^6\). While this may be a strategic necessity, it none the less removes the deliberative process to enact policy, war in particular, that is critical to democracy.

Elaine Scarry centers her focus around American democracy specifically for good reason. Currently, the US president has the sole authority to authorize the use of nuclear weapons\(^7\). To

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\(^6\) Ibid

some degree, then, nuclear weapons usage is the product of democratic deliberation because the president is an elected official. However, the distance between the voters and the president’s nuclear weapons decisions is much larger than it may for a more typical policy decision. These decisions must be run through various other branches of government and representatives. Further, a president is typically voted for based on a campaign of the things they want to do or values they represent. The situation under which nuclear weapons must be used, however, is not known when voters choose a president. This means that the president has huge discretion when making the decision, even compared to other policy decisions.

While the decision to use nuclear weapons is in the hands of the president and thus, on some level, a product of public deliberation, the organization that manages the American nuclear supply is not. The nuclear weapons themselves are maintained by the National Nuclear Security Administration. The administration, however, is self-described as “semi-autonomous” meaning not directly governed by congress⁸. Democratic processes are intentionally removed to a large extent for various reasons, usually cited as national security. Regardless of the reason, however, the current public involvement in the use, maintenance, and creation of nuclear weapons is extremely minimal and especially undemocratic in the US.

Scarry further grounds her argument for the contradiction of nuclear weapons in the uniquely American second amendment. She argues that while congress is supposed to be able to declare war, the second amendment is evidence that the right for individual citizens to bear arms is so that they are the ones who with their “bodies and weapons” actually “make” war. Nuclear weapons prevent people from ever making war which eliminates their role as

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“ratifiers”⁹. Scarry views the second amendment as a constraint on the warring abilities of the government by drawing a distinction between “declaring” and “making” war. Even if the congress declares war, the people have to make war by risking their lives and livelihoods. In this sense, they could technically refuse to participate in the war and thus, if they do, they ratify it to a large extent. Nuclear weapons, however, prevent the population from having this ratifying power that she argues American democracy and constitutionalism require because they never have the opportunity to use or refuse to use their bodies and weapons; nuclear deterrence removes soldiers from war.

Daniel Deudny argues that it is not just the US that has made nuclear deterrence contradictory to its democratic values, but that nuclear deterrence is itself inherently despotic. For the strategy of nuclear deterrence to be credible, the choice to retaliate must be concentrated so that the decision can be made in the time frame required. General John Hyten said in an interview with CNBC that the US would have about 30 minutes from the detection of nuclear missiles launched from Russia to the time they made contact¹⁰. In order for deterrence to have the desired effect of preventing nuclear war, there must be a credible threat of retaliation. This means that, within that 30-minute window, a decision to retaliate must be able to be made. The democratic process of deliberation simply takes too long for nuclear deterrence to be an effective strategy and so the decision will always be in the hands of one or

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very few people\textsuperscript{11}. If it was changed to be more deliberative and the power of nuclear
authorization was dispersed, deterrence would fail. A state that places its nuclear power in the
hands of fewer people would have an advantage over a state that disperses it because the
speed of decision making is an inherent advantage. Elaine Scarry concludes her book by noting
that the US had a choice between getting rid of nuclear weapons or getting rid of congress and
citizen approval of war for which we chose to get rid of congress and citizen power\textsuperscript{12}. The level
of speed required makes nuclear deterrence so that it will inherently tend towards despotism
rather than democracy.

\textbf{Nuclear Deterrence and Liberal Democracy}

Nuclear deterrence not only conflicts with democracy, but liberal democracy as well.

Democracy requires that all citizens are represented and have a say in their country’s policies
through free and fair elections. However, Fareed Zakaria points out that there could be free and
fair elections that result in racist or fascist leaders with excessive power resulting in what he
termed an illiberal democracy\textsuperscript{13}. Liberal democracy means different things such as a respect for
individual rights and liberties, rule of law, and crucially for nuclear deterrence, a separation of
powers. In the US, nuclear launch decisions are almost entirely in the hands of the president


and are clearly in contradiction with liberal values\textsuperscript{14}. Elaine Scarry also argues that maintaining a nuclear arsenal is “fundamentally anti-democratic” and illiberal because it undermines the traditional separation of powers\textsuperscript{15}. In the US, nuclear authorization is officially placed in the hands of president alone. By doing so, the separation of powers is degraded. The president is given control over the declaration of not just war, nuclear war, a task constitutionally assigned to the more deliberative and representative legislative branch. The power originally dispersed among the three branches in the US changed so drastically with the president given such explicit formal power over war, that the originally intended balance is no longer intact.

