

Three Minutes to Midnight:
Civil Defense in the Late Cold War Period

by

Brendan Donelson

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

This thesis examines civil defense in the United States under the Nixon, Carter and Reagan administrations. Throughout the late Cold War period civil defense policy planners employed a philosophy of dual-use. The Defense Civil Preparedness Agency (DCPA) and the Federal Emergency Management Agency (FEMA) instructed the American public to plan for a nuclear attack as well as natural disasters. Civil defense directors implemented crisis relocation plans for Americans that lived in designated high-risk areas. In an imminent nuclear attack, Americans in high-risk areas would temporarily relocate to host communities in low-risk areas of the county. This study is a blend of both civil defense policy and the reactions to nuclear war through the prism of popular culture in the late Cold War period.

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Introduction and Historiography

The concept of defending American citizens from an atomic attack has been around since the successful detonation of an atomic bomb by the Soviet Union in 1949. Nuclear paranoia and the quest to build bigger and more powerful super weapons led to different attempts by Americans to shore up perceived vulnerabilities to an enemy attack. Under the Truman, Eisenhower and Kennedy administrations duck and cover and sheltering was the mantra of civil defense proponents. In the 1970s and 1980s American civil defense officials advocated crisis relocation plans and employed a philosophy of dual-use. They instructed individuals to be in a constant state of preparedness for both natural and man-made disasters and to plan for the unthinkable.

Government officials and civil defense proponents, with some exceptions, generally regarded the usefulness of civil defense as a deterrent vis-à-vis the Soviet Union while professionals in the medical and scientific communities remained skeptical of the implications in a post-attack United States. Physicians and physicists stressed the immense power of nuclear weapons and their ability to destroy humanity and entire ecosystems; to them, civil defense promoted a false sense of security. Reports of massive Soviet civil defense efforts in the late 1970s by the American Right led to accusations of a survivability gap and brought greater national awareness to the urgency of civil defense on American soil. The 'civil defense gap' also added new energy and resources to a neglected civilian defense culture.

Elementary school children would not escape the efforts of civil defense enthusiasts. Duck and cover, the popular notion for kids to hide under their desk in the event of a

nuclear war, became a thing of the past as pilot programs were introduced and brought up to date with the concept of crisis relocation planning. Efforts were ramped up from the private sector to the upper echelons of the American government as some American corporations capitalized on public nuclear fears and offered services that were beyond the financial means of the average American family. Continuity of government plans were an example of elite level civil defense, as a plethora of options were developed for the President and members of Congress to survive and reciprocate nuclear strikes.

The near catastrophe at the Three Mile Island nuclear power plant in Pennsylvania in 1979 created nuclear paranoia as media reports conflicted with those from plant operators and investigators. Residents were in a panicky state for two weeks as they awaited the possibility of a mass evacuation. Civil defense officials remained confident throughout the crisis that a mass evacuation was feasible which contrasted from the Governor who argued the opposite. The incident at Three Mile Island provides a case study to gauge the effectiveness of the emergency response and the reactions by local residents to the disaster.

Cultural reactions to nuclear war and civil defense in the late Cold War period was manifested through a multitude of forms including, films, fiction, children's books and music. Taken as a whole, it suggests a pervasiveness of nuclear issues in popular culture as well as a deep disconnect between government policy and American popular culture. Tensions between the U.S. and Soviets were also reflected among the phenomenon of privatized civil defense. Non-government affiliated survivalists urged Americans to take

survival preparations seriously and firmly believed that civil defense planning would allow many Americans to survive nuclear Armageddon.

By the late 1970s the Cold War was ratcheting up and a new phase of confrontation between the United States and Soviet Union began. Public opinion polls throughout the late Cold War period indicated nuclear anxiety as Americans felt Armageddon was likely to occur. Although largely dormant by the late 1960s, the impetus to renew civil defense efforts came as a result of an alleged Soviet 'civil defense gap' in 1978 by right wing American politicians. Late Cold War civil defense officials touted crisis relocation plans as being the most effective mechanism for surviving nuclear Armageddon, but make-shift expedient shelters were still recommended for those who did not live in designated high-risk areas. Crisis relocation plans had an incentive of a minimum requirement of energy and expenditures for the American populace. Civil defense officials reassured residents that ample warning time and everyday practice enabled emergency population mobilization. Proponents and even government officials argued that the absence of a civilian defense program only increased the chances of American capitulation to Soviet demands. Throughout the 1970s and 1980s the confidence exuded by the various civil defense agencies never completely trickled down to the American people. For those concentrated in large, densely populated urban centers, the apparent infeasibility of crisis relocation plans in the face of a nuclear attack created a sense of apathy.

While American historians have devoted most of their attention to the civil defense establishment in the 1950s and 1960s, few scholars have uncovered the aspect of civil

defense under the Carter and Reagan Administrations.¹ Documenting civil defense throughout the late Cold War period is especially salient given that the existing literature is largely concentrated on the various civil defense agencies throughout the Truman, Eisenhower and Kennedy Administrations. Historians Thomas Kerr and Dee Garrison document the 'civil defense gap' in the 1970s and Garrison examines crisis relocation plans in the 1980s, but they do not delve into late Cold War popular culture. Tracy Davis' monograph is a comparison between American, British and Canadian civil defense efforts during the 1950s and 1960s, but she does briefly highlight American civil defense efforts in the 1980s. This study is a blend of both civil defense policy and the reactions to nuclear war through the prism of popular culture in the late Cold War period.

Historians such as Margot Henriksen, Paul Boyer, Allan Winkler and Laura McEnaney all seem to agree that by the mid to late 1960s, the concept of civil defense had become somewhat of a cultural relic, never attracting the kind of attention it had received in the previous years. They also agree that, as Henriksen put it, "interest revived briefly during the Cuban Missile Crisis in October 1962, but subsided as the crisis passed."² However, there are some significant disagreements in the historiography, as a number of explanations have been provided to explain the waning of interest in the civil defense

¹ For discussion of civil defense in the 1950s and 1960s, see: Paul Boyer, *By the Bombs Early Light: American Thought and Culture at the Dawn of the Atomic Age* (Chapel Hill: University of North Carolina Press, 1994); Allan Winkler, *Life Under a Cloud: American Anxiety about the Atom* (New York: Oxford University Press, 1993); Laura McEnaney, *Civil Defense Begins at Home: Militarization Meets Everyday Life in the Fifties* (Princeton, N.J.: Princeton University Press, 2000); Margot Henriksen, *Dr. Strangelove's America: Society and Culture in the Atomic Age* (California: University of California Press, 1997); and Guy Oakes, *The Imaginary War: Civil Defense and American Cold War Culture* (New York: Oxford University Press, 1994). For discussion of civil defense in the 1970s and 1980s, see Tracy Davis, *Stages of Emergency: Cold War Nuclear Civil Defense* (Durham, N.C.: Duke University Press, 2007); Dee Garrison, *Bracing for Armageddon: Why Civil Defense Never Worked* (New York: Oxford University Press, 2006); and Thomas Kerr, *Civil Defense in the U.S.: Bandid for a Holocaust?* (Boulder, Colorado: Westview Press, 1983).

² Henriksen, *Dr. Strangelove's America*, 233-235.

establishment in the mid to late 1960s. Boyer and Winkler examine the “cultural attention to the nuclear threat”³ in the 1980s which shows that historians were cognizant of the atmosphere but, researching and writing at the time that history was unfolding, they neglect the resurgence of civil defense in the late Cold War period.

Henriksen highlights the “moral awakening” of American citizens as a result of the “Gun Thy Neighbour” debate in 1961 and felt that this moral stance against selfish homeowners created a public backlash as the “open defense or display of shelters suffered a quiet demise...Americans no longer felt comfortable displaying their preparedness.”⁴ She also believes that citizens began to reject the complete reversal of human behaviour needed to survive in a sheltered America as “a truly sheltered America would entail astronomical costs and outrageous changes in lifestyle...only a mole-like life would be effective.”⁵ McEnaney agrees with Henriksen’s interpretation of a rejection of a “mole-like” lifestyle as “sustaining popular interest and getting people to move from bomb consciousness to a change in behaviour ultimately proved impossible.”⁶ She posits that the “gospel of self-help” led many Americans to “repudiate a level of militarization that required them to finance their own security...they rejected the idea of living with a physical reminder of nuclear war inside or outside of their homes.”⁷

Winkler looks to the drastically improved technological weapons and the futility of effective defense against it as “arguments of opponents who felt protection was impossible became increasingly persuasive...human purpose took precedence over a haphazard effort

³ Boyer, *By the Bomb’s Early Light*, xi.

⁴ Henriksen, *Dr. Strangelove’s America*, 217-218.

⁵ *Ibid*, 215.

⁶ McEnaney, *Civil Defense Begins at Home*, 62.

⁷ *Ibid*, 66.

to hide citizens from the effects of nuclear war.”⁸ Winkler also adds a new dimension to the debate; he points to the Limited Test Ban Treaty in 1963 which banned nuclear testing in the atmosphere, on the ground and underwater and was convinced that the treaty resolved the issue of radiation and contributed to the public’s lack of concern.⁹ With an end to “atmospheric testing and eliminating the fallout”, the Limited Test Ban Treaty “neutralized proponents of protection and left civil defense as a casualty of the arms-control process.”¹⁰

Boyer agrees with Winkler that after the Limited Test Ban Treaty, “almost overnight, the nuclear fear that had been building since the 1950s seemed to dissipate.”¹¹ He believes that the treaty put the nuclear arms race out of sight and mind as “it did not stop the nuclear arms race but it gave the appearance that something was being done about the hazards of nuclear war.”¹² He also adds a new explanation as to why interest in civil defense declined in the mid to late-1960s and points to the expanding war by American forces in Vietnam: “the war absorbed nearly every available drop of antiwar energy heavily contributing to nuclear apathy.”¹³ Thus as can be seen in the early Cold War civil defense historiography, some historians attributed the demise of civil defense due to events such as the Vietnam War and the Limited Test Ban Treaty while others explained waning interest as a result of a rejection of a groundhog lifestyle.

What provided the impetus for the renewed focus of civil defense in the late Cold War period? Historian Thomas Kerr argued that by the mid to late 1970s, “interest in the

⁸ Winkler, *Life Under a Cloud*, 130-131.

⁹ *Ibid*, 132.

¹⁰ *Ibid*.

¹¹ Boyer, *By the Bombs Early Light*, 355.

¹² *Ibid*, 356.

¹³ *Ibid*, 358.

concept of civil defense began to revive due to rising concern in some quarters over a buildup of Soviet civil defense capabilities.”¹⁴ The renewed energy for civil defense was largely a result of the American Right and the 1977 Central Intelligence Agency (CIA) study that highlighted an alleged ‘civil defense gap’.¹⁵ A look at the annual Congressional appropriations to the civil defense agencies in the 1970s and 1980s lends credence to Kerr’s argument. In 1970 the Office of Civil Defense (OCD) submitted an appropriation request for \$73.8 million which “was the lowest civil defense request ever submitted to Congress.”¹⁶ Clearly members of the legislative branch did not hold the civil defense agency in high regards in the early 1970s. Years of dormancy within the OCD led to austere budgetary estimates by civil defense officials. By the time of the CIA study the 1977 request “was for \$76 million but Congress appropriated \$87 million which was the first time that Congress appropriated more than what was requested.”¹⁷ This trend of increased annual Congressional appropriations continued into the early 1980s as “action on the fiscal year 1983 request resulted in the appropriation of \$147.8 million.”¹⁸ By the late 1970s a renewed energy infused the civil defense agency and members of Congress responded in kind and provided the mechanism to bolster American defensive efforts.

What were some of the factors of continuity and change with regards to civil defense philosophies and protocols from the early Cold War period to the late Cold War period? What was new in this period and what was simply a return of the old civil defense establishment? One factor of continuity that revived in the 1970s and 1980s consisted of

¹⁴ Kerr, *Civil Defense in the U.S.*, 149.

¹⁵ Ibid, 149-152.

¹⁶ B. Wayne Blanchard, *American Civil Defense, 1954-1984: The Evolution of Programs and Policies* (Emmetsburg, Maryland: Federal Emergency Management Agency, 1985), 16.

¹⁷ Ibid, 20.

¹⁸ Ibid, 23.

the notion of “self-help”. As Laura McEnaney has noted, in the 1950s “self-help shifted the financial burden for readiness from the state to the individual, mandating that consumer-citizens purchase the tools of survival.”¹⁹ This meant that individual citizens had the primary responsibility to safeguard themselves and their families against a possible atomic attack. Since planners knew that it was “foolish to promise that all would survive, they said civil defense could minimize risk for many; if citizens believed the government would protect them, they would think civil defense was unnecessary and therefore not practice it.”²⁰ The rationale behind this was to place the impetus on American citizens to protect themselves in order to combat apathy which would be the inevitable result of assured government protection. In the Carter and Reagan years, this notion of “self-help” reared again with the implementation of crisis relocation plans. Eight out of every ten Americans who lived in designated high-risk areas were expected to temporarily relocate to host areas using their own private automobiles.²¹ Thus for the vast majority of American citizens, most of the expense as well as the hassle of departing in gridlocked traffic was put on the evacuees.

One factor of change in terms of civil defense protocols in the late Cold War period was the implementation of crisis relocation plans. In the 1950s and 1960s civil defense officials endorsed plans that emphasized private and community shelters as the primary instrument of defense against an atomic attack. To illustrate this, the Federal Civil Defense Administration joined forces with Archer Productions, a New York advertising company, in 1951 and created a film called *Our Cities Must Fight*. Presented as a dialogue between two

¹⁹ McEnaney, *Civil Defense Begins at Home*, 7.

²⁰ Ibid, 24.

²¹ Davis, *Stages of Emergency*, 322.

newspaper editors, it “reflected the early attitude that cities should not be evacuated in the face of an atomic bombing.”²² The logic behind the film was that American citizens would be needed in their own communities to help rebuild infrastructure and produce goods and services.

Henriksen posits that as a result of “Soviet Inter Continental Ballistic Missiles that could reach America from Siberia in thirty minutes...the vastly reduced warning time effectively ended the possibility of mass evacuation as a viable form of civil defense.”²³ With not enough warning time to evacuate, citizens in the 1950s and 1960s were instructed to duck and cover and seek refuge in a private home shelter, if they had one, or their nearest community shelter. During the 1970s and 1980s, the “political situation suggested that surprise attack was unlikely, and instead a period of tension would precede any nuclear war.”²⁴ Civil defense planners expected a minimum of three days of advanced warning time so the policies and protocols under the Carter and Reagan Administrations adjusted. Civil defense directors in the late Cold War period advocated crisis relocation plans and reassured Americans that there would be ample time to evacuate cities during a period of increased international tensions.

²² *Our Cities Must Fight* (1951), *The Atomic Platters: Cold War Music and Educational Films from the Golden Age of Homeland Security* (Germany: Bear Family Records, 2005).

²³ Henriksen, *Dr. Strangelove's America*, 105.

²⁴ Davis, *Stages of Emergency*, 172.

Chapter I – Civil Defense under the Nixon and Carter Administrations

Civil Defense in the Nixonian Era

The first chapter traces the introduction of crisis relocation plans and the scientific and public response. It looks at some of the proposed schemes by civil defense officials to implement population relocation as well as methods of operation. Concerns over an alleged ‘civil defense gap’ by right wing American politicians will be examined in the context of Mutual Assured Destruction (MAD) and the emerging influence of neoconservatives in government. The near meltdown at the Three Mile Island nuclear power plant provided a test case to assess the ability of emergency management agencies to handle a crisis as well as gauge public attitudes and reactions to the incident.

In 1972 President Nixon abolished the Office of Civil Defense (OCD) and, in its place, created the Defense Civil Preparedness Agency (DCPA).²⁵ The DCPA incorporated the functions of planning for natural and man-made disasters into a philosophy of dual-use which included emergency contingency planning for nuclear war as well as hurricanes, tornadoes and earthquakes.²⁶ However, planning for peacetime natural disasters would take a backseat to preparing for a nuclear attack until the establishment of the Federal Emergency Management Agency (FEMA) in 1979. Although annual House appropriations to the DCPA in the 1970s were a fraction of what was requested, civil defense officials at the state and local levels fervently conditioned Americans to plan for the unthinkable and be in a constant state of preparedness in the event of a nuclear attack or other natural emergency.

²⁵ Garrison, *Bracing for Armageddon*, 140.

²⁶ *Ibid.*

An annual report by the DCPA in 1973 provides a glimpse into the efforts and activities of state and local civil defense directors in the early 1970s. In a glowing report from John Davis, national director of the DCPA, he stated that additional progress had been made “toward the objective of providing the entire population of the United States with shelter from the hazards which could result from a nuclear attack.”²⁷ The main role of the agency in early 1970s was twofold: locate potential shelter spaces for the entire population as well as assist locales that were considered high-risk areas in the development of crisis relocation plans.

In the realm of community shelters Davis commented that “survey operations continued to be principally of an updating nature confined, for the most part, to areas developing community shelter plans...the nationwide shelter inventory was increased by 7,197 facilities resulting in a grand total of 224,368 facilities.”²⁸ In addition the DCPA made funds available for state directors to acquire the services of Community Shelter Planning Officers whose role it was to give “technical assistance to city and county governments in the development of their community shelter plans and to develop plans for dealing with peacetime disasters as well as the effects of a nuclear attack.”²⁹ A DCPA sponsored research task force in 1973 also introduced “procedures for conducting contingency planning for population relocation during periods of increased threat for communities considered at high-risk to direct weapons effects.”³⁰ As a result of the research efforts on behalf of the

²⁷ John Davis, *Foresight: Defense Civil Preparedness Agency Annual Report #2, FY 1973* (Virginia: U.S. Government Printing Office, 1974), 15.

²⁸ *Ibid*, 16.

²⁹ *Ibid*, 18.

³⁰ *Ibid*.

DCPA, crisis relocation plans were developed as part of a pilot project in a few urban cities with populations that exceeded 50, 000 during 1974.

B. Wayne Blanchard, who became a planning specialist for civil defense programs in the Federal Emergency Management Agency, has shed light on the nature of crisis relocation plans in the United States during the 1970s. He concluded that crisis relocation plans were developed after several dozen research projects on “issues including movement feasibility, food redistribution, medical care and electrical power and was deployed only after thorough discussion with the state director’s association...who agreed that planning should be commenced.”³¹ Blanchard claimed that state planners, who were funded by the DCPA, were responsible for creating and introducing these emergency evacuation plans to city and county officials and that “efforts were underway in nearly all states by 1976-1977.”³² However it should be noted that “federal assistance in 1977 was solely for attack preparedness as Congress appropriated \$87 million to the DCPA.”³³ This completely reversed the dual-use philosophy of the DCPA which “had been that improved capabilities to deal with peacetime disasters were a secondary but desirable objective of the civil defense program.”³⁴ For those state and regional civil defense directors who saw the futility of emergency evacuation plans in the event of a nuclear attack, the attack preparedness qualifier created a strong desire for a consolidated agency that treated the importance of preparing for natural and man-made disasters equally.

³¹ Blanchard, *American Civil Defense 1945-1984*, 20.

³² *Ibid.*

³³ *Ibid*, 21.

³⁴ *Ibid.*

The Scientific Community and the Public Response

Initial reactions to the concept of crisis relocation planning were met with mixed reviews, especially among members of the scientific community. An article that ran in the *Bulletin of the Atomic Scientists* in March 1974 conceded that whatever nation launched a nuclear attack first would be in a slightly better position. Columns that ran in the *Bulletin of the Atomic Scientists* espoused progressive views that tended towards the left-center of the political spectrum. Herbert York stated that in the event of a full-scale nuclear war between the U.S. and Soviet Union, “most of the urban populations could be killed and most of the industry and commerce could be destroyed by the direct and immediate effects of the nuclear explosions.”³⁵ York estimated that a large scale nuclear war “would result in the order of ten million casualties from cancer and leukemia in countries situated well away from the two protagonists.”³⁶ The scientific community clearly sensed that a nuclear exchange between the two countries would have grave implications for the entire world.

Conversely, the *National Review* featured an article in 1976 that endorsed crisis relocation planning as a deterrent to a Soviet pre-emptive strike as long as serious plans were in place. Columns in the *National Review* tended towards the far right of the political spectrum. Historian David Farber asserts that the journal “was an institutional beachhead on which conservative political activists could sort out their worldviews and organize their campaigns to take on what they perceived as an establishmentarian liberal consensus.”³⁷ Conservative activists treated American nuclear arsenals as providing a strong posture vis-

³⁵ Herbert F. York, “Deterrence by Means of Mass Destruction,” *Bulletin of the Atomic Scientists* (March 1974), 6.

³⁶ *Ibid.*

³⁷ David Farber, *The Rise and Fall of Modern American Conservatism: A Short History* (Princeton, N.J.: Princeton University Press, 2010), 41.

à-vis the Soviet Union. “The DCPA is laying plans for what is called crisis relocation planning”, wrote Carsten Haaland and Eugene Wigner. “Such evacuation plans, if they appear credible to the Soviet leaders, will go far toward preventing a serious confrontation from occurring well into the 1980s, if at all.”³⁸ The logic behind their assertion came from the belief that if the Soviet Union knew that the U.S. had an effective mechanism for emergency population mobilization, they would think twice before launching a nuclear strike that would be reciprocated.

Paul Hodge, a reporter with the *Washington Post*, uncovered the crisis relocation plans that were being studied by the DCPA for Washington and Virginia area residents. In an article that made front page news in January 1977, Hodge reported that “plans to evacuate two million Washington-area residents to rural and West Virginia during threat of nuclear war are being studied by the Defense Civil Preparedness Agency.”³⁹ Out of the pilot evacuation studies conducted in small cities, Hodge asserted: “all are finding that mass evacuation is feasible in most parts of the country except in California and the Northeast, where well over 50 million people would have to be evacuated and shelter, food and supplies found for them in rural areas.”⁴⁰ John Bex, a state director for civil defense efforts among the mid-Atlantic states, was one of many who was convinced of the usefulness of crisis relocation plans: “It’s absolutely feasible to evacuate Washington, given a day or two’s notice...Hell, we do it on a limited scale with 360, 000 people every day during rush

³⁸ Carsten M. Haaland and Eugene P. Wigner, “Surviving a Nuclear War,” *National Review* (Vol. 28, No. 35, September 1976), 1005.

³⁹ Paul Hodge. “Civil Defense Studies Plan for Evacuation of Northern Virginia,” *The Washington Post* (January 20, 1977), VA1.

⁴⁰ *Ibid.*

hour.”⁴¹ The DCPA acknowledged that crisis relocation plans for locales such as New York City might never work due to a large amount of people concentrated in a small area with limited access routes. Therefore, the impetus was to concentrate on smaller, high-risk communities first and develop plans for larger areas once it was proved it could work.

So what exactly was considered a feasible crisis relocation plan? A good example can be found in the late 1970s in Oklahoma City. According to the *New York Times*, by the end of 1978 only eight cities in the entire nation had an emergency evacuation plan: Oklahoma City, OK; Utica-Rome, N.Y; Dover, DE; Macon, GA; Duluth, MN; Tucson, AZ; Great Falls, MT and Colorado Springs, CO.⁴² The DCPA considered Oklahoma City a high-risk area due to its proximity to several military bases. Other criteria for inclusion in a high-risk area included population centers with more than 50, 000 people and a city’s proximity to strategic missile silo bases.⁴³

As the *New York Times* reported, during a period of imminent threat directions on where to go would appear in the three Oklahoma City newspapers as well as on the radio and television. In the first nine hours after the President’s order of evacuation, residents would be allowed “unrestricted movement to travel outside the risk area which would enable families to move in with relatives and friends outside the city.”⁴⁴ After the first nine hours had elapsed, families with car license plates that ended in an even number would depart to one of fourteen host counties in Oklahoma where they would be assigned to

⁴¹ Ibid, VA3.

⁴² Bernard Weinraub, “Oklahoma Shows That It’s Always Been Serious About Civil Defense,” *The New York Times* (December 1, 1978), A20.

⁴³ Kerr, *Civil Defense in the U.S.*, 157-158.

⁴⁴ Weinraub, “Oklahoma Shows That It’s Always Been Serious About Civil Defense,” A20.

schools and other buildings for at least two weeks.⁴⁵ After eighteen hours had elapsed, families with car license plates that ended with an odd number would vacate.⁴⁶ Although this is just one example of a feasible crisis relocation plan, by the end of the 1970s, with some exceptions, states and counties across America engaged with an increased level of enthusiasm for civil defense that would continue to the early 1980s.

One of the bizarre methods of crisis relocation was reported in the *Chicago Tribune* in 1978 and was put forth by an Illinois civil defense official. He believed that all one needed to have in order to survive a nuclear attack was two feet and a heartbeat. A comparison was made between the annual Marine Corps marathon in Chicago and the ability to disguise mass evacuation as a jogging marathon. As Dick West reported, “about 7,000 people ran 26 miles in the annual Marine Corps marathon...had they run the same distance out of the city, they would have been well away from ground zero.”⁴⁷ Defending his rationale, the Illinois civil defense director believed that mass evacuation by vehicle would only serve to provoke an enemy, “but if we dress them in jogging togs and sent them loping off into the countryside, the enemy would assume it was merely another mass marathon and would not take alarm.”⁴⁸

Another bizarre concept was advocated by a Los Angeles County civil defense official and contained a Social Darwinian aspect to it. Robert Kingsbury proposed a “Noah’s Ark plan whereby only the young and healthy hit the highways and the old and sick would

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ Dick West, “Our Secret Civil Defense Plan: Run For Your Life,” *Chicago Tribune* (November 26, 1978), A6.

⁴⁸ Ibid.

stay behind.”⁴⁹ The logic behind Kingsbury’s crisis relocation plan was that high priority evacuees would be needed in the post-attack aftermath while the elderly and sick would “serve only to place a burden on the survivors.”⁵⁰ For those who would not have the physical capacity or endurance to make it, their best bet was to hope and pray that a nuclear attack would never occur.

In order to inform and educate the American population on how to protect themselves in the nuclear era, the DCPA released a short instructional video in 1978. *Protection in the Nuclear Age* instructs viewers that “an attack could come by surprise but most likely during a period of increased international tensions...if there is sufficient time to evacuate cities many millions of lives will be saved.”⁵¹ Citizens were reassured that after the initial blast there would be a thirty minute lapse before radioactive fallout commenced: “It’s not contagious, you do have defenses against radiation...mass, distance and time. Thick, heavy, dense materials like brick or packed earth to shield you and after two weeks only one tenth of one percent of the radiation is left.”⁵² In terms of the kind of protection available to the public, the DCPA advised those in high-risk areas to relocate temporarily to host areas in the countryside which they conceded was a “difficult problem requiring much planning but not to worry, we relocate millions of workers from our big cities every evening rush hour.”⁵³ For the rest of the U.S. they advised those with home shelters to put them to use and for those who did not, there were more than enough public shelters to

⁴⁹ Jay Mathews, “Head-for-the-Hills Civil Defense Schemes Produce Mixed Results,” *The Washington Post* (May 16, 1982), A18.

⁵⁰ Ibid.

⁵¹ *Protection in the Nuclear Age* (New York: Defense Civil Preparedness Agency, 1978).

⁵² Ibid.

⁵³ Ibid.

shield the entire population, as long as residents brought lots of food and water with them.⁵⁴

A look at public opinion polls in the late 1970s provides a glimpse into American citizen's views regarding civil defense efforts and their receptivity towards the DCPA programs. A poll conducted in 1977 highlighted a gap in American knowledge of DCPA plans while also revealing that a number of those surveyed voted for increased civil defense efforts. While "74 percent did not know where the nearest public shelter was located, 37 percent were in favour of requiring every new U.S. house built to come with a bomb shelter, with the federal government paying for most of the costs."⁵⁵

The poll was conducted again in 1979 and showed both an increased awareness of civil defense plans and a heightened sense that the United States simply needed to ramp up its efforts. In the late 1970s the press reported that the Soviet Union had an extensive civil defense program. Although there was considerable debate that cast doubts on Soviet civil defense efforts, public opinion was skewed towards acceptance out of fear that the U.S. had fallen behind the Soviets in the realm of nuclear defense planning. The Gallup Poll revealed that while "52 percent of persons interviewed said we should do more than we are currently doing; only 24 percent said they knew where the nearest public shelter, if any, is located."⁵⁶

⁵⁴ Ibid.

⁵⁵ George Gallup, "Americans in the Dark About Civil Defense Systems," *The Hartford Courant* (January 23, 1977), 15A.

⁵⁶ George Gallup, "52 Percent Want More Civil Defense," *The Washington Post* (February 4, 1979), A11.

The Committee on the Present Danger and the 'Civil Defense Gap'

In 1976 newly appointed CIA Director George H. W. Bush gathered a conservative “team of outside experts to review classified data and to draw up its own separate report on the Soviets and its intentions.”⁵⁷ Team B consisted of ten neoconservative members and included Richard Pipes, professor of Russian history at Harvard University, and Paul Wolfowitz, who worked at the U.S. Arms Control and Disarmament Agency.⁵⁸ The Team B report “presented an analysis of Soviet motivations profoundly different from the one U.S. intelligence had been offering” and “concluded that the Soviets were striving for military superiority...and that it viewed détente as means of achieving this goal.”⁵⁹ Such allegations were warmly received by the American Right and policymakers formed a lobbying organization called the Committee on the Present Danger “to produce an intellectual counterweight to détente.”⁶⁰ Like Team B, the Committee on the Present Danger was stacked with neoconservative intellectuals eager to increase the defense budget and pushed for a more aggressive policy towards the Soviets.

According to historian Dee Garrison, from the mid-1970s until the late 1980s the Committee on the Present Danger “warned of a civil defense gap that put the survival of American society at risk.”⁶¹ The Committee on the Present Danger highlighted the alleged Soviet commitment to shelters and evacuation and claimed that Soviet preparations for “civil defense was clearly as dangerous as its growing military strength, for its elaborate

⁵⁷ James Mann, *Rise of the Vulcans: The History of Bush's War Cabinet* (New York: Penguin Books, 2004), 74.

⁵⁸ Ibid.

⁵⁹ Ibid.

⁶⁰ Julian Zelizer, *Arsenal of Democracy: The Politics of National Security From World War II to the War on Terrorism* (New York: Basic Books, 2010), 274.

⁶¹ Garrison, *Bracing for Armageddon*, 145; Persistent calls of a 'Soviet civil defense gap' by right wing American politicians lasted until 1988. See Garrison, *Bracing for Armageddon*, 224.

system would allow it to win and survive a nuclear conflict.”⁶² In the view of committee members, preparing for nuclear war required infusing public confidence in the American civil defense establishment.⁶³ Garrison notes that the American Right “depended on frightening the American public into believing that the Soviet civil defense program would protect 90 percent of Soviet citizens from death in a nuclear exchange, while Americans would be unprotected.”⁶⁴ Right wing politicians were against reductions in U.S. nuclear arsenals and clamoured for an increase in defense spending to shore up the ‘civil defense gap’.

A two part feature in the *Bulletin of the Atomic Scientists* in March and April 1978 called into question the efficacy of Soviet civil defense preparations and labelled them mostly as mere paper plans. Fred Kaplan, in part one, invoked the scenario that Committee on the Present Danger members were warning of with a ‘civil defense gap’: “The Soviets, after evacuating their cities, force American leaders to give in to certain demands threatening a nuclear strike otherwise.”⁶⁵ In order for that scenario to work, American officials had to believe in the credibility and effectiveness of the Soviet civil defense program that they viewed a pre-emptive strike as unnecessary.

The dominant view within the scientific community, expressed by Fred Kaplan, was that the “Soviet civil defense program would be inadequate in the face of a large-scale nuclear attack and that the U.S. currently has more than sufficient capability to nullify

⁶² Ibid, 145.

⁶³ Ibid, 147.

⁶⁴ Ibid.

⁶⁵ Fred M. Kaplan, “The Soviet Civil Defense Myth,” *Bulletin of the Atomic Scientists* (March 1978), 15.

whatever passive-defense measures that may have been taken by the Soviets.”⁶⁶ Kaplan systematically attacked the ability to evacuate large industrial cities such as Moscow and Leningrad due to a small percentage of private automobiles and an abysmal transportation infrastructure.⁶⁷ Regarding the construction of expedient shelters in the countryside, he argued that the “ground is frozen in the Soviet Union all winter. In the spring and summer, food stocks are virtually depleted as the planting season is about to begin. Autumn is the time when it rains nearly all the time and when everything is muddy.”⁶⁸ If the Soviet people desired to build expedient shelters there would be a very limited window of opportunity. However, Soviet civil defense was seen as just another tactic to manipulate the population as it “helps maintain order at home, being an excellent means both for reinforcing a garrison-state mentality and for instilling a faith that the Communist Party watches over and protects its people.”⁶⁹ To Kaplan, Soviet civil defense symbolized another means of control and remained a plan not executed from paper.

Historian Thomas Kerr has framed American civil defense efforts in the 1970s as providing a credible posture of deterrence vis-à-vis the Soviet Union. According to a 1977 study conducted by the CIA, the Soviets had spent eight to ten times more than Americans on civil defense in fiscal year 1977 and “if duplicated in the United States, would have cost about \$2 billion.”⁷⁰ Kerr maintained that if evidence “demonstrated that steps were being taken to protect Soviet citizens, while Americans remained essentially unprotected, then

⁶⁶ Ibid.

⁶⁷ Ibid, 17.

⁶⁸ Ibid, 18.

⁶⁹ Fred M Kaplan, “The Soviet Civil Defense Myth- Part 2,” *Bulletin of the Atomic Scientists* (April 1978), 43.

⁷⁰ Kerr, *Civil Defense in the U.S.*, 152.

the credibility of the U.S. deterrent would be seriously eroded.”⁷¹ In other words if the Soviets believed that American populations were vulnerable to attack they would not think twice about a pre-emptive strike.

The CIA figure of \$2 billion was met with criticism from members of the scientific community who felt that the unclassified report neglected key differences within the study. Lee Aspin, an economist, claimed that the estimate was “derived not from an exchange rate calculation but from a duplicate basis...70 percent of this dollar estimate consists of manpower costs, assuming that Soviet civil defense workers are paid. Higher manpower costs in the U.S. significantly inflate the budget estimate.”⁷² This figure would be repeatedly referred to in the early 1980s under the Reagan Administration as the estimate for national civil defense expenditures needed to combat the ‘civil defense gap’ that supposedly existed between the Soviet Union and the United States.

Leon Goure, a Soviet emigrant to the United States, was one of the most vocal attestors to a strong Soviet civil defense program. Goure based his views from personal experience and with interviews he conducted with Soviet immigrants and claimed that the adult population completed annual compulsory civil defense courses while children were taught lessons in the second, fifth and ninth grades.⁷³ Although he conceded that the harsh Soviet winters posed “special problems” for the construction of expedient shelters, Goure contended that “evacuation exercises for civil defense personnel had been held in large cities such as Leningrad, Kharkov and Novosibirsk.”⁷⁴ Committee on the Present Danger

⁷¹ Ibid.

⁷² Lee Aspin, “Soviet Civil Defense,” *Bulletin of the Atomic Scientists* (February 1979), 44.

⁷³ Leon Goure, “Another Interpretation,” *Bulletin of the Atomic Scientists* (April 1978), 49.

⁷⁴ Ibid, 50.

members like Paul Nitze and Eugene Rostow recommended American government officials increase civil defense efforts in the U.S. in order to maintain a strategic balance with the Soviet Union and warned of the scenarios that Goure spoke of.