Further preventing the free and fair election from being truly free and fair is the overwhelming secrecy that is required of nuclear deterrence. American citizens are not informed about the dealings and debates that surround nuclear decisions. On numerous occasions president Eisenhower considered using nuclear weapons, Lyndon Johnson considered using nuclear weapons on China before they had developed them, Nixon considered them in Vietnam, and former secretary of defense Robert McNamara said that there were three times the US was “within a hairbreadth of nuclear catastrophe” during the course of John F Kennedy’s presidency\textsuperscript{16}. Critically, the American public was made aware of the considerations and deliberation years after they happened. In his book, \textit{Restricted Data: The History of Nuclear Secrecy in the United States}, Alex Wellerstein argues that the nuclear age ushered in an entirely


new and unprecedented age of government secrecy with the Department of Energy having its own elevated levels of security clearances within the government (Q, L, Yankee White).\(^\text{17}\) In a democracy founded on liberal values, citizens must be able to make informed decisions about policy choices. In the case of nuclear weapons, however, citizens were not only not given a choice on whether to use nuclear weapons or not, but were not even aware there was a choice their political leaders were in the process of making. Not only was formal power removed from the citizenry, but deliberation itself was removed.

Finally, there is a commonly held belief that nuclear weapons, regardless of how they are used or whether they are held by a democracy or not, are inherently immoral and illiberal. This is a view originating in the anti-nuclear movement in the 1950s and continued today by the Global Zero movement, the humanitarian campaign, and the Vatican, with President Obama expressing a similar sentiment in a speech he gave in Japan.\(^\text{18}\) He says that while “science allows us to communicate across the seas and fly above the clouds; to cure disease and understand the cosmos”, it is “those same discoveries can be turned into ever-more efficient killing machines” that requires a “moral revolution” on top of the technological one to lead to “progress in human institutions”.\(^\text{19}\) The former president has been heavily criticized for his anti-nuclear rhetoric despite little action on denuclearization, however, he is nonetheless expressing the liberal sentiment that nuclear weapons are immoral and illiberal. Their disassembly is

viewed as moral and institutional progress in his eyes. In this sense, the scale at which nuclear weapons threaten innocent lives make not only their use, but their threat of use illiberal.
III. Chapter 2: The Practical Struggle to Maintain Democratic Deliberation

Despite the numerous theoretical contradictions nuclear weapons have with democracy and democratic values, they have remained the foundation of defense strategies among modern democracies. Further, there appears to be no substantive movement in the direction of eliminating nuclear arsenals among modern democracies, and rather the opposite is happening, with modernization or maintenance among most. Though many are concerned, few claim that those largely democratic nations have become undemocratic because of their nuclear weapons. Rather, they are seen as an undemocratic aspect of democracies. If the public could be brought in more directly to the decision of nuclear weapons usage, then these weapons would become more democratic if not necessarily more liberal. However, bringing the public into decisions like nuclear weapons usage and maintenance may theoretically make them democratic, but empirically there are clear reasons it would be problematic.

Nuclear weapons are a particularly sensitive topic in the minds of the public. Most of this sensitivity is for good reasons given the scale of destruction they are capable of. However, there is also a psychological underpinning for what is largely considered an overly strong fear of the power of the atom that has been show numerous times during nuclear accidents. Nuclear weapons and nuclear energy accidents are considered “dread risks” which are risks that are thought of as being inevitable and catastrophic despite an extremely small likelihood of happening. While nuclear energy is a different idea than nuclear arsenals, the dread risk that poses a problem for democratic deliberation is just as present in both and there have been

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numerous and more recent incidents relating to nuclear energy than nuclear weapons. The nature of nuclear weapons practically inhibits democratic deliberation, even if the laws and structure of societies were changed to be as democratic as possible.

On top of the theoretical contradictions nuclear weapons have with democracy, the dread risk bias poses practical problems for democratic usage of nuclear weapons. The problematic public debate around nuclear weapons is shown most clearly by the two most notable nuclear accidents, Fukushima and Three Mile Island. While these incidents involve debates on nuclear energy not nuclear weapons, these two subjects fall into the same category of psychological dread risk. This dread risk results in a type of bias unique to the topic of nuclear accidents and nuclear weapons. Thus, the democratic deliberation in times of nuclear accident was inefficient because of the nature of the topic showing that even practically, having conversations and deliberation on nuclear weapons and energy is difficult.

**Dread Risk and Radiophobia**

The characteristics associated with dread risks are higher in nuclear war and accidents than in any other type of dread risk. The effect that dread risks have is a clear disproportionate response to probabilities of particular types of events. However, determining likelihoods of catastrophic events is hardly an exact science, yet it is the “expert” estimations of risk that serve as the baseline for what a disproportionate response is actually considered\(^\text{21}\). Dread risks exist, then, on a spectrum of the divergence between the experts’ estimates of annual

mortalities and the public’s estimates of fatalities related to a set of studied factors. These factors that define dread risks come from psychometric studies and include voluntariness of exposure, certainty of fatality, knowledge of exposure, generational consequences, and whether the risk is understood by science or not\textsuperscript{22}. The more severe a certain risk is perceived to meet these factors, the more severe of a dread risk it is considered. When nearly 50 types of risks, including DNA technology, auto accidents, dynamite, and skyscraper fires, were tested on these factors, nuclear accidents and nuclear weapons fallout were in their own category of most severe dread risk\textsuperscript{23}.

For this reason, looking at communication and deliberation during nuclear accidents can be a useful proxy for the effectiveness of democratic deliberation on nuclear weapons. Currently, for practical reasons, there is nowhere that allows the public to directly deliberate on the use of nuclear weapons. Investigating the effectiveness of democratic deliberation during nuclear weapons crises is difficult. Because nuclear accidents, however, have been shown to illicit a strikingly similar dread risk reaction, democratic deliberation can be evaluated and extrapolated to a similar situation but with weapons rather than energy.

The dread risk response from the public has led many to classify people who are staunchly anti-nuclear as suffering from radiophobia. Radiophobia has a more complex and less clearly defined definition than dread risk. In response to the nuclear accidents, there emerged a “well established” gap between experts and the public on risks relating to nuclear subjects\textsuperscript{24}.

\textsuperscript{22} Ibid, 9.
\textsuperscript{23} Ibid, 11.
Generally, it has come to mean any fear of nuclear radiation that comes from an emotional reaction rather than scientific facts\textsuperscript{25}.

Certainly, radiophobia is not a clinical term as almost nobody ever described as experiencing radiophobia would meet the psychological standard for a phobia\textsuperscript{26}. This is for many reasons, however a primary component of the DSM definition is that a phobia must be a fear out of proportion to not only the actual risk, but the sociocultural context as well\textsuperscript{27}. Nuclear accidents and nuclear war may be statistically unlikely, but finding out these statistics is difficult and given the social context they operate in, it is not necessarily accurate to label the public as suffering from radiophobia. This labeling of the public as suffering from radiophobia is a way that the government and companies have dismissed public concerns repeatedly in all nuclear accidents. The tension between the operators of nuclear facilities and the public is a constant in both nuclear energy and weapons debates that stems from the dread risk present in the public discourse. Because of the nature of nuclear energy and weapons, the democratic process is compromised as the deliberation is not based in fact nor communicated effectively.

\textbf{Communication In Nuclear Crises}

Immediately after nuclear the Three Mile Island nuclear incident, communication was both poorly given by operators as well as poorly received by the public because of the psychological effect of radiation. The World Atomics Organization writes that the defining feature of the

\begin{itemize}
\item \textsuperscript{25} Ibid, 1.
\item \textsuperscript{26} \textit{Diagnostic and Statistical Manual of Mental Disorders: DSM-5} (Arlington, VA: American Psychiatric Association, 2017).
\item \textsuperscript{27} Ibid.
\end{itemize}
Three Mile Island (TMI) incident was “fear” and “confusion” during the days of evacuation.

After the incident had truly been resolved, experts looked back on the engineering failure and radiation leaked into the atmosphere and concluded that it was, by and large, not a failure. Rather, the biggest failure of the incident had been how the problem was communicated between the reactor company, the government, and the public.

Certainly, there were engineering problems that required attention, but the communicative failure and lack of public trust remains what is considered the biggest failure of the system. In their comprehensive book on the incident, *Crisis Contained: The Department of Energy at Three Mile Island*, Philip Cantelon and Robert Williams write that what made those engineering problems significant was a “series of misunderstandings caused, in part, by problems of communication within various state and federal agencies.” The engineering of the reactors was complex, but it was communication and deliberation around those topics that simply did not function during times of emergency. This poses a problem for democratic deliberation around nuclear accidents, power, and weapons. If the operators of these capabilities cannot communicate well with the public and if the public cannot calmly or rationally deliberate on the matter, then it does not matter if nuclear weapons are theoretically inconsistent with democracy. Practically, deliberation does not happen, at least not effectively, even when everyone wants it to if nuclear weapons or energy are involved.

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Even if institutions relayed clear and accurate information in a timely manner and the public more closely aligned with experts’ estimations of risk, the nature of communication on dread risks poses further complications for the simple diffusion of information. Firstly, there is evidence that debates on regular hazards and risks which involve uncertainty undergo social amplification, meaning the risks perception changes from person to person as the information is relayed. This theory was termed the social amplification of risk and first proposed by W.J. Burns in 1993\textsuperscript{30}.

More recently, the amplification of risk has been shown to be the most severe when dread risks are involved. A study by Robert Jagiello and Thomas Hills that the diffusion of information resulted in significant amplification of risk when the risks were dread risks, nuclear accidents in particular\textsuperscript{31}. When balanced information was given to starting participants, the researchers found that for dread risks, the number of negative statements drastically increased by the time the information had been passed through many different people and that re-exposing the group to the initial information did not reduce their bias\textsuperscript{32}. When deliberation around dread risks take place, people tend to misrepresent or over value certain information. These findings pose serious difficulties for democratic deliberation. If the deliberation does happen accurately or effectively precisely because of the nature of the particular topic, nuclear energy in this case, then the democratic process is practically not taking place. At the very least, public deliberation on nuclear energy has proven to be particularly difficult and ineffective.