Goure published the most definitive account of Soviet civil defense plans and preparations in 1976. *War Survival in Soviet Strategy* provides a rare look at the Soviet Union's strategies for nuclear war using extensive Soviet civil defense documents, newspapers, and Communist Party sources including pamphlets and training films. According to Goure, Soviet approaches towards crisis relocation made a distinction between essential workers and the rest of the general population. This logic sprung from the "conviction that it is vital to maintain essential production and services, even in wartime."⁷⁵ Ordinary residents were to proceed with lengthier evacuation procedures while essential workers were to disperse between "60-120 km so that the dispersed worker will not spend more than 4.5 hours on the round trips to and from work."⁷⁶ Differing from the official concept advocated by the American counterpart FEMA, Soviet civil defense strategies clearly had a war-fighting element that geared towards maintaining an uninterrupted economy.

Soviet civil defense plans permeated the Republic's citizens as it became part of the mandatory Communist indoctrination sessions as early as 1961.⁷⁷ "The aim", writes Goure, "is to instill in the population a proper attitude towards the civil defense program and also to foster patriotism, support for the regime and its policies and an appreciation for what

⁷⁵ Leon Goure, *War Survival in Soviet Strategy: USSR Civil Defense* (University of Miami: Center for Advanced International Studies, 1976), 85.

⁷⁶ *Ibid*, 86.

⁷⁷ *Ibid*, 81.

the leadership is doing to ensure the safety of the population.”⁷⁸ Soviet citizens received training for important secondary effects of a nuclear blast such as radiation exposure and information was disseminated through all available Communist Party propaganda channels. By the mid-1970s districts and cities throughout the USSR held either “a civil defense day or month each year.”⁷⁹ Articles devoted to the subject were published in newspapers, training videos were broadcast on national television stations, and exhibits and exercises were held which promoted a sense of unity and camaraderie.⁸⁰

American government officials and public concerns over a ‘civil defense gap’ were balanced with “persistent skepticism in foreign policy and intelligence circles about the scope and effectiveness of the Soviet civil defense effort.”⁸¹ Two former American ambassadors to Moscow, Malcolm Toon and Thomas Watson, probed Soviet society for evidence of preparations while serving abroad. They did not believe the Soviets had an effective mechanism in place to shield a major portion of the population from a nuclear blast: “The Soviets are very good at establishing lots of bureaus to work on projects that never fly,”⁸² diplomat Thomas Watson stated. Under the façade, appearances did not seem to match realities as Soviet civil defense propaganda was primarily a tool used to keep communist party members in check, and a way for workers to demonstrate loyalty to the motherland.

⁷⁸ Ibid, 207.

⁷⁹ Ibid, 209.

⁸⁰ Ibid.

⁸¹ Judith Miller, “Despite Foes and Skeptics, Administration Presses Ahead on Civil Defense,” *The New York Times* (June 10, 1982), B20.

⁸² Ibid.

As reporter John Finney wrote in the *New York Times*, the “Soviet Union, with its plans for evacuating civilian populations and dispersing industry, was gaining a war-fighting capability not possessed by the U.S.”⁸³ News of a ‘civil defense gap’ was front page on the *Los Angeles Times* later that year and it helped bring greater national awareness to the American people of the urgency of having a civil defense program. A “new civil defense debate is developing”, wrote Norman Kempster, “because of concern that the Soviet Union maybe opening up a survival gap with its own defensive measures.”⁸⁴ As one reporter put it, “what we don’t want to develop is a situation where only one nation can go underground and safely push a button.”⁸⁵ The cumulative effects of the national debate over an alleged ‘civil defense gap’ added new energy and resources to the Defense Civil Preparedness Agency that had, in the early 1970s, been victim of restrained congressional appropriations. In 1979 a near nuclear meltdown at a Pennsylvania power plant captured national media attention as news buzzed of a possible mass evacuation.

The Accident at Three Mile Island

On 28 March 1979 a major malfunction occurred at the Three Mile Island II (TMI) nuclear power plant in Pennsylvania. The reactor pumps quit working around 4:00am and initiated a plethora of problems that culminated with a relief valve tripping and permitting “large volumes of cooling water from the primary system to escape. The failure of the relief valve was the principal mechanical cause of what soon became a grave crisis at TMI.”⁸⁶

⁸³ John W. Finney, “Experts Disagree on Civil Defense,” *The New York Times* (April 29, 1976), 9.

⁸⁴ Norman Kempster, “Survival Gap Fears Start New Civil Defense Debate,” *The Los Angeles Times* (November 7, 1976), 1.

⁸⁵ William Rempel, “Civil Defense May Play Role In Arms Talks,” *The Los Angeles Times* (October 5, 1977), B3.

⁸⁶ J. Samuel Walker, *Three Mile Island: A Nuclear Crisis in Historical Perspective* (Berkeley: University of California Press, 2004), 73.

Residents close to the plant had grown accustomed to the loud noises throughout the day and night so the “few who were awakened rolled over grumpily and went back to sleep.”⁸⁷ According to one newspaper account, the accident at TMI “would generate a week of doomsday fear, panicky flight, conflicting statements and intense confusion.”⁸⁸ Although different from a nuclear attack in the sense that it was a product of American enterprise gone awry and not a strike from a foreign power, civil defense officials were presented with an opportunity to implement crisis relocation plans which had remained in theory and on paper.

As sociologist Ronald Perry rightly noted, the accident at TMI did not allow for a national civil defense exercise because the “event posed a localized threat” and therefore “cannot reasonably be seen as an incident providing any substantial part of the population with first-hand experience.”⁸⁹ Only some Pennsylvania residents were affected which left the remainder of Americans safe from radiation poisoning and crisis relocation plans were therefore unnecessary in forty-nine states during the crisis. Perry also highlighted the difference between emergency evacuation plans during a nuclear attack or reactor meltdown and natural disasters. In the former the host areas “remain constant”⁹⁰ and highway routes and alternative plans can be developed. With natural disasters unpredictability becomes an issue and “safe evacuation routes and destinations must change for virtually every impact because of variation in factors like the direction of approach of the storm and its intensity.”⁹¹ Even though a fraction of Americans did not

⁸⁷ B. Drummond Ayres Jr., “Three Mile Island: Notes From a Nightmare,” *The New York Times* (April 16, 1979), A1.

⁸⁸ *Ibid.*

⁸⁹ Ronald Perry, *The Social Psychology of Civil Defense* (Lexington, MA.: Lexington Books, 1982), 35.

⁹⁰ *Ibid.*, 41.

⁹¹ *Ibid.*

have a first-hand encounter with a near nuclear disaster in the late Cold War period, TMI can be used as a test case to assess the effectiveness of the response from disaster officials as well as gaging public reactions to the incident.

Mass evacuation of Pennsylvanians to host areas posed a myriad of logistical problems but planners within the Pennsylvania Emergency Management Agency (PEMA) remained convinced that it was feasible. However, it would only be ordered if there was imminent danger or if radiation amounts exceeded safe levels of exposure. Nuclear Regulatory Commission (NRC) staff and county civil defense officials were forced to sift through conflicting reports from the media as well as from TMI operators on the condition of the plant. By 30 March 1979 NRC and emergency management authorities grew weary “about the condition of the plant and the misleading information about releases of radiation convinced them to move quickly on the suddenly urgent question of evacuation.”⁹² The Governor of Pennsylvania, Richard Thornburgh, had the final decision whether to issue an evacuation and was not confident that it could be executed.

As a precautionary measure, Thornburgh issued an evacuation notice for pregnant women and children on 31 March 1979 and advised them “to stay at least five miles away from the crippled TMI nuclear power plant as radioactivity continued to leak.”⁹³ Thousands of schoolchildren accompanied by their mothers were temporarily relocated “ten miles southeast of Harrisburg, and other people began leaving on the Governor’s advice.”⁹⁴ If evacuees did not have family or friends to accommodate them, community centers such as

⁹² Walker, *Three Mile Island*, 126.

⁹³ Richard Lyons, “Children Evacuated But Governor Says Later Further Pullouts Are Not Thought Likely,” *The New York Times* (March 31, 1979), 1.

⁹⁴ *Ibid.*

the Hershey arena became a temporary home until it was deemed safe enough to return. Until then children's anxieties were soothed with activities as they were treated to a trip "to the Hershey Zoo and were entertained with puppet shows, games and television."⁹⁵ Approximately 3, 500 pregnant women and children, 83%, chose to evacuate and most women left in a panic with hasty preparations.⁹⁶ One woman from Harrisburg confessed to reporters at the Hershey arena that she had "left home with lunch still on the table for her three young children"⁹⁷ and similar sentiments were expressed from other individuals.

Jane Lee, a dairy farmer in Etters, PA, "was in a state of panic trying to pack the car" and lamented that "it was one hell of a horrible experience to go down that road and look back and know you're never coming back."⁹⁸ Lee and her husband braved the warnings of a nuclear meltdown and drove back daily to milk and tend to their dairy cows. A Middletown resident temporarily evacuated to Maryland for a week to stay with relatives. Pat Street decided to leave the children in the care of relatives until the Governor had lifted the evacuation advisory.⁹⁹ Across the Susquehanna River from TMI, Bill Whittock "saw many people in town hastily getting ready to vacate" but he was unwilling to travel outside a fifteen mile radius because he owned an apartment close to his home.¹⁰⁰ Other Pennsylvanians either decided to stay put or packed up personal items and waited until they received the Governor's evacuation notice. An editorial printed in the *Washington Post* lambasted the U.S. dependence on nuclear power and asked if Americans could "afford the

⁹⁵ Robert Jackson and Penny Girard, "Mass Evacuation Possible Near Nuclear Plant," *The Los Angeles Times* (April 1, 1979), A6.

⁹⁶ Walker, *Three Mile Island*, 138.

⁹⁷ Jackson and Girard, "Mass Evacuation Possible Near Nuclear Plant," A6.

⁹⁸ Robert Leppzer, *Voices From Three Mile Island: The People Speak Out* (New York: The Crossing Press, 1980), 7.

⁹⁹ *Ibid*, 10.

¹⁰⁰ *Ibid*, 4.

physiological and psychological costs of nuclear mishaps.”¹⁰¹ Confidence in the state’s ability to handle nuclear emergencies was bound to be shaken and the public voiced their concerns in the wake of the crisis. Initial reactions to the TMI accident ranged from shock and disbelief to confusion as citizens anxiously awaited the possibility of a mass evacuation.

Two days after pregnant women and young children were temporarily evacuated, newspaper headlines across the U.S. buzzed with reports of a precautionary mass evacuation of Pennsylvanians. The *Hartford Courant* announced that “six Pennsylvania counties were ordered to be prepared for evacuation”¹⁰² on 2 April as conflicting reports about the magnitude of the disaster continued to contradict each other. PEMA officials contemplated expanding the radiation safety zone from five to twenty-five miles which increased the number of Americans to be evacuated to an estimated 400, 000 people.¹⁰³ *The New York Times* reported that schools and shopping malls in surrounding cities would absorb the influx of evacuees and “some of those who live within 25 miles of the disabled Three Mile Island nuclear power plant would be sent as far away as Philadelphia and Scranton.”¹⁰⁴ One PEMA director exuded confidence that the twenty-five mile radius around TMI could be evacuated in a half days’ time: “If Philadelphia can move 35, 000 cars in a few hours at a football game we should have no trouble doing it in 12 hours.”¹⁰⁵

¹⁰¹ Michael Reinemer, “Three Mile Island Aftermath,” *The Washington Post* (April 16, 1979), B2.

¹⁰² Michael Whalen, “Six Pennsylvania Counties Receive Evacuation Alert,” *The Hartford Courant* (April 2, 1979), 1.

¹⁰³ Arthur Siddon and Carol Oppenheim, “Tell Evacuation Plan for 400, 000” *Chicago Tribune* (April 2, 1979), 5.

¹⁰⁴ Ben Franklin, “Precautionary Evacuation Plan Is Studied for a 25-Mile Radius of Nuclear Plant,” *The New York Times* (April 2, 1979), A14.

¹⁰⁵ *Ibid.*

John Brabits, assistant director of emergency preparedness in Dauphin County, explained that in the event of a precautionary mass evacuation National Guard trucks, buses and other means of transportation would relocate residents, but stressed “if everyone follows instructions, we won’t overload highways or cause traffic jams.”¹⁰⁶ Brabits embarrassingly admitted to being caught off guard by the TMI catastrophe but civil defense planners in Dauphin County had scrambled to finish evacuation procedures by 31 March: “we had plans but not for anything of this magnitude.”¹⁰⁷ Fortunately for PEMA directors the mass precautionary evacuation order for all Pennsylvanians within a twenty-five mile radius of the TMI nuclear power plant never occurred. The final decision rested with Governor Thornburgh and he was hesitant to issue a sweeping emergency mobilization advisory because he did not share the same optimistic convictions of feasibility as some of his PEMA colleagues.

According to a Rutgers University study in 1979 by Barnes et al., thirty-three percent of people within a twenty mile radius of TMI made preparations to mobilize but chose not to.¹⁰⁸ The most common reason given for not evacuating “was the inability to leave jobs and the absence of an evacuation order.”¹⁰⁹ Thornburgh only issued an evacuation notice for pregnant women and children within a five mile radius, but the twenty-five mile radius around TMI never was ordered to leave. Considering the fact that it was not mandatory, most of the residents who temporarily vacated were within a five to ten mile radius of TMI. Pennsylvania hospitals fielded calls during the TMI accident from

¹⁰⁶ Siddon and Oppenheim, “Tell Evacuation Plan for 400, 000,” 5.

¹⁰⁷ Ibid.

¹⁰⁸ Cynthia Bullock Flynn, “Reactions of Local Residents to the Accident at Three Mile Island,” in *Accident at Three Mile Island: The Human Dimensions*, David Sills, C.P. Wolf and Vivien Shelanski eds. (Boulder, CO: Westview Press, 1982), 50.

¹⁰⁹ Ibid.

panicked individuals who believed they had radiation poisoning but “not a single case was found among central Pennsylvania residents.”¹¹⁰ The complete invisibility of radiation particles caused anxious Americans to complain to physicians with symptoms which “ranged from a bad taste in their mouths to a mysterious bad smell in the air and erratic behaviour by their children.”¹¹¹ At the peak of the TMI catastrophe nuclear paranoia spread to imaginative proportions among those that did not temporarily evacuate.

A survey by the NRC revealed the breakdown of the percentage of Pennsylvanians that evacuated around a fifteen mile radius of the TMI nuclear power plant. Within a five mile radius, 60% vacated; within five to ten miles of TMI, 44% departed and in the ten to fifteen mile zone, 32% chose to leave.¹¹² According to the survey, respondents indicated the primary motive for temporarily relocating “was the confusing information reported about the situation. A related reason for leaving voluntarily was the desire to avoid the danger or confusion of a forced evacuation.”¹¹³ NRC and government officials reassured residents throughout the crisis that the radiation threat was overblown and posed no serious dangers to public safety. Reports by media outlets offered conflicting accounts and highlighted the possibility of a hydrogen bubble explosion which contributed to the publics’ anxiety and confusion.

Pregnant women and children were allowed to return to their homes two weeks after the precautionary evacuation after officials “declared the crisis at Three Mile Island

¹¹⁰ Bill Drummond, “Radiation Scare: Unseen Danger Spawned Confusion, Anxiety, Fear,” *The Los Angeles Times* (April 9, 1979), B1.

¹¹¹ *Ibid.*

¹¹² Flynn, “Reactions of Local Residents to the Accident at Three Mile Island,” 52.

¹¹³ *Ibid.*, 54.

over.”¹¹⁴ Schools resumed a few days after the declaration but investigators admitted that it would be “months before radioactivity has subsided enough to permit inspection of its damaged core.”¹¹⁵ In an interview with reporters from the *Hartford Courant* weeks after the catastrophe had subsided, Governor Thornburgh rejected the notion of issuing a mass evacuation order due to the possible dangers as well as traffic jams. Thornburgh remained “convinced that a mass evacuation would have resulted in panic and possible injury and death especially to the old and sick.”¹¹⁶ This contrasted with PEMA planners as they were convinced that if evacuees remained calm and followed civil defense instructions, crisis relocation plans would be an effective defense against nuclear mishaps and attacks as well as natural disasters.

It is interesting to note the leniency that existed between nuclear power plant licensing and emergency response plans to accidents. The NRC did not require a “state emergency plan as a condition of plant licensing, although a state could voluntarily submit a plan to NRC for its concurrence.”¹¹⁷ Counties in close proximity to nuclear power plants across the U.S. initiated crisis relocation planning “even though plans depended on inadequately prepared local communities.”¹¹⁸ Emergency evacuation procedures often were treated as an afterthought as they were dependent on funding and the level of enthusiasm that civil defense planners held.

¹¹⁴ Associated Press, “The Meaning of Three Mile Island,” *The New York Times* (April 12, 1979), A22.

¹¹⁵ *Ibid.*

¹¹⁶ Associated Press, “Thornburgh Defends Decision Not to Evacuate N-Plant Area,” *The Hartford Courant* (April 24, 1979), 1.

¹¹⁷ Russell Dynes, “The Accident at Three Mile Island: The Contribution of the Social Sciences to the Evaluation of Emergency Preparedness and Response,” in *Accident at Three Mile Island: The Human Dimensions*, David Sills, C.P. Wolf and Vivien Shelanski eds. (Boulder, CO: Westview Press, 1982), 123.

¹¹⁸ *Ibid.*, 124.

In January 1978 a nuclear power plant in Ft. St. Vrain, CO accidentally leaked low amounts of radioactivity and the response by disaster planners created an embarrassing situation. Emergency preparedness plans “called for using school buses to remove the area’s adult population en masse”, however, “the officials responsible for carrying out the Colorado evacuation had forgotten all about the children.”¹¹⁹ Gaffes reported in newspapers revealed that nuclear contingency plans were treated with a low priority. Directors responsible for crisis relocation plans accepted the “argument that because of the relatively low radiation levels expected from even a major nuclear power plant accident, an evacuation could proceed safely without a rush.”¹²⁰ Such justifications relegated crisis relocation plans to the backburner of yearly agendas as emergency planners hoped it would be something they would never have to implement.

Reports on the condition of the TMI nuclear power plant were contradictory throughout the two week crisis which greatly contributed to the public’s confusion. Plant operators and NRC officials maintained that the threat was under control and the radiation emitted posed no serious health risks. Media outlets painted a different scenario and speculated about the possible risk of an explosion and the need for a mass evacuation. Civil defense authorities admitted to being caught off guard by the initial event but were convinced that such an operation was feasible. This contrasted with Governor Thornburgh who believed that a forced mass evacuation would generate panic and injuries and therefore resisted issuing the order. The vast majority of residents that temporarily

¹¹⁹ Robert Toth, “Some Lacking: Nuclear Plant Disaster Plans- How Good?” *The Los Angeles Times* (April 14, 1979), SD1.

¹²⁰ Leslie Berkman, “San Onofre Evacuation Tested on Paper, Not in Crisis,” *The Los Angeles Times* (April 14, 1979), 6.

relocated were within the ten to fifteen mile radius of the TMI plant. Sentiments expressed by evacuees reflected the desire to get out of town to avoid the panic and confusion of an evacuation order. After the crisis had subsided and people had returned to their homes, serious doubts were raised as confidence in emergency officials' abilities to effectively handle the situation was shaken. Ultimately the legacy of TMI cast a shadow over the civil defense establishment as it encouraged Americans to be even more skeptical of crisis relocation planning.

Civil Defense in the Carter Years

In order to improve the complex and fragmented nature of the DCPA's ability to handle both natural and man-made disasters, President Jimmy Carter established the Federal Emergency Management Agency (FEMA) in 1979 to "succeed and combine several disaster services, including the Defense Civil Preparedness Agency under the FEMA umbrella."¹²¹ According to historian Dee Garrison, FEMA was "publicized as a group devoted to a dual purpose in order to make preparation against nuclear war less frightening to the public."¹²² Instead of planning solely for a nuclear attack, FEMA officials emphasized the similarities of evacuation between preparing for an impending hurricane and a nuclear disaster. There is also a more simple explanation as to why FEMA consolidated the disparate agencies: cost savings. As Jimmy Carter explained in his remarks announcing Reorganization Plan No. 3 of 1978, "cost savings of between \$10-15 million annually can be achieved by consolidating headquarters and regional facilities and

¹²¹ Jennifer Shaw and Henry Stanhope eds., *Nuclear Attack: Civil Defense- Aspects of Civil Defense in the Nuclear Age* (London, U.K.: The Royal United Services Institute for Defence Studies, 1982), 194.

¹²² Garrison, *Bracing for Armageddon*, 150-151.

staffs.”¹²³ Under Reorganization Plan No. 3, FEMA consolidated “five existing Federal agencies and six additional disaster-related responsibilities into a single structure...the National Fire Prevention and Control Administration and oversight responsibility for the Emergency Broadcast System were also transferred to the agency.”¹²⁴ FEMA not only created a more visible awareness among American citizens with regards to the state of civil defense preparedness in their state, but also assured that local civil defense officials coordinated evacuation plans with areas that became host counties.

Carter was convinced that consolidating civil defense functions would ensure that “attack readiness programs were effectively integrated into the preparedness organizations and programs of state and local governments, private industry and volunteer organizations.”¹²⁵ There were, however, reservations among state and local civil defense officials about the new agency created by the Carter Administration. As one state director remarked, his “major objection to the reorganization plan was his concern that civil defense would become subordinate to preparations for natural disasters.”¹²⁶ The fear was that planning for a nuclear attack would not be taken seriously and be shelved in favour of planning for more common occurring peacetime disasters such as hurricanes, tornadoes and floods.

Conversely, opponents of civil defense within the medical and scientific communities maintained that planning for man-made and natural disaster emergencies

¹²³ Jimmy Carter, *Public Papers of the Presidents of the United States* (Washington: Office of the Federal Register National Archives and Records Service General Services Administration, 1979), 1131.

¹²⁴ *Ibid*, 1128.

¹²⁵ *Ibid*, 1130.

¹²⁶ Martin Tolchin, “Carter Proposes a Reorganization Giving Civil Defense New Emphasis,” *The New York Times* (June 20, 1978), A1.

were so different that they could not be lumped together into a single agency. The main concern was the uncertainty of how many survivors would be left after a nuclear blast as “most conventional disaster plans rely on the rapid influx of help, in both materiel and manpower, from neighbouring regions...the actual responses to nuclear war and non-nuclear war situations are likely to be very different.”¹²⁷ The scenario of a nuclear attack envisioned by physics specialists painted a bleak picture of mass death with no survivors left from any surrounding areas to help out.

The official concept of civil defense preparations advocated by the Carter Administration in the late 1970s was one of mass evacuation of high-risk areas to host counties. Evacuees would, in theory, live temporarily with relatives and friends, reside in school and church basements or build expedient fallout shelters. For those not living in a designated high-risk area, they were expected to either build a make-shift expedient shelter or relocate to a community shelter.

The focus towards crisis relocation plans had an added incentive of a minimum requirement of energy and expenditures needed by residents in the high-risk areas of the U.S. Unlike the massive price tag of blast shelters that was pegged at upwards of \$60 billion¹²⁸, the crisis relocation plans would be a fraction of that cost. As reported by the *Chicago Tribune*: “the Carter Administration announced a five year, \$1.2 billion program to prepare for mass evacuation of cities especially in California, the Northeast corridor and the Chicago-Detroit corridor.”¹²⁹ The main instrument of crisis relocation plans were

¹²⁷ John Hassard, “Maintaining Perceptions: Crisis Relocation in the Planning of Nuclear War,” in *Civil Defense: A Choice of Disasters*, John Dowling and Evans M. Harrell eds. (New York: American Institute of Physics, 1987), 90.

¹²⁸ Shaw and Stanhope, *Nuclear Attack*, 200.

¹²⁹ James Coates, “Is it Better to Run or Hide?” *Chicago Tribune* (November 19, 1978), A4.

automobiles as “at least 80 percent of evacuees were expected to relocate in private automobiles, effectively putting most of the cost of transport onto evacuees themselves.”¹³⁰ The distance that Americans were supposed to travel depended on the geographical location and access routes, but was generally less than 250 miles which was the estimate of the fuel range on a full tank of gas.¹³¹ For those that did not have access to a car, the chief means of evacuation would come through public transportation via buses or trains and through air travel.

The plan to evacuate large metropolitan areas such as New York relied on commercial airlines and had a skeptical response from an article published in the *Bulletin of the Atomic Scientists*. “Planners envisioned airlifting up to 1.5 million people in the New York area airports to western New York State”, wrote David Cavers, “having tried to get to airports late in the afternoon, I consider this concept a triumph of creative imagination.”¹³² It was expected that a certain amount of the population would refuse to temporarily relocate. This would benefit those who were heading for the hills as the routes would be a bit less congested.

The city of Plattsburgh, New York was one of the areas in the state that actively engaged in crisis relocation planning during the late 1970s and into the early 1980s. Due to its close proximity to an Air Force Base, the chief emergency evacuation planner in New York State, Richard Herskowitz, developed detailed protocols for emergency evacuation in cooperation with local civil defense officials.¹³³ Although not completely finished by 1979, a

¹³⁰ Davis, *Stages of Emergency*, 322.

¹³¹ Ibid.

¹³² David F. Cavers, “That Carter Evacuation Plan,” *Bulletin of the Atomic Scientists* (April 1979), 16.

¹³³ Ed Zuckerman, “Hiding from the Bomb-Again,” *Harper’s Weekly* (Vol. 259, No. 1551, 1979), 33.

wailing blast from a siren would signal residents to evacuate “to lower-risk portions of Clinton County unless they had a vacation cabin, relatives or friends in which they would be advised to go there instead...the police department would assign two patrolmen to direct traffic at the corner of Broad and Cornelia.”¹³⁴ Herskowitz’s crisis relocation plan included “lodging assignments for evacuees in public and commercial buildings, special arrangements for key workers who would commute back to their jobs in Plattsburgh and arrangements for the delivery of food and other supplies to the host areas.”¹³⁵ A House member who represented New York, Tom Downey, ridiculed the proposed plan on the grounds that planning to survive a nuclear attack was ludicrous: “life as we know it would come to an end...we’d be holed up in cellars with machine guns trying to protect five cans of tuna fish.”¹³⁶

In order to effectively warn residents of an impending disaster, the District of Columbia announced in 1978 that the state was taking a proactive stance and updating the civil defense warning sirens. As Frances Sauvé reported in the *Washington Post*, a “wailing sound for 3-5 minutes would warn residents to turn on their radios and televisions for instructions in the event of a local disaster.”¹³⁷ In 1978 there were roughly 350 civil defense sirens in the D.C. area and residents could expect another 225 sirens installed and working by the end of the fiscal year.¹³⁸ The warning sirens were linked electronically and had the unfortunate tendency to malfunction from time to time. In 1985 D.C. residents awoke one late May evening to the sound of blaring warning sirens and “within minutes

¹³⁴ Ibid, 34.

¹³⁵ Ibid.

¹³⁶ Ibid, 36.

¹³⁷ Frances Sauvé, “New Plan for Civil Defense Sirens,” *The Washington Post* (June 1, 1978), DC2.

¹³⁸ Ibid.

hundreds of concerned residents had tied up telephone lines with queries to their police and fire departments.”¹³⁹ In that instance it turned out to be a false alarm but that did not stop the hysteria from reaching some residents in Montgomery County, as one emergency response assistant attested: “one woman told me she was really afraid and she wanted to know what was happening...I just tried to calm her.”¹⁴⁰

In other cases, some states were not as proactive as D.C. in terms of their emergency disaster warning systems and had let maintenance of sirens fall by the waste side. In March 1985, civil defense officials in Lehigh County, Pennsylvania received a message of an impending attack warning on the teletype from AT&T and were about to order the Emergency Broadcasting System.¹⁴¹ A malfunction occurred and the message had been accidentally sent to 40 of the state’s 67 counties but “20 counties did not verify or sound the alarm...in Allentown only 3/7 sirens were in operation...in fact, most people only learned of the incident the next day from the newspaper.”¹⁴² The false alarm incident in Pennsylvania revealed that if a nuclear or natural disaster occurred in the state, the apparatus to warn residents was woefully inadequate.

One concerned individual from Danvers, Massachusetts clamoured for an increased effort on the behalf of state and local civil defense officials to prepare for natural or wartime disasters. In an editorial in the *Boston Globe*, local resident Paola Jasper expressed her disbelief over the sorry state of emergency preparedness planning and believed that “what America puts into her defense budget, Russia puts into her civil defense program.

¹³⁹ Ed Bruske, “Civil Defense Sirens Bring Calls to Police,” *The Washington Post* (May 16, 1985), C1.

¹⁴⁰ *Ibid.*

¹⁴¹ Patty Edmonds, “Alarming Incident,” *Nuclear Times* (Vol. 2, No. 5, March 1984), 6.

¹⁴² *Ibid.*

And if there were to be a war, it is known that wars are won by the people who survive them.”¹⁴³ Jasper had good reason to be alarmed. An article that ran a few months prior to her editorial in the *Boston Globe* stated that “California and the Northeast corridor that includes New York and Boston are cited as the two most difficult areas for mass evacuation...the northern and central sections of Massachusetts would get seven refugees for each local inhabitant.”¹⁴⁴ Clearly the crisis relocation plans in some parts of the country needed a lot more fine tweaking as locales with high concentrations of population posed serious problems to emergency mobilization planners.

Chapter I - Conclusion

Throughout the 1970s and 1980s, American civil defense officials employed a philosophy of dual-use and instructed citizens to be in a constant state of preparedness for both natural and man-made disasters, and to plan for the unthinkable. While the civil defense agency remained largely dormant during the Johnson and Nixon era, a new phase of Cold War confrontation in the late 1970s and an alleged Soviet ‘civil defense gap’ gave extra impetus for civil defense plans and ushered in a wave of civil defense enthusiasm that lasted into the early 1980s. There were factors of continuity and change from the civil defense agencies in the early to late Cold War period. One element of continuity was the notion of “self-help” which put the onus and expense of survival preparations on the American people. One aspect of change was the implementation of crisis relocation plans which largely replaced the duck and cover and bomb shelter craze of the 1950s and 1960s.

¹⁴³ Paola Jasper, “Civil Defense Is Vital,” *Boston Globe* (January 18, 1979), 16.

¹⁴⁴ Robert Kaylor, “Civil Defense Is, Once Again, On U.S. Agenda,” *Boston Globe* (November 19, 1979), 64.

Government officials and civil defense proponents in the late Cold War period generally regarded civil defense as providing a credible posture of deterrence vis-à-vis the Soviet Union. Enthusiasts on the far Right viewed civil defense in the lens of Mutual Assured Destruction and argued a strong program would avoid American capitulation to Soviet demands. Professionals in the medical and scientific community condemned civil defense efforts as futile and stressed that the post-attack implications were so catastrophic that planning to survive one promoted a false sense of security. Civil defense officials remained confident that crisis relocation planning was feasible based on everyday practice with rush hour and holidays. They emphasized the similarities between planning for natural and man-made disasters, but this was met with ridicule from members of the medical and scientific community as well as the public.

The near meltdown at the Three Mile Island nuclear plant caught Pennsylvania civil defense planners off guard and the contradictory reports regarding the situation created anxious and panicky residents. Civil defense officials were extremely confident that a mass evacuation of all Pennsylvanians within a twenty-five mile radius of the plant could be done, but this contrasted with the convictions of the only man who had the authority to dictate an order. In the end, most of those who left were in close proximity to the accident and chose to do so to avoid the confusion and danger of a forced evacuation notice. The legacy of Three Mile Island ultimately cast a shadow of doubt over the emergency management agency and led to public skepticism over crisis relocation planning.

Chapter II - A Final Resurgence: Civil Defense under Reagan

Chapter II delves into the reasons as to why civil defense crisis relocation plans were outright rejected by American citizens by Reagan's second term. It looks at civil defense activities in the classrooms, corporate America and the White House as the civil defense establishment received a boost with the election of Reagan. Proponents framed the usefulness of civil defense as providing a credible posture of nuclear deterrence vis-à-vis the Soviet Union and likened the concept to a seat belt, fire extinguisher or bullet proof vest as a preventative measure. Critics were not convinced of the humanitarian insurance argument and believed a strong civil defense program would only provoke the Soviets. It includes a discussion of the optimistic assurances by civil defense officials and a member of Reagan's cabinet that preparations would enable survival as well as an examination of the scientific and public backlash to civil defense plans through editorial reactions and public opinion polls.

By the early 1980s sentiments expressed by residents like Paola Jasper, regarding the civil defense efforts by the Soviet Union, were shared among senior advisors to the Reagan Administration and even Ronald Reagan himself. In an interview with Sam Donaldson of ABC news in May 1982, President Reagan expressed his inner thoughts and fears about a 'civil defense gap' between the United States and Soviet Union. "The Soviet Union for years has had a very expensive and very efficient civil defense program", stated Reagan, "shelters, evacuation plans, everything...we've got to go forward with some plans

for the protection of our own people.”¹⁴⁵ When asked about his views over whether the American people could protect themselves against a nuclear attack, Reagan was confident that there would be adequate warning time to prepare: “there’d have to be enough strain in advance that you would think you’d have some warning that you better get the people out. There wouldn’t be any protection in that for a surprise attack because you’ve only got 28 minutes.”¹⁴⁶ Although he conceded that in the unlikely event of a surprise attack inhabitants would be doomed, the scenario he envisioned included a period of rising international tensions followed by an evacuation of Soviet cities which would allow ample warning time for American citizens.

The election of Republican President Ronald Reagan in 1980 signalled a shift in the Cold War as Reagan adopted a more bellicose stance and labelled the Soviet Union as an “evil empire.”¹⁴⁷ Reagan rode to power on the message that “government is not the solution to our problem; government is the problem.”¹⁴⁸ Encouraging public cynicism towards government created a contradiction when expecting the public to be receptive to government initiated civil defense planning. In the realm of nuclear war and public opinion, a poll conducted by the National Broadcasting Company in mid-December 1981 found that “76 percent of the American people believed that nuclear war was likely within a few years, an increase from 57 percent the preceding August.”¹⁴⁹

¹⁴⁵ Ronald Reagan, *Public Papers of the Presidents of the United States* (Washington: Office of the Federal Register National Archives and Records Service General Services Administration, 1983), 681.

¹⁴⁶ *Ibid.*

¹⁴⁷ Melvyn P. Leffler, *For the Soul of Mankind: The United States, the Soviet Union and the Cold War* (New York: Hill and Wang, 2007), 340.

¹⁴⁸ Farber, *The Rise and Fall of Modern American Conservatism*, 197.

¹⁴⁹ Ronald E. Powaski, *Return to Armageddon: The U.S. and the Nuclear Arms Race, 1981-1999* (New York: Oxford University Press, 2000), 18.

One tangible example that measured societal anxiety with regards to nuclear weaponry throughout the Cold War was referred to as the “doomsday clock.” Prominent members of the medical and scientific communities formed an influential group known as the *Bulletin of the Atomic Scientists* after the atomic bombings of Hiroshima and Nagasaki in 1945. Upon its inception, members created a “doomsday clock” in order to gage fear and tension in American society. They took into account factors such as international crises and events as well as the nuclear arms race between the Soviet Union and the United States. If the minute hand of the clock was placed closer to midnight scientists warned of a possible impending international conflagration.

By the early 1980s the *Bulletin of the Atomic Scientists* had moved the “doomsday clock” to three minutes to midnight due to “the accelerating arms race and the almost complete breakdown of communication between the superpowers...this has combined to create a situation of extreme and immediate danger.”¹⁵⁰ In fact, the only time the minute hand had been placed closer was in 1953 after the United States successfully detonated the first hydrogen bomb.¹⁵¹ By the mid-1980s the scientific community had reacted to the gravity of the international situation and had negative perceptions regarding prospects for peace. Therefore the fear that was shared among high level officials within the Reagan Administration was reflected among prominent individuals within the scientific community. Within this backdrop of deepening nuclear tensions, grass-root Americans were exposed to these fears and they were taught to defend themselves against a possible nuclear attack.

¹⁵⁰ The Editors, “Three Minutes to Midnight,” *Bulletin of the Atomic Scientists* (January 1984), 2.