\textsuperscript{32} Ibid
Three Mile Island

On March 29 1979, the Unit 2 reactor on the Three Mile Island began what would become a partial meltdown. However, what followed was later referred to by the New York Times as not an actual nuclear meltdown, but a “Credibility Meltdown”\(^{33}\). Metropolitan Edison, the company managing the reactor, released a statement that morning saying that “everything is under control”, yet altered its assertion hours later saying the situation was more complex than they had originally determined\(^{34}\). Not only did the change of statement concern the populace, but the nature of the secondary statement was so vague and obscure that it allowed people to wait in uncertainty. Furthermore, the change from a statement of certainty to a statement of uncertainty implied danger without explicitly stating it, only leaving people more skeptical of Metropolitan Edison. Chaos began when the Nuclear Regulatory Commission recommended that pregnant women and small children evacuate the surrounding city. The Washington Post wrote that it was at this moment, that people began to realize that no one knew what was actually going on\(^{35}\).

Prior to the accident, the public had been told that accidents simply could not happen because the American engineering involved so many layers of redundancy\(^{36}\). When the large and distinct reactor buildings were being built, they had no negative connotation because the people of South-Central Pennsylvania were sold on the idea that nuclear energy was perfectly


\(^{35}\) Ibid

\(^{36}\) Ibid
safe. However, when it became clear that an accident of precisely the nature that was promised not to be possible had occurred, the contradiction further bred skepticism in the public.

Three Mile Island’s legacy as one of misinformation and communicative failure was most defined by the relationship between Metropolitan Edison and the media. Metropolitan Edison’s interactions with reporters and civilians characterized by a highly dismissive tone\(^\text{37}\). As the situation developed, people began asking questions that only grew in concern and frustration. The company, however, spoke with reports that dismissed these concerns as both uneducated and unimportant\(^\text{38}\). At one point, the spokesperson said “I don’t know why we need to tell you each and every thing that we do specifically” which was later credited as the statement that completely eliminated the credibility the company had in the eyes of the public\(^\text{39}\). The company made the public feel like their input was not required on a matter that would directly affect their health and well being significantly. Because radiation is invisible, people have no choice but to rely on the words of people who measure it and so communication is a key component of managing reactor troubles. At Three Mile Island the engineering problems were minor, but the communication failures were major. This failure created deep distrust among the population and seriously compromised public deliberation.

In the wake of Three Mile Island, the incident is looked upon as how government should not handle emergency situations. It is largely agreed that the way the Nuclear Regulatory

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Commission and Metropolitan Edison handled a fairly minor reactor malfunction was a failure. However, the consequences of their mishandling were made more severe by a paranoid public reaction stemming from the movie, *The China Syndrome*. The “syndrome” is not a condition of the mind, but rather a term for the worst case reactor failure. If the nuclear reactor undergoes an uninhibited meltdown, the radioactive slag could melt right through the reactor and beyond without cooling down all the way until it reached China. While it would obviously not reach China, it could melt down to the ground water and potentially make huge swaths of land too radioactive for survival. The fictional film is considered a docudrama showing the events that follow the detection of a malfunction in a large reactor. It is particularly notable for an uncanny amount of similarities to the actual three mile island incident just two weeks after the film’s release.

The film played a peculiar role in priming the public’s understanding of nuclear reactors. While it made a concerted effort to be accurate, it was nonetheless a dramatization of a fictional accident. One of the first things a spokesman for Metropolitan Edison said at a press conference during the incident was that “We are not in a China Syndrome type of situation”⁴⁰. The company shows its perception of the public as not only having seen this movie, but also as being particularly scared of their reaction to it. The spokesperson was likely wise to address it so quickly and immediately, however, as the media quickly linked the incident to the main concern expressed in the movie. The many people following the situation unfold got all their

information from media outlets reporting on the incident while using information from the fictional film to supplement their reporting.

As communication diffused through media outlets and in accordance to what research on communication on dread risks would predict, “Fact merged with fiction as United States' three television networks regularly incorporated clips from the film in their nightly newscasts--often in the lead story position and without clear attribution--to compensate for the absence of images from inside the Three Mile Island plant”\(^\text{41}\). While it is simple to blame media outlets for poor reporting, this effect is exactly what psychometric theories find happens when people communicate on dread risks. The nature of the problem, nuclear accidents, fills a role in people’s minds that makes communication and public deliberation particularly difficult.

Due to the company’s lack of clarity in communication, people actually went to watch the movie to get a better understanding of what might be happening inside the three mile island reactors\(^\text{42}\). Even reporters said that they went to go see the movie as “an instant primer in nuclear research”\(^\text{43}\). In this case, the movie makes the failures of the company have worse consequences than the company would have created on their own. Rather than confusion and concern held in the mind of the public, they turn to a dramatized telling of a reactor failure for

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their information, which exacerbates the problem and makes public deliberation on the issue ineffective.

The practical consequence of this type of communication was that the public was misinformed. One resident said of the incident that “like they say, the plant could blow straight to China”\(^44\). It was not, in fact true, that anyone was saying a reactor meltdown could make its way to China. As sloppy communication diffused through the population, facts became not just warped, but particularly warped because of the dread risk that nuclear accidents are considered. In the case of this resident, they believed something to be the case that nobody had told them was the case. Even if the company had relayed clear information and the media had clearly and effectively reported on it, this person would not have received the information that way. When they go to participate in the public discourse, they are not doing so effectively in large part because the nature of the topic at hand often incites this type of fearful response.

A public reaction based on a film, even one that is fairly credible, is not a reaction that will result in effective or useful democratic deliberation. In the aftermath of the incident, the commissioner of the Nuclear Regulatory Commission stated of \textit{The China Syndrome} “that it sensitized many readers and watchers, as well as reporters, editors, and commentators, to the implications of a nuclear accident and the possibility of a core melt is a thesis almost beyond argument”\(^45\). Democratic deliberation requires more than simply the larger population discussing an issue, but for them to be productively discussing it. In the case of Three Mile


\(^{45}\) ”Three Mile Island (TMI): A Report to the Commissioners and the Public” by the Rogovin Special Inquiry Group of the Nuclear Regulatory Commission, January 24, 1980, Reports from the Papers of Dick Thornburgh, Library of the University of Pittsburgh, Pennsylvania.
Island, the starting place for this discussion was a timely though fictional and dramatized movie and is a clear sign that it was not an effective deliberation.

While Three Mile Island is a nuclear energy accident and not a nuclear weapons incident, it is subject to the exact same type of psychological response that nuclear weapons create. Nuclear accidents, like nuclear weapons being used, are in their own category of dread risk in the highest severity. Because of this, the practical result is that the democratic deliberation is ineffective. Communication and deliberation on matters that are dread risks of this severity is shrouded in chaos, confusion, and misinformation. Whether this form of deliberation is still better than having decisions made in secret by a select is an unsettled question, but it is nonetheless clear that high dread risk scenarios seriously conflict with the efficacy of democratic deliberation.

**Fukushima**

In March of 2011, Japan was struck by a magnitude 9.0 earthquake and a following tsunami which was estimated to have killed over 10,000 people.\(^{46}\) Immediately following the earthquake, the Fukushima nuclear reactor shut down as planned. However, the flooding from the following tsunami destroyed all backup generators leaving the plant completely powerless for an extended period of time. Without power, the pumps to three reactor units ceased pumping water through the system to cool the uranium rods, which resulted in a meltdown.\(^{47}\)


As a modern meltdown, people were well primed to view a nuclear accident as a dread risk that makes communication and deliberation particularly difficult. The handling of the accident was characterized by a similar level of confusion, miscommunication, and fear that other nuclear incidents had been. Like the Three Mile Island Incident, the communicative and deliberative failure came from two sides of the debate. On one side, Like the Three Mile Island incident, the government and managing company, TEPCO, are responsible for poor communication, unpreparedness, and even hiding facts at times. On the other hand, however, is the larger population who was characterized by fear, hyperbole, and outright confidence in misinformation. The result was that public deliberation and debate on nuclear energy was ineffective precisely because of the nature of nuclear accidents functioning as a dread risk.

TEPCO's, or Tokyo Electric Power Company, was the company that was operating the nuclear power plant whose response to incident has been characterized by mistrust, unpreparedness, and even deceit. Immediately after the earthquake as people realized the reactors were a critical point of concern, TEPCO dismissed public concerns claiming the situation was under control. Days later, however, they asked to evacuate some workers at the facility as conditions there were growing dangerous. This contradiction may or may not have been deceitful in nature, however, it had the distinct effect of causing distrust between the government and TEPCO. Further, it was not, in fact true. The actual situation at the plant was one of complete chaos with total power loss. Operators could determine very little about what was actually happening in the reactors with no information on critical water levels and were

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even using flashlights in the control room. The back and forth on statements of severity had the distinct effect of causing concern and distrust in the minds of the public. Shortly after the incident, the prime minister grew sufficiently frustrated with lines of communication between the government and TEPCO deciding to visit the company headquarters himself and station a trusted personal aide there to help the flow of information.

By the time Fukushima had largely come under control, the Chairman of Japan’s powerful Fisheries Collective Association stated that “trust has been lost” in the government and TEPCO to manage nuclear reactors. While the aide helped the information flow, it showed that TEPCO and Japan were unprepared for managing a nuclear crisis. People perceived the government and the company as improvising in a critical time that contributed to deep mistrust. To a large degree, the mistrust was well warranted with TEPCO admitting over a year later that it had delayed too long to declare a meltdown while downplaying numerous risks during the incident to prevent anti-nuclear sentiment.

Miscommunication led to mistrust among the Japanese public and of the world at large making democratic deliberation ineffective. Fukushima serves as a clear example of TEPCO and Japan’s struggle to communicate effectively. Policies can be made to compel the private sector to be more forthcoming with details or to put more crisis management strategies in place, but the nature of having to do this for nuclear accidents makes this process particularly hard.

50 Ibid.
Further, the population at large shows signs of ineffective deliberation, regardless of how effective policy is at eliminating mistrust and miscommunication.