¹⁵¹ *Ibid.*

Classroom Civil Defense: Say Goodbye to Bert the Turtle

Conditioning Americans to placate themselves against an enemy attack ultimately meant starting from the ground up. In other words, this meant implementing curriculum changes in the nation's elementary and secondary schools. This next section deals with the receptivity of public opinion in the push to include civil defense education as part of a standard curriculum, as well as the reactions by school teachers and the press. In 1973 a DCPA annual report noted that all states except Kentucky and Rhode Island had active civil defense education programs. This produced the following results: a total of "900, 872 pupils completed a personal and family survival course of 8 hours or more. An additional 1,542,543 pupils completed from 1-8 hours of instruction in DCPA publications...school-oriented workshops were held with a total attendance of 11, 817 teachers."¹⁵² Efforts by the Federal Emergency Management Agency continued to target the nation's school curriculum in the 1980s. In the 1983 annual report the agency boasted of an "increase in the number of courses offered by the Emergency Management Institute and a 57% increase in the number of students who participated in training activities."¹⁵³ Besides encountering civil defense in the classrooms, students could enroll in free courses offered through regional or state offices. In 1983 over 100,000 students participated.¹⁵⁴

Civil defense officials maintained that training students to deal with the prospects of surviving a nuclear attack was an important element as it was hoped that pupils would return home and share their advice with their parents. Even Nobel Prize winner Dr. Eugene

¹⁵² Davis, *Foresight: DCPA Annual Report #2, FY 1973*, 22.

¹⁵³ Louis Guiffrida, *Annual Report FY 1983: A Report to the President...* (Maryland: U.S. Government Printing Office, 1984), 24.

¹⁵⁴ *Ibid.*

Wigner supported civil defense efforts in the schools and advocated for the inclusion of high school courses in the nation's curriculum. An article in the *New York Times* informed readers that Wigner "suggested training two teachers in each of the nation's 29,500 secondary schools to conduct the courses"¹⁵⁵ The curriculum would teach high school students the protocols and procedures of crisis relocation planning in an impending nuclear attack or other natural disaster. In order for that to occur, school administrators had to believe in the usefulness of civil defense education and certain amount of receptivity needed to exist within the American public.

A survey conducted in the fall of 1984 in Greensboro, North Carolina "assessed the knowledge and attitudes toward nuclear war" among high school students and college freshman.¹⁵⁶ When posed the question over whether pupils "would want to be among the survivors after a nuclear attack, only 41 percent of high school students and 19 percent of college students responded affirmatively."¹⁵⁷ Although this was a relatively small sample of survey respondents, the vast majority of North Carolina's youth indicated that in the event of an enemy attack, they would rather be among the dead than those living. Clearly civil defense educational activities needed to be ramped up in certain sections of the country to impart a greater level of confidence amidst students that preparations would enable survival.

By the early 1980s a large portion of FEMA's work consisted of public awareness campaigns and cajoling the American public into adopting emergency preparedness

¹⁵⁵ Associated Press, "Nobel Winner Urges Schools to Teach More Civil Defense," *The New York Times* (October 11, 1981), 66.

¹⁵⁶ Richard L. Zweigenhaft, "Students Surveyed About Nuclear War," *Bulletin of the Atomic Scientists* (February 1985), 26.

¹⁵⁷ *Ibid*, 27.

preparations. This was a logical extension for the civil defense agency as much of their planning depended upon willingness by Americans to follow their lead. "This focus" write scientists Jennifer Leaning and Matthew Leighton, "derives from its emphasis on influencing popular perceptions about nuclear war and prospects for survival."¹⁵⁸ By the end of the Reagan Administration's first term, FEMA's efforts had paid off as a pilot program introduced an emergency management curriculum in nearly half of the U.S. states and plans were announced for a nationwide program in 1984. An article in the *Nuclear Times* in January 1983 provided an overview of the pilot program curriculum for those in grades kindergarten through grade 12. As reporter R. Burd noted, a "program covering natural disasters, technological disasters and nuclear disasters of various types was field tested in 22 states during 1981-1982."¹⁵⁹ FEMA planned to expand the program to all fifty U.S. states during the 1984 school year.

What were some of the initial reactions among teachers and administrators as well as the press? Reporter Paul Loeb was optimistic of the youth pilot program as he felt that the "nuclear curricula for junior high schools confronts the issue head on. They discuss what nuclear war would be like, how the weapons buildup has come about and our options for preventing catastrophe."¹⁶⁰ For example, young primary school children "should determine the location of fallout shelters in their town and practice emergency drills" but "it is not suggested that children practice how to duck and cover."¹⁶¹ The popular notion to duck and cover during the 1950s and 1960s was replaced in favour of crisis relocation

¹⁵⁸ Jennifer Leaning and Matthew Leighton, "Programs for Surviving a Nuclear War: A Critique," *Bulletin of the Atomic Scientists* (June 1983), 5S.

¹⁵⁹ R. Burd, "FEMA Plans at Risk," *Nuclear Times* (Vol.1, No.3, January 1983), 12.

¹⁶⁰ Paul Loeb, "Teaching the Unthinkable," *Nuclear Times* (Vol.2, No.1, October 1983), 26.

¹⁶¹ Metta Winter, "Survivalism in the Schools," *Nuclear Times* (Vol.1, No.5, March 1983), 16.

planning. Civil defense films promoted this notion with a lovable character named Bert the Turtle and advised children to duck and cover in the event of an atomic attack. In the 1980s the curriculum material was divided into four sections according to grade level and had a skeptical response from scientist Jennifer Leaning who looked at the content in teacher's manuals in the junior grades. She concluded that an "incomplete and optimistic assessment pervades the curriculum. Nuclear war is presented as one more in a series of manageable disasters along with earthquakes and hurricanes."¹⁶² Leaning expressed her disdain for the overly optimistic advice presented in FEMA teaching manuals as she did not believe that planning for natural and man-made disasters were similar.

FEMA's education specialist, Jim Bunton, described the curriculum as a "comprehensive all disasters approach" and claimed that "an overwhelming majority of the teachers [in the pilot program] found the curriculum to be good."¹⁶³ Leaning's pessimism was echoed among some of the teachers who participated in the pilot program. Betsy Schultz, a high school science teacher in Oakland, California remarked that the "information regarding nuclear war is totally unrealistic...nuclear war is just another disaster the way it is presented."¹⁶⁴ As a result she "declined to use the nuclear war section of the curriculum" for the 1983-1984 school year.¹⁶⁵ Thus by the mid-1980s a certain level of disconnect between civil defense officials and American educators was apparent. For those expected to implement the plans and activities on behalf of the civil defense agency, the confidence and enthusiasm levels in survival plans among the grass roots did not match that of civil

¹⁶² Leaning, "Programs for Surviving a Nuclear War," 65.

¹⁶³ Winter, "Survivalism in the Schools," 16-17.

¹⁶⁴ *Ibid*, 17.

¹⁶⁵ *Ibid*.

defense officials. This lack of confidence in civil defense plans contrasted with the boom in nuclear preparations among elite government politicians and corporate America in the Reagan years.

Civil Defense in Corporate America and the White House

How did businesses and corporations as well as high level government officials plan for an enemy nuclear attack? In 1979, Ronald Reagan was “invited to visit the headquarters of North American Aerospace Defense Command (NORAD) in Cheyenne Mountain, Colorado.”¹⁶⁶ According to Reagan’s memoirs he was “incredibly shaken by the Cheyenne Mountain experience, and by the fact that there was nothing that could prevent a Soviet nuclear attack.”¹⁶⁷ This experience weighed heavily on the President’s conscience and personally reminded him of the importance of having civil defense plans in the White House.

The Federal Emergency Management Agency had a detailed and highly secretive continuity of government plan that has remained largely classified to the present day. The purpose of this plan was to “provide for the rescue and shelter of top government officials, industrial and military leaders during a nuclear war to ensure that selected American elite could continue to direct and ‘win’ a protracted nuclear conflict.”¹⁶⁸ Also known as Project 908, the continuity of government plan was labelled the “Doomsday Project” by a journalist who uncovered portions of the plan in the late 1980s.

¹⁶⁶ Garrison, *Bracing for Armageddon*, 155.

¹⁶⁷ *Ibid.*

¹⁶⁸ *Ibid.*, 150-151.

In 1981 President Reagan signed a “secretive Executive Order that paid special attention to presidential succession and involved measures to protect the President...a shadow war cabinet was created that could assume power if the President was killed.”¹⁶⁹ Seventeen top-ranked military and government officials were constantly “tracked through a computer database and at least one of them was supposed to remain outside the Washington, D.C. periphery at all times.”¹⁷⁰ According to the *U.S. News and World Report* journalist who uncovered Project 908 in 1989, intelligence sources “admitted that there had been more than a dozen occasions during 1982-1989 when all of the officials had been within 2 miles of each other in the capital.”¹⁷¹ Clearly in the case of Presidential succession, expedience had trumped preparations due to the importance of high level government officials still needing to conduct the daily affairs of the country.

Another option contained in the continuity of government called for the evacuation of the President, Cabinet and Supreme Court to the 434 acre mountain facility located 48 miles from Washington in Berryville, Virginia: Mt. Weather.¹⁷² Completed under the Eisenhower Administration in the late 1950s, the massive underground bunker was complete with a hospital, dining and recreation areas, a crematorium, an emergency power plant and reservoirs of drinking water.¹⁷³ The site was so secretive that it only became public knowledge in the late 1980s and early 1990s and “archived records pertaining to it

¹⁶⁹ Ben Fischer, “The Soviet-American War Scare of the 1980’s,” *International Journal of Intelligence* (Vol. 19, No. 3, 2006), 487-488.

¹⁷⁰ *Ibid*, 488.

¹⁷¹ Steven Emerson, “America’s Doomsday Project,” *U.S. News & World Report* (Vol. 107, No. 6, 1989), 27.

¹⁷² Stephen Schwartz, *Atomic Audit: The Costs and Consequences of U.S. Nuclear Weapons Since 1940* (Washington, D.C.: Brookings Institution Press, 1998), 212.

¹⁷³ *Ibid*.

remain classified and nothing is accessible regarding its use during exercises.”¹⁷⁴ The continuity of government plan was designed to give the President survival options in the event of an impending nuclear attack. In case that failed, those designated to succeed the Presidency would be provided with the tools and resources necessary to both launch a retaliatory strike vis-à-vis the Soviet Union as well as carry on the functions to maintain the economy in the aftermath of a nuclear disaster.

There was yet another option for the White House in Project 908. National Emergency Airborne Command Posts (NEACP) were set up in which specially retrofitted Boeing 747's were available to the President on fifteen minutes notice.¹⁷⁵ These airborne posts provided the President or successor with command over nuclear forces from the air during a crisis but could only remain aloft for 72 hours.¹⁷⁶ There are some inconsistencies within the available documents pertaining to the feasibility of NEACP's being able to remain in airspace longer than three days. While historian Steven Schwartz claimed a maximum airborne time of 72 hours, reporter Steven Emerson stated that “with refueling, the NEACP could remain airborne almost indefinitely, allowing the President to direct a military reprisal and coordinate emergency relief efforts.”¹⁷⁷ The scenario that Emerson envisioned foresaw another 747 refueling the NEACP while mid-air thus allowing for an extended period of emergency operation. Continuity of government plans were top secret and remained out of the realm of public knowledge to allay fears of an American war-ready image.

¹⁷⁴ Davis, *Stages of Emergency*, 295.

¹⁷⁵ Schwartz, *Atomic Audit*, 210.

¹⁷⁶ *Ibid.*

¹⁷⁷ Emerson, “America’s Domsday Project,” 27.

The Reagan Administration was careful to balance a vision of “peace through strength” with concerns over public opinion with a trigger-happy President. Defense Department officials contemplated an extended war with the Soviet Union and their satellites beyond the exchange of a singular nuclear weapon. According to Richard Halloran, a reporter with the *New York Times*, the Pentagon drew up its first strategy to fight a nuclear war and directed the “armed forces to prepare for nuclear counter-attacks against the Soviet Union over a protracted period.”¹⁷⁸ On the other hand, the General Services Administration’s purchase of 10, 000 pounds of morphine sulfate was delayed in January 1983 by the Reagan Administration “in part out of concern about public fears that the U.S. might be prepared to wage a limited nuclear war.”¹⁷⁹ Morphine sulfate would be one of many drugs used to help victims of radiation sickness in a post-attack aftermath and was “among the half-dozen drugs stored in the strategic stockpile for civil defense.”¹⁸⁰ With the nuclear freeze movement gathering momentum by 1983 and 1984 being a presidential election, the Reagan camp was cautious to please a diverse political spectrum while seeking a second term.

Russell Clanahan, a spokesman for FEMA, discussed the agency’s justification for the continuity of government plan: “You have to have a place to protect the leadership, the decision-makers, so that they will be able to continue the operation of state and local government after a nuclear attack.”¹⁸¹ In one way or another, FEMA officials believed the command posts were a crucial element in the event of a nuclear attack but an article in the

¹⁷⁸ Richard Halloran, “Pentagon Draws Up First Strategy for Fighting a Long Nuclear War,” *The New York Times* (May 30, 1982), 1.

¹⁷⁹ Judith Miller, “U.S. Delays Buying Morphine to Avoid War-Ready Image,” *The New York Times* (February 14, 1983), A13.

¹⁸⁰ *Ibid.*

¹⁸¹ David Corn, “Give Them Shelter,” *Nuclear Times* (Vol. 4, No. 6, July/August 1986), 5.

Christian Science Monitor in May 1986 called into question the morality of civil defense proponents. As reported by the Associated Press, a \$1.5 billion proposal to set up special command posts “generated controversy as the posts would protect government officials but the public would not be able to receive this same kind of protection.”¹⁸² What purpose would it serve to protect and plan for the continuity of government if civil defense officials did not expect there to be survivors to govern? For the rest of the American populace, important questions still needed to be answered in the realm of the post-attack aftermath. Private American companies capitalized on the nuclear paranoia of the late Cold War period and offered services to citizens hoping to survive nuclear Armageddon.

In the early 1980s some corporations took part in civil defense planning but this occurred among only a fragment of the American business community. At the Federal level, the Federal Reserve Board constructed a vault out of reinforced concrete in the early 1970s at Mt. Pony, near Culpepper, Virginia.¹⁸³ In the event of an enemy attack, the “gigantic vault held billions of dollars to replace currency lost in a nuclear war.”¹⁸⁴ With currency saved it was expected that commerce and the economy would resume functions if they had a vital monetary supply.

The United States Postal Service planned to “distribute emergency change of address cards” if an attack were to occur on American soil and this “postage-free card would be used by displaced survivors to notify the Postal Service of their emergency

¹⁸² Associated Press, “Civil Defense Plan Would Protect Elite, Critics Say,” *The Christian Science Monitor* (May 13, 1986), 7.

¹⁸³ David F. Krugler, *This is Only a Test: How Washington, D.C. Prepared for Nuclear War* (New York: Palgrave Macmillan, 2006), 183.

¹⁸⁴ *Ibid.*

mailing address.”¹⁸⁵ In the private sector, the American Telephone and Telegraph (AT&T) Company created shelters for top executives and “space for a three-storey building was chiseled from granite and the nerve center was buried 70 feet underground outside Netcong, New Jersey.”¹⁸⁶ The nation’s telephone apparatus would remain in-tact if a pre-emptive strike came from the Soviet Union. Boeing Company also took civil defense preparations seriously as they “experimented with protecting equipment by packing sand and crushable materials around it.”¹⁸⁷ Corporate level civil defense was by no means a widespread practice in the business community during the early 1980s.

Across America about a “dozen firms were created which offered document preservation vaults for companies concerned about preserving vital records through a nuclear attack.”¹⁸⁸ These companies were a product of the time period as they capitalized on the ratcheting up of Cold War tensions between the U.S. and Soviet Union. Developers too took advantage of the anxieties that existed among the American public as “one developer in LaVerkin, Utah built 240 underground condominiums complete with outdoor scenes painted on the windows.”¹⁸⁹ Lane Blackmore named the development Terrene Ark I and recorded over 65 sales by 1982.¹⁹⁰ He explained that the types of Americans who were investing in the condominiums were not the typical hard-core survivalists: “I’m getting doctors and lawyers in here, not kooks. These are really quite prudent people who know

¹⁸⁵ Louis Rene Beres, “The Lie of Crisis Relocation,” *Dissent* (Vol. 31, No. 1, 1984), 19.

¹⁸⁶ Ray Vickers, “Going Underground,” *The Wall Street Journal* (June 17, 1981), 56.

¹⁸⁷ *Ibid.*

¹⁸⁸ *Ibid.*

¹⁸⁹ Merrill McLoughlin, “From Duck and Cover to Run Like Hell,” *U.S. News & World Report* (Vol. 107, No. 6, 1989), 31.

¹⁹⁰ Tom Vanderbilt, *Survival City: Adventures among the Ruins of Atomic America* (New York: Princeton Architectural Press, 2002), 111.

how to live in the nuclear age.”¹⁹¹ It is difficult to determine just how many residents went to extreme lengths to prepare themselves for nuclear war, but the logic behind this instance was to provide a tranquil atmosphere for those inhabitants who had retreated underground.

A company known as Biosphere Corp. offered a “\$30, 000 fiberglass, egg-shaped living unit designed to outlast the pyramids.”¹⁹² Although they admitted they had yet to sell one, Americans who were willing to foot the bill had access to extensive and expensive civil defense preparations that could, in theory, stand the test of time. These types of heavy duty blast-resistant shelters were financially out of reach for the average American family as only wealthy citizens could invest in a post-nuclear future.

By the early 1980s civil defense preparations became an industry as private companies offered “the business of survival.”¹⁹³ The President of New World Survival Company, which specialized in pre-fabricated shelters, claimed that 1983 has “undoubtedly got to be the best year we’ve had...I think next year is going to be much better.”¹⁹⁴ *Survive* magazine, which eventually would become *Survival Tomorrow*, offered a monthly newsletter subscription that covered all aspects of appropriate survival measures. Although not officially sanctioned by government agencies such as FEMA, *Survive* monthly garnered a membership of 20,000 subscriptions and a “total circulation of 80, 000 issues.”¹⁹⁵

¹⁹¹ Ibid.

¹⁹² David Lamb, “Civil Defense Termed Inadequate,” *The Los Angeles Times* (October 10, 1981), A11.

¹⁹³ Phil McCombs, “The Business of Survival,” *The Washington Post* (January 19, 1984), D9.

¹⁹⁴ Ibid.

¹⁹⁵ Ibid.

Edward Murray, Deputy Director of Civil Defense for Baltimore County, built his egg-shaped cement bomb shelter in the 1960s but felt it was necessary to have in the 1980s. While unused for many years, Murray commented that “it’s up to the individual to do something because government isn’t doing it at the moment.”¹⁹⁶ While frustrated with a lack of financial resources to effectively perform his duties, he maintained that there was the possibility of surviving a thermonuclear war. Murray remained unconvinced by the “warnings of Jonathan Schell and others that such a war could bring on a nuclear winter and finish off the human species.”¹⁹⁷ To civil defense officials, as long as Americans planned for the unthinkable, preparations and a detailed plan of attack were the keys to survival.

The Final Push: Scientists and the American Public Backlash

To symbolize a strong support for an invigorated American civil defense program, the Reagan Administration’s fiscal year 1983 civil defense request was for “\$252 million presented as the first year of a seven-year enhanced program, estimated to require expenditures of about \$4.2 billion through fiscal year 1989.”¹⁹⁸ As released in a statement by FEMA, the agency planned to rely on the extensive transportation infrastructure to “relocate the population of metropolitan and other potential high-risk areas to surrounding areas of lower risk during a period of international crisis.”¹⁹⁹ Unfortunately members of Congress appropriated a fraction of the administration’s request to the tune of \$147.8 million and “sent a strong message that they were opposed to the plan on the grounds that

¹⁹⁶ Phil McCombs, “Digging in for the Bomb,” *The Washington Post* (January 19, 1984), D1.

¹⁹⁷ *Ibid.*

¹⁹⁸ Blanchard, *American Civil Defense*, 22.

¹⁹⁹ Federal Emergency Management Agency, “President Reagan Directs Implementation of Seven-Year Civil Defense Program,” (Washington: Office of Public Affairs, March 30, 1982), 29.

it was part of a war-fighting strategy.”²⁰⁰ Congress interpreted FEMA’s intentions as increasing the chances of a nuclear confrontation if the President had an effective mechanism to protect substantial portions of the American people.

The debacle in Vietnam and the Watergate scandal created tension between the legislative and executive branch of the United States government as well as deep public mistrust in American politicians. Henry Kissinger commented on the political climate in the post-Vietnam and Watergate era: “There was an extreme attack on general principles of authority and, in particular, on the Defense establishment.”²⁰¹ By the mid-1970s, public support for an American-Soviet confrontation simply did not exist. Members of Congress reinforced those views by cutting budget requests and investigated “intelligence operations to unprecedented scrutiny.”²⁰² The deep tensions between the legislative and executive branch created by Vietnam and Watergate were felt under the Reagan Administration.

A look at a pamphlet released by FEMA in 1982 reveals the responsibilities and activities surrounding the agency in the early years of the Reagan Administration. The eight page pamphlet describes its primary activities as “coordinating civil emergency preparedness for nuclear attack, nuclear power plant accidents, earthquakes, floods, hurricanes and tornadoes...and supporting state and local governments in a wide range of disaster planning, preparedness and recovery efforts.”²⁰³ This included educational and

²⁰⁰ Blanchard, *American Civil Defense*, 22.

²⁰¹ Zelizer, *Arsenal of Democracy*, 240.

²⁰² Mann, *Rise of the Vulcans*, 78.

²⁰³ Federal Emergency Management Agency, “This is the Federal Emergency Management Agency,” (Washington: Office of Public Affairs, March 1982), 2.

training programs to enhance the quality of federal, state and county civil defense officials as well as direct federal support in terms of funding, supplies and equipment.²⁰⁴

A good example of FEMA's civil defense public awareness campaign occurred in September 1983 in Saratoga Springs, New York. The Saratoga County Fairgrounds were rented to hold "civil defense Olympics" in which "several hundred people turned out for what was both a festive occasion with music and refreshments and a serious gathering with an educational and political purpose."²⁰⁵ Civil defense officials injected a bit of fun into a subject that typically caused apprehension among Americans as "seventeen teams completed in a series of events such as expedient shelter construction, duck and cover relay and relocation obstacle courses."²⁰⁶ Efforts to cajole Americans to take planning for a nuclear disaster seriously paid off when citizens were allowed to have fun while learning practical tips that could enable survival.

Although assisting state and local civil defense directors in the development and implementation of crisis relocation plans comprised most of FEMA's efforts, additional activities included the "resumption of selective shelter marking as well as work to provide a basis for future procurement of shelter supplies and ventilation kits."²⁰⁷ Residents who temporarily relocated to host areas in the countryside could expect to stay there for a couple weeks until radiation levels had been deemed safe enough to return, so provision of food and water supplies was of utmost importance to the surviving populations.

²⁰⁴ Ibid, 4.

²⁰⁵ Barry M. Casper, "The Best Offense: Civil Defense?" *Nuclear Times* (Vol. 2, No. 2, November/December 1983), 26.

²⁰⁶ Ibid.

²⁰⁷ Federal Emergency Management Agency, "Backgrounder: FY 1983 Civil Defense Program," (Washington: Office of Public Affairs, March 12, 1982), 29.

FEMA exuded confidence that a surprise nuclear attack was extremely unlikely as “radio reports will probably warn you that you have between 60-90 minutes to prepare for a nuclear attack. Probably the most likely is a situation where the warning of expected nuclear confrontation is given several days before any weapons are detonated.”²⁰⁸ The agency was also optimistic that effective crisis relocation plans “could add over 100 million survivors to the 70 million likely to survive anyway. This program could enable survival of roughly 80 percent of the U.S. population in a heavy attack.”²⁰⁹ This eighty percent survival figure was repeatedly cited by FEMA officials, but derided by civil defense opponents as completely unrealistic.

A pamphlet released in February 1981 dedicated solely to crisis relocation planning included a hypothetical scenario of a one megaton airburst attack. Within thirteen kilometers of the blast area, “houses suffer severe damage but most people in home basements at that distance would be uninjured,”²¹⁰ the authors claimed. Within fourteen and a half kilometres of the blast area, “people in the open would suffer significant burn injuries...however, one would expect all evacuees to be in shelter at time of attack.”²¹¹ According to FEMA, as long as the American people were actively engaged with their state and local civil defense officials, the mechanisms for survival would enable a substantial percentage of the United States population to be saved.

²⁰⁸ Federal Emergency Management Agency, “Emergency Management U.S.A.,” (Washington: U.S. Government Printing Office, October 1981), 66.

²⁰⁹ Federal Emergency Management Agency, “U.S. Crisis Relocation Planning,” (Washington: U.S. Government Printing Office, February 1981), 7.

²¹⁰ *Ibid.*, 2.

²¹¹ *Ibid.*

T.K. Jones and the Shovel Controversy

An official within the Reagan Administration, Thomas K. Jones, was among those who believed that American civil defense efforts were crucial in order to survive a nuclear attack. Appointed by Reagan as Deputy Undersecretary of Defense for Research and Engineering, Strategic and Theater Nuclear Forces, Jones claimed in an 1981 interview that the “United States could fully recover from an all-out nuclear war with the Soviet Union in just two to four years.”²¹² Jones firmly believed that all the American people needed was a shovel because “if there are enough shovels to go around, everybody’s going to make it. It’s the dirt that does it.”²¹³ Robert Scheer explained that the purpose of the shovels was for digging expedient shelters in the countryside to which three feet of dirt should be piled on top.²¹⁴ Such rhetoric coming from a high level official within the Reagan Administration severely alarmed Scheer and he published excerpts of the interview in the *Los Angeles Times* and into a book the following year.

In that sense millions of readers were exposed to assurances from an official within the Reagan Administration that even the most basic, primitive civil defense mechanisms could enable survival. Jones believed that a strong and effective civil defense program within the United States would deter the Soviet Union from launching a nuclear attack. His rationale derived from the “choice between whether to make the Russians as vulnerable as we are or to make ourselves as survivable as they are.”²¹⁵ With the former it would entail building more nuclear arms which would drive up the national debt. The cheaper

²¹² Robert Scheer, *With Enough Shovels: Reagan, Bush and Nuclear War* (New York: Random House, 1982), 18.

²¹³ *Ibid.*

²¹⁴ *Ibid.*

²¹⁵ T.K. Jones, “Civil Defense for America is No Laughing Matter,” *The Los Angeles Times* (March 15, 1982), C9.

alternative to overpowering the Soviet Union's nuclear arsenal, Jones believed, would come through the protection of American citizens as "it is better to spend a little money to save a lot of Americans than to be forced to spend a lot more money to build more weapons."²¹⁶ In response to a question posed by Scheer over which nation would have an easier time evacuating high-risk population centers, Jones believed that the upper hand lay with the United States. "It would be a lot easier to evacuate the American population", stated Jones, "given the much greater number of motor vehicles, vastly superior highway systems, and summer homes and motels in the countryside to accommodate the urban refugees."²¹⁷ He also pointed to the harsh winter conditions that existed in the Soviet Union for longer periods than the United States and did not think Soviet citizens would be able to dig expedient shelters in the frozen dirt.

A look at public opinion polls in the early 1980s provides a glimpse into the American people's receptivity towards an expanded civil defense program and their prospects of surviving a nuclear attack. Taken in context with optimistic assessments of survival by such government officials as T.K. Jones, the confidence exuded from civil defense proponents did not trickle down to the American people. A poll conducted in 1981 by Dr. Jiri Nehnevajsa of the University of Pittsburgh showed that a majority did not think there would be enough evacuation time, but did not want to cease with civil defense activities. While sixty-five percent of respondents did not think there would be enough time to evacuate in a nuclear alert, only eleven percent wanted the civil defense

²¹⁶ Ibid.

²¹⁷ Scheer, *With Enough Shovels*, 116.

establishment dismantled.²¹⁸ Furthermore, Gallup polls exposed that a substantial portion of American citizens agreed with Reagan and Jones' view that American civil defense served largely as a deterrent vis-à-vis the Soviet Union. A poll in September 1982 confirmed this as "75 percent of all adult Americans believe a buildup of our civil defense program would help make war less likely."²¹⁹ The American people thought that a strong civil defense program would force the Soviets to abandon a pre-emptive nuclear strike.

Civil Defense and Nuclear Deterrence

To emphasize the usefulness of civil defense as a deterrent, FEMA officials and civil defense advocates likened the concept as an analogy comparable to seat belts in a car or fire extinguishers in homes. As the influential scientist Edward Teller argued: "seat belts do not deter automobile accidents nor can extinguishers deter fires. They only reduce the severity of the consequences... the absence of a civil defense program only adds to the probability of war."²²⁰ The article helped clarify that while complete population protection was too idealistic, crisis relocation planning would "save millions of lives and prevent unnecessary suffering."²²¹ Teller expressed confidence in crisis relocation planning through America's superior transportation infrastructure and everyday practice by motorists during rush hour. He wrote that "we experience considerable evacuation of our cities in a few disorderly hours every holiday weekend without the benefit of planning or one-way exit traffic on major roadways."²²² To critics who did not think emergency evacuation was

²¹⁸ Shaw and Stanhope, *Nuclear Attack: Civil Defense*, 206.

²¹⁹ James Holton, "In Defense of Civil Defense," *Society* (Vol. 20, No. 6 September/October 1983), 15.

²²⁰ Edward Teller, "Civil Defense is Crucial," *The New York Times* (January 3, 1984), A19.

²²¹ *Ibid.*

²²² *Ibid.*

feasible, Teller pointed out that both the incoming and outgoing lanes of highways would be used in an emergency which would facilitate an orderly dispersal of vehicles.

Another analogy put forward by civil defense enthusiasts to prove the point of deterrence was that of a bullet proof vest to improve chances of survival. Charlie Martin, a reporter with the *Washington Post*, compared Soviet and American adversaries as each holding a gun but “one of them dons a bulletproof vest which improves his chance of survival...this does not make a shootout more likely...there is less incentive to attack a nation that has a protected population. All civil defense can do is save lives.”²²³ Cloaked with analogies, civil defense as a seat belt, extinguisher or vest drove home the point that it would lessen the chances of nuclear war from happening and would save American lives.

There were critics that questioned the logic of civil defense as a nuclear deterrent vis-à-vis the Soviet Union. John Lamperti, a member of the *Bulletin of the Atomic Scientists*, suggested that a large-scale civil defense program would increase the chances of a nuclear war as it could be perceived as a form of provocation. Taking aim at the “humanitarian insurance argument”, Lamperti argued that “a civil defense program could, by increasing the probability of war, result in more, rather than less, danger to the population it is intended to protect.”²²⁴ Contrary to Charlie Martin’s vest analogy, Lamperti believed that a nation with a bullet-proof vest would act more dangerously. To some critics, a strong and well organized civil defense program was viewed with caution as it had the ability to provoke the Soviets and increase the likelihood of nuclear Armageddon.

²²³ Charlie Martin, “Yes, Civil Defense is Moral,” *The Washington Post* (December 24, 1983), A13.

²²⁴ John Lamperti, “What Harm Can it Do?” *Bulletin of the Atomic Scientists* (July 1983), 8S.

Louis Giuffrida, director of FEMA during the first term of Reagan's presidency, had a vested interest in promoting national civil defense efforts but believed that emergency mobilization planning was useful simply due to a lack of other alternatives. To critics of crisis relocation planning, Guiffrida countered that the "alternative to a planned and controlled evacuation from a perceived nuclear attack would be an uncontrolled and enormously disruptive movement out of cities."²²⁵ With a plan in place, a lot of the initial chaos would be removed as citizens would know exactly where to go and what to do. Furthermore Giuffrida noted that emergency planning would not be in vain as similarities existed between plans for natural and man-made disasters. Wastefulness was not the issue, in his opinion, as the "techniques, plans and resources that would be employed in the event of a nuclear attack have been developed for much more immediate and predictable emergencies that imperil segments of the American public almost on a daily basis."²²⁶ So although planning for a nuclear attack seemed unthinkable as such an event had not occurred in the U.S., Americans were instructed to plan for more frequent disasters such as hurricanes and tornadoes and replicate those plans if the Soviet Union ever decided to launch a pre-emptive strike.

The Death of Crisis Relocation Plans

Crisis relocation plans were not without detractors. Critics of emergency mobilization planning generally attacked proposals as naïve and overly optimistic assessments that did not take into account realistic scenarios of the post-attack world. One flaw pointed out by civil defense opponents revolved around assurances that the U.S.

²²⁵ Louis Giuffrida, "Need for Civil Defense Planning in the U.S.," *The Los Angeles Times* (August 20, 1983), C2.

²²⁶ *Ibid.*

would have ample warning time to evacuate cities: “an obvious faulty assumption is the idea that Americans would have several days to evacuate its high risk areas.”²²⁷ If a surprise attack were to occur, plans in place for evacuating would be thrown out the window. Another critique directed at FEMA included their assumption that people fleeing the cities in the face of a nuclear attack would be calm, cool and collected. Detractors painted pictures of mass panic and chaos as “our government can hardly expect that a mass exodus from the cities could take place calmly and expeditiously.”²²⁸ Additional concerns sprang from FEMA’s logic that temporary relocated populations would survive in a host area in the countryside because “there is no reason to believe the host areas would be relatively free from radioactivity.”²²⁹ The view that the countryside would be safe from secondary effects like radiation was not shared among skeptics who felt that there would be fatal amounts of fallout in all parts of the country.

Depending on what part of Massachusetts people lived in, residents were assigned to host areas in various parts of the countryside in Maine and New Hampshire. The chief director of civil defense efforts in Maine, Rudolph Landry, was unsure how host areas were expected to cope with the influx of fleeing populations. For example, after the president announced a nuclear emergency, “Sandy Zeamer is supposed to leave her apartment in the Beacon Hill section of Boston and head for Litchfield, Maine...in a recent interview with Rudolph Landry; he says he hopes she brings a tent.”²³⁰ The capacity to absorb additional

²²⁷ Beres, “The Lie of Crisis Relocation,” 18.

²²⁸ *Ibid*, 19.

²²⁹ *Ibid*, 20.

²³⁰ Janet Domowitz, “Civil Defense and the Maine Woods,” *The Christian Science Monitor* (July 13, 1982), 14.

segments of American citizens into host areas was questioned by local civil defense officials as accommodations were likely to be overcrowded with their own residents.

An editorial published in the *Boston Globe* and reprinted in the *Washington Post* spoke to the illusions that Massachusetts inhabitants felt with evacuation to such host areas as Laconia, New Hampshire. “In case of nuclear warning”, wrote Ellen Goodman, “I am to calmly pack my car with a list of essential items...I am to drive in a leisurely way to Laconia, N.H where the people will be eagerly awaiting my arrival along with the rest of the fleeing urban hordes.”²³¹ This tongue-in-cheek reaction showed the utter disbelief that some American people felt towards their states crisis relocation plans. Goodman went on to explain that part of her resistance towards emergency evacuation stemmed from the “illusions of surviving a nuclear war” as well as the presentation of material in pamphlets and films by FEMA officials. After browsing through FEMA booklets, Goodman “couldn’t decide whether to giggle or shiver. The calm, chatty description of how to survive a nuclear war with just a touch of inconvenience is the logic of madness.”²³² Although this was one reaction to emergency mobilization, resistance to planning for a nuclear catastrophe pervaded mostly among high-risk areas in which large concentrations of urban populations rejected the feasibility of crisis relocation plans.

Medical and scientific professionals across the United States condemned civil defense efforts as futile and stressed the post-attack implications that they believed were neglected by FEMA directors. The largest and most influential group of medical professionals to weigh in on the issue of civil defense was the Physicians for Social

²³¹ Ellen Goodman, “Civil Defense Follies,” *The Washington Post* (February 3, 1982), A23.