As The Fukushima incident unfolded, rumors and misunderstandings diffused through the Japanese population. By 2011, social media had come into existence. Unlike the previous nuclear accidents, this gave a new and potent pathway for rumors and fear to spread. An extensive study of Twitter during the days of the incident revealed “belief in rumors” determined people’s attitudes in a significant way, even leading people away from testing children for radiation exposure. While TEPCO and the government hold some of the responsibility for the chaos and fear that followed the incident, people also struggled to objectively view the situation and found themselves entrenched in rumor and exaggeration. Because nuclear accidents are a particular kind of fear that is related to dread risks, the diffusion of information, especially on social media, led to a stronger negative reaction than otherwise would have occurred.

The poor public understanding of the issue resulting in compromised deliberation was also shown in China more recently. Japan released some treated radioactive water from the accident back into the ocean. The Chinese public reacted aggressively against Japan and nuclear power following the venting with it coming to change their social lives. People rushed

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to the supermarkets buying large amounts of iodized salt in hopes of preventing the harmful effects of the supposed radiation leak from Japan that had now entered their waters\textsuperscript{55}. At a certain point, this behavior was so widespread that the neighborly greeting changed from its typical one to “have you bought salt?”\textsuperscript{56}. The panic among the Chinese populace led to a strong anti-nuclear sentiment that manifested most aggressively in online chat boards. Even in China, with strong government censorship, the people posted that they China building new nuclear plants and called for demonstrations\textsuperscript{57}. The amount of salt people would have to eat to have any meaningful effect on the absorption of radiation that was present would be in inhuman amount as they were told by experts, but they continued to protest nuclear power. While Chinese citizens do not directly participate in Japanese democratic deliberation, it still shows the difficulty of having public debates on nuclear topics. Rumors and misconceptions are fierce because of the nature of the topic.

The radioactive water venting did not only affect Japan’s relationship with a less friendly China, however, but harmed their Korean relationship as well. The Korean people were deeply disturbed by the Japanese water venting despite the government sign off on Japan’s plan. There were large protests with signs saying the government is “killing the livelihood of our fishermen” with even more activity in online forums\textsuperscript{58}. The protests were sufficiently strong for the New York Times to write that the whole incident has “compromised” the positive direction of the relationship between South Korea and Japan\textsuperscript{59}.

\textsuperscript{55} Didi Kirsten Tatlow, “Panic May Slow Nuclear Energy in China,” March 23, 2011.
\textsuperscript{56} Ibid
\textsuperscript{57} Ibid
\textsuperscript{59} Ibid
While communicative failure on the part of the larger organizations responsible for nuclear incidents played a key role in preventing democratic deliberation, the public debate would have still been ineffective. Even if the larger organizations had been perfectly prepared and made all the correct decisions on transparency and reporting, rumors and misinformation spread particularly fast and severely when the deliberations surround questions of nuclear accidents. In Japan, rumors were shown all over social media with people claiming their actions were based on incorrect information. China’s population began buying huge amounts of salt even though it had no effect on radiation absorption while Korea found anti nuclear sentiment and hyperbole flourished in echo chambers on social media and online forums. Of course, democratic deliberation is always difficult to achieve perfectly. However, when the deliberation is on a topic like nuclear accidents or nuclear weapons, it is especially difficult. This difficulty poses problems for maintaining nuclear weapons and nuclear power plants in democracies not only on a theoretical level, but a practical one as well.
IV. Chapter 3: The Liberal and The Realist Defense

Despite large agreement that nuclear weapons and deterrence exist in tension with democracy both theoretically and practically, the argument for maintaining effective and significant nuclear arsenals remains a serious one in both academia and public at large. While there is approval of maintaining arsenals, there is also strong approval for attempting reduce those nuclear arsenals through cooperation with other countries. To a certain end, this has been a genuine sentiment that has manifested in policy decisions. At the height of the Cold War, the US had approximately 27,000 nuclear warheads\textsuperscript{60}, but today, the number is closer to 5,000\textsuperscript{61}. This is a function of numerous treaties, deals, and agreements between the US and the USSR/Russia over many years. This agreement to dismantle and decrease nuclear arsenal size, however, has slowed in recent years and there is no evidence that the number will reach zero in the near future. In fact, there the number of countries with nuclear capabilities has only grown despite many efforts to prevent such technological development.

At the onset of his appointment as president, Obama publicly stated that United States should and would “seek the peace and security of a world without nuclear weapons”\textsuperscript{62}, however, he also said that as long as nuclear weapons existed elsewhere, the US would


maintain a “safe, secure, and effective” arsenal. Despite the claim that denuclearization was a primary aim, the US continued to maintain and even upgrade its nuclear arsenal, spending 537 million dollars to modernize its arsenal of thermonuclear bombs located in Europe whose strategic value had been decreasing since the end of the Cold War. Obama (and his liberal democracy allies) chose to maintain nuclear weapons for fear of what other countries (primarily China and Russia) would do if they were to all of the sudden obtain a nuclear monopoly over their ideological opponents. The protection of the US was important not only for national security, but for the security of liberal democracy.

Obama was expressing the common defense of nuclear weapons which is that they are required for the protection of liberal democracy and its values. If China or Russia were to hold an extreme advantage in military power, the values of liberal democracy that the US so proudly defends (and attacks for) would be seen as lost. This is an argument most thoroughly embodied by John Rawls in his work Law of Peoples, where he argues a Liberal defense of nuclear weapons in that they are not only ethically justified but required for the protection of liberal democratic states from non-liberal democratic ones. However, this is not the only reason that is offered for why nuclear arsenals should be maintained.

Nuclear weapons serve not only to protect national interest or ideological values, but peace and stability as well. This is an argument most embodied by Kenneth Waltz and his realist


theory of nuclear peace where regime type is a non-factor in nuclear considerations, but rather that countries and regions that acquire nuclear weapons engage in significantly less violence and aggression. If their enemies have nuclear weapons, they are forced into tranquility. I will argue that despite the agreement that nuclear deterrence is inconsistent with liberal democratic values, the numerous defenses of why nuclear arsenals should be maintained fall into the Rawlsian liberal defense of liberal democratic and moral values or Waltz's realist defense of peace and stability.

The Protection of Values

In order for Rawls to defend nuclear deterrence on its capacity to protect liberal values, he first argues for the existence of “outlaw states”. Certainly, he finds nuclear weapons to be undesirable weapons to use or threaten use of and “among reasonably just liberal and decent peoples the control of such weapons would be relatively easy, since they could effectively be banned”\(^65\). Even more importantly though, is that Rawls rests his theory on the fact “that constitutional democratic societies do not go to war with one another” because they “have no cause to go to war with one another”\(^66\). In a word full of constitutional democracies Rawls would see no need for nuclear weapons as war would never happen. However, he argues we do not live in this world and states that are not liberal or decent are outlaw states. Rawls does not spend a significant amount of time defining what exactly an outlaw state is, however, he

\(^66\) Ibid, 8
believes they are all states which refuse to comply with typical liberal values such as honoring and respecting human rights and separation of powers.\textsuperscript{67}

Rawls believes that given the existence of such outlaw states, “some nuclear weapons need to be retained to keep those states at bay and to make sure they do not obtain and use those weapons against liberal or decent peoples.”\textsuperscript{68} Nuclear weapons certainly serve a pragmatic function for Rawls, however he does not view their use as value neutral and to be evaluated on the efficacy of their outcome. Rather, as Thomas Doyle effectively argues, Rawls views nuclear deterrence as a painfully necessary “prevention for preventing the destruction of liberal peoples.”\textsuperscript{69} In this sense, he views them as necessary illiberal weapons for the preservation of liberal values in a world where those values are under threat.

Rawls bases his defense of nuclear deterrence on Michael Walzer’s \textit{Just War Theory}, with both theories justifying nuclear weapons on their necessity to protect moral values. Walzer takes nuclear deterrence to be unequivocally evil yet believes there may “may well be no other [strategy] that is practical in a world of sovereign and suspicious states.”\textsuperscript{70} As Thomas Doyle notes, nuclear deterrence for Walzer is the painfully necessary “provision for preventing the overthrow of the moral goods which are embodied by national communities.”\textsuperscript{71} Walzer’s account is arguably the most well-known and accepted account of nuclear deterrence and

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\textsuperscript{67} Ibid, 5.
\textsuperscript{68} Ibid, 9.
\textsuperscript{70} Michael Walzer, essay, in \textit{Just and Unjust Wars} (London: Allen Lane, 1978), 274.
\end{flushright}
ethics and it has certainly made its way into mainstream understandings with people like Obama expressing its significant findings on a very public stage. Rawls and Walzer defend nuclear weapons on their necessity to defend moral and ideological values. In doing so, they establish the liberal side of the nuclear deterrence defense because although they are not entirely unconcerned with calculations of power politics and stability, their primary goal was to protect values and traditions they deemed worthy of protection.

**For Peace and Stability**

The other defense of nuclear deterrence, however, is unconcerned with moral values or traditions, and instead evaluates the strategy on its ability bring about peace and stability in the international area. Constance Baroudos, writing for The Lexington Institute, argued that history has shown nuclear weapons prevent conflict and fighting. Their presence can be a symbol of commitment to defend themselves or allies and discourage aggression. As more countries have developed nuclear capabilities, aggression has decreased and a primary reason for this is the strategy deterrence. By this logic, a “more is better” theory of nuclear weapons in international relations is implied and is taken to its most logical conclusion by Kenneth Waltz. Waltz is most credited with defending the Nuclear Peace Theory which he most directly outlined in his article, *Nuclear Myths and Political Realities*. Here, he laments the degradation of the debate around deterrence as it entered the political realm where words take on “colorations reflecting the preferences of their users.” He argues that the US should desist in

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its pursuit of preventing nuclear proliferation in all cases and if not literally provide nuclear weapons, allow countries to develop them themselves provided they meet the three criteria for effective deterrence: capability, credibility, and communication. He is most directly opposed by Scott Sagan, and their argument is one that spans many years and culminated in a jointly authored book that outlined their arguments.