²³² *Ibid.*

Responsibility (PSR). A symposium was held on 17-18 November 1980 in California to discuss the consequences of nuclear weaponry and featured “several prominent physicists and arms controllers who spoke on civil defense impracticabilities and the insanity of nuclear war.”²³³ The symposium was released as a film the following year and the general message of the conference stated that “nuclear war would inevitably lead to death, disease and suffering of epidemic proportions...treatment programs would be virtually useless and the costs would be staggering.”²³⁴ A large segment of the film was devoted to Jack Geiger’s hypothetical account of what would happen if a one megaton nuclear bomb exploded “over downtown San Francisco in the fall on a clear day, on a working day, a Monday at 3pm...in short let’s say today, now, at this moment.”²³⁵ Geiger claimed that with San Francisco’s population of roughly three million people, 780, 000 would be killed outright while there would be over one million casualties.²³⁶

In regards to civil defense planning, Geiger looked to the experience of Hamburg residents during the Second World War and concluded “the only people who survived were those who fled their shelters. For those who stayed the shelters simply turned into crematoriums with temperatures that exceeded 780 degrees centigrade.”²³⁷ The prospects of medical intervention were grim as “physicians and hospitals would be destroyed as they are concentrated in downtown urban areas. If every physician spent ten minutes on each patient at work for 20 hours a day it would be eight days before every injured person

²³³ John Dowling, “The Last Epidemic: Medical Consequences of Nuclear Weaponry and Nuclear War,” *Bulletin of the Atomic Scientists* (December 1981), 37.

²³⁴ Howard H. Hiatt, “Preventing the Final Epidemic,” *Bulletin of the Atomic Scientists* (September 1981), 15-16.

²³⁵ Physicians for Social Responsibility, *The Last Epidemic: Medical Consequences of Nuclear Weaponry and Nuclear War* (Santa Cruz, California: Impact Productions, 1981).

²³⁶ *Ibid.*

²³⁷ *Ibid.*

would be seen by a physician.”²³⁸ He also took into account the fact that there would be minimal supplies to work with and likely no electricity. Geiger received a raucous applause from the audience when he delivered his closing remarks that “any physician who even takes part in so-called emergency medical disaster planning specifically to meet the problem of a nuclear attack is committing a profoundly unethical act.”²³⁹ To members of the scientific and medical communities, a nuclear attack was so catastrophic that planning to survive one promoted a false sense of security among American citizens.

By the mid-1980s high-risk areas identified by FEMA as the hardest to evacuate began to reject participation in civil defense efforts, specifically crisis relocation plans in the event of a nuclear attack. In response, Julius Becton, head of FEMA, insisted that “any state government that refused to practice civil defense drills in preparation for nuclear attack would lose its federal funds for other emergencies such as hurricanes, floods and earthquakes.”²⁴⁰ The state of Massachusetts called their bluff in 1986 when Governor Michael Dukakis “notified FEMA that they would not take part in attack preparedness planning but received a full share of funding for all emergency disasters in fiscal year 1987.”²⁴¹ Other states with high concentrations of urban populations followed suit and California “became one of the first states to pass a law forbidding the use of state funds for crisis relocation planning as defense against nuclear war.”²⁴² New York City also opted out of nuclear emergency evacuation planning but Russell Clanahan, a FEMA spokesman, asserted that “changes in agency plans had forced a new emphasis on planning to handle a

²³⁸ Ibid.

²³⁹ Dowling, “The Last Epidemic: Medical Consequences of Nuclear Weaponry and Nuclear War,” 37.

²⁴⁰ Garrison, *Bracing for Armageddon*, 179.

²⁴¹ Physicians for Social Responsibility, “We’re No Fools: FEMA’s National Security Exercises,” *Nuclear Times* (Vol. 5, No. 4, May/June 1987), 35.

²⁴² Garrison, *Bracing for Armageddon*, 169.

wide range of natural and technological disasters rather than nuclear war.”²⁴³ Whatever the case, planning specifically for a nuclear war in the mid-1980s began to be seriously questioned by areas with the highest concentrations of urban populations.

A look at letters to the editor within various newspapers in the 1980s sheds light on public attitudes towards the receptivity of civil defense plans. One resident of Costa Mesa, California expressed his desire for an open discussion on civil defense preparations with arguments presented from both sides of the debate: “Is James Alexander of the State Office of Emergency Services afraid that a reputable and knowledgeable group, such as the Physicians for Social Responsibility, will present valid reasons for questioning the feasibility of civil defense in a nuclear war?”²⁴⁴ An open forum with a panel of experts representing the civil defense establishment, as well as the anti-civil defense camp, would allow attendees to make an informed decision as to whether they would support emergency preparedness efforts. Unfortunately for civil defense officials, opportunities to engage curious Americans through informational sessions remained fairly limited since the 1983 fiscal appropriations for civil defense was a mere eleven percent of the total Federal Emergency Management Agency budget.²⁴⁵

On the topic of Mutual Assured Destruction and the likelihood of winning a nuclear war, editorials from concerned residents ranged from maintaining or escalating the arms race to expressions of apathy. P.S. Symonds, Professor of Engineering at Brown University, voiced skepticism as to how one country could survive a major nuclear exchange “because a side that has surrendered a quarter of its population to effects of blast, heat, fire and

²⁴³ Associated Press, “Civil Defense Relocation Plan Said to be Dropped,” *The New York Times* (March 4, 1985), A9.

²⁴⁴ Phillip Cutler, “Forums on Civil Defense Preparations,” *The Los Angeles Times* (December 25, 1983), OCA18.

²⁴⁵ Guiffrida, *Annual Report FY 1983*, 29.

subsequent radiation sickness and general disease will have lost.”²⁴⁶ In his view it did not matter who managed to launch the first strike as “losing will be the case whether or not its opponents is even worse off, and regardless of how much war-fighting it still can do.”²⁴⁷ Members of the scientific community viewed planning for nuclear war and the logic of Mutual Assured Destruction with incredulity.

Conversely, an editorial in the *Chicago Tribune* speculated a worst-case scenario if the U.S. were to adopt restrictions in the number of nuclear arsenals at its disposal. “If disarmament becomes a one-way street,” wrote Carl Siegel, “we’ll soon find ourselves with a gun pointed at our heads and told to surrender or suffer the consequences of having nuclear bombs dropped on five or six of our major cities.”²⁴⁸ For the most part, a majority of Americans did not support nuclear proliferation but were concerned with deep cuts in the number of nuclear weaponry if the Soviet Union did not follow suit. A four day poll conducted by CBS news in May 1982 found that “most Americans support the concept of a freeze in Soviet and American nuclear arsenals, but they turn against the proposal if it means that the Soviet Union would gain a military advantage.”²⁴⁹ Out of 1,470 adults that were surveyed, “72% of those interviewed said that they favored putting a stop to the testing, production and installation of additional nuclear weapons by both sides, about half of them changed their minds and opposed a moratorium if it would give the Soviets a

²⁴⁶ P.S. Symonds, “Civil Defense Cannot Avert a Nuclear Defeat,” *The New York Times* (December 27, 1982), A18.

²⁴⁷ Ibid.

²⁴⁸ Carl Siegel, “Reactions to ‘The Day After’ Holocaust,” *Chicago Tribune* (November 29, 1983), N16.

²⁴⁹ Judith Miller, “72% In Poll Back Nuclear Halt If Soviet Union Doesn’t Gain,” *The New York Times* (May 30, 1982), 1.

nuclear edge over the U.S.”²⁵⁰ As the Strategic Arms Limitation Treaty II became a hot button topic, some Americans did not want to compromise strength for peace.

Medical professionals within the Physicians for Social Responsibility actively denounced crisis relocation planning as a possible defense against a nuclear attack. Its effectiveness was completely dependent upon two interrelated factors: the vast majority of American citizens had to be willing to temporarily relocate and capable of doing so.²⁵¹ A Gallup poll conducted in May and June of 1982 surveyed a sample of 1, 000 adults to determine attitudes towards their state’s crisis relocation plans. Respondents were asked what they believed to be the “most important thing that the government should provide as part of the civil defense program.”²⁵² Out of a possible six options, only 3% of the sample chose a relocation plan which was the lowest response for any of the options.²⁵³ Americans preferred the security of in place shelters and believed that was the most crucial piece of defense that the government could provide.²⁵⁴ Whether it was a lack of perceived feasibility or apathy towards planning for emergency mobilization procedures, American public opinion indicated that crisis relocation plans were viewed as the least attractive and effective option for surviving a nuclear war.

Out of the 400 designated high-risk areas, the Northeast corridor was cited repeatedly by civil defense detractors as being virtually impossible to evacuate. The sheer magnitude of people concentrated in a relatively small area caused civil defense planners

²⁵⁰ Ibid.

²⁵¹ Philip Herr, “Alarms of Struggle and Flight: Citizen Responses to Crisis Relocation,” in *The Counterfeit Ark: Crisis Relocation for Nuclear War*, Jennifer Leaning and Langley Keyes eds. (Cambridge, MA.: Ballinger Publishing Company, 1984), 67.

²⁵² Ibid, 74.

²⁵³ Ibid.

²⁵⁴ Ibid.

the most headaches out of any region across the country. Specifically with the case of New York, an estimated 43% of residents did not own an automobile in the early 1980s which meant that public transportation would play a role disproportionate to its infrastructure.²⁵⁵ It was estimated that buses would have to operate for a minimum of fifteen hours per day over a three day period and “if only one round trip per day could be made by each bus, nearly 12, 000 bus vehicles would be required to evacuate New Yorkers.”²⁵⁶ The entire state of New York did not have the fleet of public transportation needed to move millions of inhabitants. Logistical issues compounded with realities and created a negative perception among members of the Physicians for Social Responsibility towards crisis relocation planning.

The New York City Council officially rejected emergency evacuation procedures in June 1982 by a vote of 35-5.²⁵⁷ There were too many skeptics that seriously doubted the feasibility of a massive operation involving thousands of fleeing New Yorkers to host counties, and a plethora of questions left unanswered by civil defense officials. Other states followed suit as details became ironed out by city council members concerned with the influx of people without an adequate infrastructure to accommodate them. James Moran, a City Councilman for Alexandria, Virginia, took his family on a 300-mile test run to the hamlet of Webster Springs, Virginia, before voting.²⁵⁸ Moran could not fathom how a tiny town with two grocery stores and forty motel rooms could have the capacity to deal with over 20, 000 fellow Virginians: “the trip took 7 ½ hours and called the evacuation plan

²⁵⁵ Daniel Brand, “Outward Bound: The Transportation Assumptions of Crisis Relocation Plans,” in *The Counterfeit Ark: Crisis Relocation for Nuclear War*, Jennifer Leaning and Langley Keyes eds. (Cambridge, MA.: Ballinger Publishing Company, 1984), 106.

²⁵⁶ Ibid, 108.

²⁵⁷ Leslie Bennetts, “City Says No to ‘Crisis Relocation’,” *The New York Times* (June 10, 1982), A1.

²⁵⁸ Ben Franklin, “Festival Rings With Ridicule of Civil Defense Plan,” *The New York Times* (May 30, 1982), 20.

useless, asinine, bizarre to contemplate and right out of Alice in Wonderland.”²⁵⁹ Besides requiring more than the suggested single tank of gasoline to get to the destination, the suburban towns of Northern Virginia, D.C, and Montgomery and Prince George counties were also supposed to evacuate at the same time using gridlocked highways.²⁶⁰ Prior experiences with rush-hour traffic and emergency evacuation routes that were too lengthy contributed to a unanimous rejection in the Alexandria city hall crisis relocation planning vote.

Crisis relocation plans eventually were scrapped by FEMA as skepticism over the feasibility of mass migrations to host areas led to boycotts and rejection in states and cities throughout America. Russel Clanahan confirmed that by 1985 crisis relocation plans were dropped by 120 jurisdictions and said “evacuation remained an option in the crisis manager’s tool kit but was not the agency’s primary thrust.”²⁶¹ Fiscal appropriations for civil defense also played a role in its demise with slashed budgets a common occurrence in the Federal Emergency Management Agency during the mid to late 1980s. By 1983 the Strategic Defense Initiative received the lion’s share of the defense budget and subsumed whatever funds that might have gone to FEMA. The Reagan Administration cut FEMA’s appropriations to a third of \$181 million which “represented a major shift in national nuclear defense strategy.”²⁶² With civil defense on the backburner, “protection of the population was relegated, whether consciously or not, to the highly controversial Strategic Defense Initiative program.”²⁶³ While receiving a significant shot in the arm once President

²⁵⁹ Ibid.

²⁶⁰ Ibid.

²⁶¹ Associated Press, “Civil Defense Relocation Plan Said to be Dropped,” A9.

²⁶² Ibid.

²⁶³ Ibid.

Reagan assumed office, other defense priorities became more important and left civil defense as an afterthought in popular culture and American memory.

Chapter II - Conclusion

The official concept promoted by civil defense officials throughout the 1970s and 1980s was one of emergency evacuation. Crisis relocation plans had an incentive of a minimum requirement of energy and expenditures for the American populace. Pilot projects that targeted defense against man-made and natural disasters were introduced in the nation's elementary school curriculum but were not well received among American educators. Children were taught the protocols of crisis relocation planning which departed from the advice of icons such as Bert the Turtle during the heyday of civil defense.

A multitude of contingency plans were in place during the Reagan years that were designed to give the President survival options in the event of a Soviet pre-emptive strike as well as the tools to retaliate. These continuity of government plans were highly secretive to avoid an American war-ready image. Some private businesses took part in civil defense preparations but this was by no means a widespread practice. Businesses were explicitly created amid the heightened Cold War tensions, but often had a class dimension as the products and services offered were above the financial means of the middle-class American family. Public opinion polls in the early 1980s highlighted a sense of nuclear paranoia as respondents felt there was going to be a nuclear war in the near future. Scientists mirrored this sentiment as the "doomsday clock" moved to three minutes to midnight before Reagan's second term.

Civil defense proponents treated planning for nuclear attacks and other disasters in the context of nuclear deterrence. Advocates likened the concept as an analogy comparable to a bulletproof vest or a seat belt in a car and argued that a civil defense program would reduce the consequences of a nuclear catastrophe by saving American lives as well as prevent a nuclear war from starting. While supporters viewed civil defense through the lens of humanitarian insurance, critics argued the opposite; to them, a strong civil defense program was dangerous as it would provoke the Soviet Union into confrontation.

Civil defense officials reassured residents that ample warning time and everyday practice enabled emergency population mobilization. They maintained that a surprise nuclear attack was extremely unlikely and instead foresaw a period of rising international tensions that would give a minimum of three days of advanced warning time to evacuate American citizens. One member of Reagan's cabinet went even further when he stated that all Americans would need to survive a nuclear holocaust was a shovel. Under the Carter and Reagan Administrations, the confidence exuded by the Federal Emergency Management Agency never completely trickled down to the American people. For those concentrated in large, densely populated urban centers, the apparent infeasibility of emergency evacuation plans in the face of a nuclear attack created a sense of apathy.

Chapter III – The Privatization of Civil Defense and Cultural Reactions to Nuclear War

This next chapter will highlight certain aspects of nuclear culture that have not been part of the dominant discourse among American Cold War historians. Cultural reactions to nuclear weapons have taken a myriad of forms and historians Scott Zeman and Michael Amundson, in their book *Atomic Culture: How We Learned to Stop Worrying and Love the Bomb*, examined “cultural expressions and everything in between including Spiderman comic books, uranium board games, science fiction television shows and atomic-themed motion pictures.”²⁶⁴ The pre-existing literature is largely devoted to early Cold War popular culture; thus, closer attention to the late Cold War period is warranted. This will include an examination of privatized civil defense enthusiasts as well as assessing popular portrayals of nuclear war through the lens of film, fiction, children’s books and music. Reactions to the tension between the U.S. and Soviet Union came from non-government affiliated survivalists, directors, authors, and musicians, which is the focus of this chapter.

Advice manuals and newsletters published by private survivalists offered practical tips to safeguard interested Americans from a nuclear holocaust. Manuals laid out step by step instructions that included everything from expedient shelter construction complete with diagrams to defenses against biological and chemical weapon attacks. Survivalists generally expressed the conviction that proactive preparations were the keys to living through a Soviet first-strike. Claims of successes in situational field-tests were meant to show that any American could participate in survival preparations, but these tests were not verified by the scientific community. While the vast majority of non-government affiliated

²⁶⁴ Scott Zeman and Michael Amundson eds., *Atomic Culture: How We Learned to Stop Worrying and Love the Bomb* (Boulder, CO.: University Press of Colorado, 2004), 2.

civil defense proponents acted to prepare the public for doomsday out of genuine interest, there is no doubt that some chose to exploit public anxiety for the sake of profit. FEMA officials and privatized survivalists repeatedly assured Americans that there would be “life after doomsday” if they honed up on nuclear attack related survival skills. This contrasted with late Cold War popular culture which typically stressed the inhabitable conditions in a nuclear aftermath and depicted views of Armageddon.

The Privatization of Civil Defense

Self-taught survivalists added another dynamic to the civil defense establishment; it became privatized. Besides being another channel of information for interested citizens; a plethora of advice columns, monthly newsletters, manuals and survivalist guides cropped up to reassure concerned Americans that emergency preparations would enable survival. Annual conferences were organized by the American Civil Defense Association but did not attract much public interest. For example, in 1981 only about 125 people attended the annual civil defense conference in California.²⁶⁵ One of the most vocal survivalists was Bruce Clayton, author of *Life After Doomsday: A Survivalist Guide to Nuclear War and Other Major Disasters*. Following the dual-use approach advocated by government officials, Clayton covered everything from tips on how to build different types of expedient shelters to planning for every kind of natural disasters. Similar to the overly optimistic assessments that came from FEMA and members of the Reagan Administration, non-government affiliated survivalists continued the trend of providing assurances that any American citizen could live through a nuclear holocaust if they took preventative measures.

²⁶⁵ David Lamb, “Civil Defense Termed Inadequate,” *The Los Angeles Times* (October 10, 1981), A11.