One of Sagan’s first claims against Nuclear Peace Theory is that terrorist organizations may acquire nuclear weapons and not be subjected to the forces of deterrence. Without any sovereign territory, a terrorist organization could use nuclear weapons without there being a credible threat of retaliation, as there is no real place to retaliate against. He uses the example of India and Pakistan as a potential place for terrorists to take control of Pakistani nuclear weapons. The Pakistani army is in an ongoing internal battle with terrorists while also hoping to employ nuclear deterrence against India leading to a possible “invulnerability-vulnerability” paradox. The protection of nuclear weapons is a priority for the Pakistani government; however, this goal is made easier the more secluded and underground the weapons themselves are. In order for the threat of nuclear retaliation to be truly credible, Pakistan must relocate its weapons to the field where they can be more quickly launched, but also more easily captured.

Waltz counters in his essay, Why Iran Should Get the Bomb, arguing that nations are heavily incentivized to never let this happen, but critically, both scholars are arguing within the realist rather than liberal framework of nuclear deterrence. Waltz argues that once acquiring

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76 Ibid.
the bomb, nations are both keenly aware of the attention that they will receive from other major powers, including potential enemies they hope to deter. If terrorists can overwhelm the state and seize nuclear weapons, there is a clear sign of weakness that can allow deterrence to breakdown.

Waltz is joined by Sumit Ganguly who agrees that nuclear terrorists could be a possibility, but that it is too unlikely to be taken seriously. He argues that in the case of India and Pakistan, each country values their nuclear weapons as if their security depended on it because it simply does. He writes that the “Pakistani military views nuclear weapons as their crown jewels. They consider these to be weapons of last resort, and jealously guard not only their own prerogatives, but control over their nuclear weapons.”77 Not only do they fit the mold of successful deterrence in that they view their nuclear weapons as a last resort, but Ganguly provides evidence for why nuclear weapons will bring about peace. Both sides of the argument, for or against the proliferation of nuclear weapons, do so with the reason stemming from which is more constructive for peace and stability. Waltz argues they will create peace and Sagan argues they will not, however neither argues they will best create a world of liberal and democratic peoples.

Waltz and Sagan, despite a notorious academic rivalry, both argue as realists who view nuclear weapons as a means or a problem for peace and stability around the world. Waltz sees nuclear weapons as advantageous because they can create peace while Sagan views them as a

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threat to peace, however both rationalize their arguments with peace and stability as the end goal.
V. Conclusion

Since the USSR obtained nuclear weapons to match the US, global warfare has changed fundamentally. In many traditional ways, warfare itself no longer exists with some arguing the Cold War was a time of long peace. By credibly threatening near total annihilation with nuclear weapons, neither country ever directly acted against the other. However, this threat required certain secretive practices in the governing bodies. Notably, the US was hoping to prove the dominance of its economic and political systems, yet to do so required it compromise on those very values in claimed were worth fighting for. Liberal democracy and nuclear deterrence are inconsistent because the nature of making credible threats requires high levels of secrecy and high concentrations of power and decision making. The maintenance and use of nuclear weapons not only is currently undemocratic because of the speed and secrecy which decisions are made, but practically having this decision made by the public would be just as difficult.

During the Three Mile Island and Fukushima nuclear accidents, democratic deliberation was ineffective because of the psychological reaction that nuclear accidents and nuclear weapons have in the minds of people. Psychometric research has shown that only these two types make the “highest severity” dread risk. This means that communication on a large scale is particularly difficult with fear and miscommunication taking root at all levels. Both nuclear accidents were most characterized by miscommunication and deceit from the energy companies, lack of preparedness and regulation by the governments, and misunderstanding from the population.

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at large. While these are nuclear accidents and not nuclear weapons, research has shown that the psychological response that these two types of crisis evokes is virtually the same. Thus, even if nuclear weapons debates were more public in an attempt to be democratic, there is reason to believe that the deliberation itself would be ineffective because of the nature of nuclear weapons debates.

However, most people in liberal democracies acknowledge this fact yet believe that nuclear weapons should be maintained. John Rawls represents the most popular liberal view that nuclear arsenals should be retained because they are necessary to protect and uphold liberal and moral values. Kenneth Waltz, however, represents the realist view that nuclear weapons are good for the world because they reduce fighting and increase global peace and stability.

The nuclear age was an example of an era profoundly different in its international political sphere from previous eras. The technological innovation of nuclear weapons spawned not just a new form of war, but a new form of society. The existential fear that came with that were associated with the Cold War today where the limelight of technological troubles has shifted to social media and machine learning. Certainly, these developments come with their own harms and benefits, but maybe one of those benefits was forgetting of nuclear deterrence. Optimistically, people’s focus may shift to new problems with old problems fading from the center of attention. Hopefully, people can forget that they, along with all their fellow citizens and even humans, are being held hostage at all times to the whims of a select few people charged with the power to wipe out civilization in a matter of minutes at just the push of a button.
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