One of the expedient shelters mentioned in Clayton's guide is the "Door-Over-Trench Shelter". He describes in considerable detail how to construct a trench "which is covered with door panels and then buried under three feet of mounded earth...with suitably constructed makeshift blast doors, it will resist blast pressures up to 15 pounds per square inch, the equivalent of a 300-400 mile per hour wind."²⁶⁶ In the event of an impending attack, Americans were to quickly unscrew the hinges on their house doors and take refuge under the safety of the dirt and doors. According to Clayton the "Door-Over-Trench" shelter was field-tested on several occasions to prove that any American family could accomplish the task. "In one instance", wrote Clayton "a father who had never dug a trench before completed the shelter within 36 hours of receiving the instructions. His wife was an invalid and he was assisted by only one little girl."²⁶⁷ Even a fatherless family demonstrated they could successfully build the "Door-Over-Trench" shelter in 34 hours.²⁶⁸ Clayton exuded confidence that the task was not cumbersome and the tools needed to complete this type of expedient shelter could be found in any household. For those Americans who did not temporarily flee to host areas, a suitable blast-resistant structure could be finished before the three days of advance warning time so often cited by civil defense officials.

The "Car-Over-Trench" expedient shelter was also a survival measure advocated by privatized survivalists. Although this type was primarily for evacuees in designated high-risk areas who fled to host counties, it could serve as a makeshift fallout shelter at home.

²⁶⁶ Bruce D. Clayton, *Life After Doomsday: A Survivalist Guide to Nuclear War and Other Major Disasters* (Boulder, CO.: Paladin Press, 1980), 71.

²⁶⁷ *Ibid.*

²⁶⁸ *Ibid.*

Privatized survivalists kept in tow with the main strategy of civil defense during the late Cold War period as the “Reagan plan advocated evacuation rather than the shelter building favoured in the 1960s.”²⁶⁹ Evacuees that took part in crisis relocation procedures would, in theory, temporarily relocate to host communities and reside in homes, church basements, schools and businesses. If a community experienced a larger influx of people then they could accommodate, evacuees and town residents were to “work together to construct expedient shelters, digging trenches if other protection was unavailable.”²⁷⁰ Non-government affiliated civil defense proponents maintained that if there was the will, there would be a way to survive.

According to Clayton, the “car is driven over the trench to form a roof, after which the interior, the trunk and top of the hood are filled with dirt to provide overhead shielding.”²⁷¹ The “Car-Over Trench” shelter required less than half the time it took to construct the “Door-Over-Trench” shelter, but Clayton conceded that these shelters were not blast resistant. In the winter of 1973 a couple with a small child field-tested this type of expedient shelter in Colorado.²⁷² Once they received the full set of instructions the family “headed for the hills in their Ford Maverick...the father did all of the work and the shelter was completed in 14 ½ hours.”²⁷³ The inherent bonus of the expedient car shelter was the fact that the vast majority of evacuees were expected to relocate using their own private automobiles. Therefore the apparatus would already be at the host destination to provide protection. Privatized survivalists constantly repeated the mantra of being prepared for

²⁶⁹ Miller, “Despite Foes and Skeptics,” B20.

²⁷⁰ Davis, *Stages of Emergency*, 324.

²⁷¹ Clayton, *Life After Doomsday*, 72.

²⁷² *Ibid.*

²⁷³ *Ibid.*

survival after nuclear annihilation and backed up their claims with case studies of possible defensive measures. However, scientists or other experts in the field did not lend credence to these schemes.

The last chapter in *Life After Doomsday* deals with the implications of the post-attack aftermath and the possibility of having to fend off bands of hordes roving the country for supplies. Clayton conceded that the aspect of using force for survival “is a unique subject in a book of civil defense techniques simply because no government or humanitarian organization is capable of discussing it.”²⁷⁴ The “Gun Thy Neighbour” debate and subsequent backlash in the early 1960s caused many Americans to question the morality of civil defense enthusiasts and the appropriate methods one could take to survive. In the early 1980s a small fraction of privatized survivalists condoned the use of force to either obtain necessities or repel intruders.

Barrett Tillman represented the moderate survivalist camp and was against having weapons. He preferred to “avoid confrontation, minimize exposure and attendant risk to the absolute minimum...good planning and rational preparation should make weapons use unnecessary.”²⁷⁵ Conversely, Clayton justified the use of force “if the supplies are your only hope of survival...anyone who attempts to steal or sabotage those supplies is attempting to murder you and your family.”²⁷⁶ He advocated that the best way to acquire basic necessities in the post-attack aftermath was to over-power the weak. Whether it was rhetoric from members of the Reagan Administration, officials at FEMA, or in this case, privatized civil defense survivalists, Americans became exposed to highly optimistic

²⁷⁴ Ibid, 111.

²⁷⁵ Barrett Tillman, “Do Survivalists Need Automatic Weapons?” *Survival Tomorrow* (Vol. 6, No. 7, July 1986), 54.

²⁷⁶ Clayton, *Life After Doomsday*, 111.

assurances that drove home the point that “believe it or not, even a nuclear war is survivable.”²⁷⁷

Survival Tomorrow was an example of a privatized civil defense monthly newsletter that was established in 1977 under the previous title, *Survive*. When the founder, Mel Tappan, died his wife carried on his legacy and changed the name of the newsletter to *Survival Tomorrow*. Contributing authors wrote on a wide variety of survivalist topics that included crisis relocation and map reading, defense against biological and chemical warfare, protection from radiation, food storage and canning, home butchering and the use of weapons. While some articles expressed a pessimistic view on the prospect of surviving a nuclear war due to the individual stance of the author, the majority of the content in *Survival Tomorrow* repeated the mantra that emergency planning would allow those to survive in a post attack aftermath.

A three part series in 1986 highlighted the potential dangers if the U.S. were to fall victim to a Soviet biological or chemical weapon act (CBW). Freelance writer John Tillman warned readers that if they were “near a suitable target, you may want to factor the risk of chemical warfare into your survival planning calculations.”²⁷⁸ Tillman conceded that if Americans lived near “nuclear delivery means”²⁷⁹ a chemical attack would be the least of their concerns as Soviet nuclear warheads would likely be delivered there first. Nevertheless, he cautioned citizens on the dangers of biological and chemical agents as “aerially-dispersed pathogens could be released from bombers off the west coast of North

²⁷⁷ Ibid, 17.

²⁷⁸ John Tillman, “A Lot of Nerve: The Potential for Strategic Chemical Warfare-Part I,” *Survival Tomorrow* (Vol. 6, No. 8, August 1986), 59.

²⁷⁹ Ibid.

America or delivered in fairly ordinary shells, bombs, rockets and missiles.”²⁸⁰ A former East German spy for the United States informed Tillman of previous secret Soviet plans to attack the Ballistic Missile Early Warning stations with bacteriological and chemical weapons in a pre-emptive strike. He painted a frightening doomsday scenario in which the “advanced chemical would incapacitate the technicians at the bases for twelve hours, long enough for Soviet nuclear missiles to get through undetected.”²⁸¹ With biological and chemical agents as another possible tool for the Soviet Union to invoke terror, privatized survivalists assured Americans that proper equipment and training would enable citizens to handle the crisis.

The most important protective measures for civilians were to have full body protection and gas masks layered with activated charcoal, the same type of material in cigarette filters.²⁸² Tillman was confident that for those fleeing urban areas plagued with viral agents, “activated charcoal clothing should be adequate for civilians not required to do anything more strenuous than get out of a contaminated area.”²⁸³ For those that did not have access to sophisticated charcoal materials, the preparations to protect against a nuclear war or other major disaster would be beneficial towards a CBW attack. Privatized survivalists considered every aspect of civil defense planning as critical towards survival and incorporated unique scenarios in their prophecies no matter how remote the possibility.

²⁸⁰ John Tillman, “A Lot of Nerve: Don’t Bug Me- The Threat of Biological Warfare-Part II,” *Survival Tomorrow* (Vol. 6, No. 9, September 1986), 70.

²⁸¹ *Ibid.*, 69.

²⁸² John Tillman, “A Lot of Nerve-Part III- Gimme Shelter: Defense Against CBW Agents,” *Survival Tomorrow* (Vol. 6, No. 10, October 1986), 76.

²⁸³ *Ibid.*

One contributing author suggested having strong outdoor survivor skills including experience in the bush as he imagined a “circumstance in which a few lucky survivors of a global disaster would be plunged back into a raw, natural existence.”²⁸⁴ Assuming that the world’s ecosystem remained intact, those who managed to survive a thermonuclear war would be forced to learn how to hunt for their own food and construct a make-shift homestead without the comfort of normal household amenities. The location of the epicenter in the blast was crucial to avoiding death, and Karl Hess believed if the “disaster struck far enough away to leave a fighting chance, wilderness survival knowledge certainly would be valuable.”²⁸⁵ A stockpile of canned foods would eventually run out so Hess emphasized that Americans needed to practice basic survival skills.

On the subject of defense against radioactive fallout, writer Saul Kent advised Americans to “make every effort to avoid massive exposure to radiation during wartime.”²⁸⁶ He claimed that if a nuclear bomb was dropped on U.S. cities the ultra-violet radiation emitted from the sun would substantially increase for months or years after and “could lead to serious eye and skin damages.”²⁸⁷ Kent recommended protecting eyes by “wearing UV sunglasses or by wearing glasses covered with opaque material, except for two horizontal slits 1/16th inch wide.”²⁸⁸ To avoid radiation exposure to the skin, citizens were to wear protective clothing and use “sunscreen lotions containing para-amino-benzoic acid.”²⁸⁹ The best chance for survival was to be as far away from the detonation but if that was not possible, measures could be taken to minimize the risk of radiation

²⁸⁴ Karl Hess, “Survival in What Wilderness?” *Survival Tomorrow* (Vol. 6, No. 5, May 1986), 33.

²⁸⁵ *Ibid.*

²⁸⁶ Saul Kent, “Protection from Radiation Damage,” *Survival Tomorrow* (Vol. 2, No. 7, July 1982), 86.

²⁸⁷ *Ibid.*, 87.

²⁸⁸ *Ibid.*

²⁸⁹ *Ibid.*

poisoning using the advice from *Survival Tomorrow*. Privatized survivalists capitalized on increased Cold War tensions and allowed for anxious Americans to brush up on civil defense skills, especially if there were no avenues available through local counties. Non-government affiliated privatized survivalists offered their knowledge and expertise to paying Americans out of genuine concern, but a small fraction of entrepreneurs were motivated by sheer profit.

In comparison to the heyday of civil defense in the 1950s and 1960s, the activities of privatized survivalists in the 1970s and 1980s indicate a sense of continuity more than change. During the Berlin Crisis the private sector offered shelter building services and capitalized on public anxiety. The Acme Bomb and Fallout Shelters Co. located in Dallas, Texas “anticipated \$100, 000 worth of orders in their first month of operation”²⁹⁰ and other private builders reported a surge in sales across the country. In the 1980s, New World Survival Co. and other private survivalists offered pre-fabricated shelters for anxious Americans who were willing to foot the bill. Such companies were a product of the times and were motivated by profits but some salesmen were genuinely sensitive to the conditions of the shelters. In the early 1960s the Lone Star Steel Co. shelter incorporated a “nicety to gladden the heart of any claustrophobe: a window painted on the wall showing an outdoor scene complete with a shade that can be pulled down at night.”²⁹¹ A developer in Utah in the 1980s continued that trend and provided a tranquil atmosphere for anyone willing to live underground.

²⁹⁰ “Building: Shelter Skelter,” *Time Magazine* (September 1, 1961), 2.

²⁹¹ “Civil Defense: The Sheltered Life,” *Time Magazine* (October 20, 1961), 4.

Preparing for a nuclear war on a daily basis was a frightening aspect for Americans and to combat a lack of enthusiasm, Dean Ing, a privatized survivalist, suggested taking a “hobbyist’s approach...efforts can be so low-key that neighbours and even some family members are wholly unaware.”²⁹² His logic behind taking a “hobby approach” was to avoid exhaustion in the long-term commitment to survival practices and so that “it doesn’t get us [survivalists] tagged as fruitcakes by folks who don’t understand.”²⁹³ Building up emergency preparedness knowledge required active participation by citizens in civil defense policies. People were expected to have maps with pre-planned evacuation routes, a list of possible family and friends in prospective host areas and a survival kit that included navigational aids and personal items. In the event of an emergency evacuation order the most detailed maps were crucial for developing alternative routes along major highways as well as “back roads in each area and all towns and villages along the way.”²⁹⁴ Having a back-up plan was essential to avoid potential bottlenecks along major arteries towards host communities.

For those that did not have loved ones or friends within a 250 mile radius, a friend of a friend could be an option even if they were relative strangers. To remedy that situation Americans could find “some other genuine reason for such a visit to their home”²⁹⁵ such as fishing or hiking, and if that were to work out the idea of bunking up during a time of crisis could be broached. Ulterior motives would not be discovered as easily this way and would increase the odds of survival for families who chose to temporary relocate.

²⁹² Dean Ing, “Survival in Everyday Life: Crisis Relocation- Being Choosy, Getting Chosen,” *Survival Tomorrow* (Vol. 4, No. 11, November 1984), 81.

²⁹³ Ibid.

²⁹⁴ Dave Scholl, “Map Reading and Evacuation,” *Survival Tomorrow* (Vol. 3, No. 8, August 1983), 62.

²⁹⁵ Ing, “Survival in Everyday Life,” 82.

An issue of *Survival Tomorrow* in 1987 contained the actual emergency evacuation and safety notification postcards that the U.S. Postal service planned on issuing in the post-attack aftermath of a nuclear war. The post office had sufficient quantities stockpiled in every locale for the estimated influx of visitors and the amount of residents.²⁹⁶ Once families had relocated, the safety notification and emergency evacuation cards could be mailed back, free of charge, to notify the government of the number of surviving family members so that mail could be forwarded to temporary addresses.²⁹⁷ Plans to create a national index for mail delivery were “further evidence that at least some people think a future war is survivable,”²⁹⁸ according to survivalist Carl Krupp. Negative attitudes regarding the feasibility of surviving a nuclear war were voiced by concerned citizens as well as a minority of privatized survivalists bent on changing the optimistic predictions from civil defense officials at FEMA.

Blast-resistant concrete bomb shelters and deep caves remained the only appealing retreats from a nuclear holocaust for Karl Hess, but he aptly noted that “they are miserable places to live...unless you are in one when a bomb goes off nearby, you might as well not have bothered locating or building the thing in the first place.”²⁹⁹ Hess was not convinced of the situation in which a period of rising international tensions would allow ample warning time for Americans to prepare, and cited natural disasters and Pearl Harbour as evidence of surprise events. In a thermonuclear war, “cars would simply be melted and not even the instruments of the millionaire’s stand-by jet would likely work when needed.”³⁰⁰ Such

²⁹⁶ Carl Krupp, “You Can’t Have it All,” *Survival Tomorrow* (Vol. 7, No. 9, September 1987), 88.

²⁹⁷ *Ibid.*

²⁹⁸ *Ibid.*

²⁹⁹ Karl Hess, “Retreat, Shelter or Home?” *Survival Tomorrow* (Vol. 2, No. 8, August 1982), 89.

³⁰⁰ *Ibid.*

discouraging assessments balanced out the idealistic scenarios that became mired in civil defense propaganda and expressed through private survivalist channels like *Survival Tomorrow*.

Two issues in the monthly newsletter in the mid-1980s highlight the dichotomy that existed between privatized survivalists in the quest to find a nuclear resistant Shangri-La. If a one megaton nuclear bomb was dropped somewhere in the U.S., Bruce Clayton posited that citizens “are much more likely to be a spectator than a victim at a range of twelve miles.”³⁰¹ He believed that a thirty mile radius was more than adequate to survive a nuclear strike and felt that the anti-defense movement was responsible for stretching the truth about the ramifications of nuclear weapons.³⁰² Clayton’s political views leaned towards the right end of the political spectrum which influenced his approach to privatized survival literature. He was against a nuclear weapon freeze and felt that America needed a strengthened civil defense program to survive a Soviet pre-emptive strike.

In sharp contrast to Clayton’s article, William Seavey pondered the agricultural problems associated with radioactive fallout and pointed to the issues of growing crops in frigid and deserted remote locations. Seavey concluded that “there are few precious towns or areas in the U.S. which could survive even a limited nuclear exchange.”³⁰³ The only states he recommended living in were Alaska, northern Nevada and southern Oregon due to their sparse, unpopulated expanses, but aside from that the best place to live was somewhere in

³⁰¹ Bruce Clayton, “Thinking About...Nuclear Targeting and ‘Safe’ Retreats,” *Survival Tomorrow* (Vol. 4, No. 1, January 1984), 1.

³⁰² *Ibid*, 1-2.

³⁰³ William Seavey, “Where to Live: Identifying Nuclear Safe Small Towns,” *Survival Tomorrow* (Vol. 5, No. 2, February 1985), 13.

the Mexican or Canadian interior.³⁰⁴ While an example of a privatized survivalist that bucked the trend, the majority of non-government affiliated civil defense enthusiasts echoed the assurances from FEMA officials. Popular depictions of nuclear Armageddon and the possible defenses against it offered a different view.

Nuclear War in Popular Culture

How was civil defense and nuclear war portrayed in the 1980s in popular films, fiction, children's books and music? American grass-root fears increased exponentially due to developments in popular culture of the era. Although atomic and nuclear war had received attention in films and popular fiction in the 1940s and 1950s, the theme reared again by the late Cold War period and entailed graphic depictions of a bleak post-attack aftermath in the U.S. Overall there is more continuity than change when it comes to comparing portrayals between early and late Cold War culture. For example, *The Fate of the Earth* and its "graphic description of what a nuclear attack would do to New York City would have been familiar to any reader of *Life*, *Collier's* or *Reader's Digest* in the late 1940s."³⁰⁵ A flurry of nuclear related fictional paperbacks and movies emerged in the late Cold War period as a multitude of authors, science fiction writers, directors and musicians were attracted to the power of the atom and capitalized on the boom in demand for nuclear themed entertainment. While some popular fiction forms were satirical and more garnered towards making a Hollywood box office success, others were anti-civil defense that advanced the notion that preparations for a nuclear catastrophe were utterly futile.

³⁰⁴ Ibid.

³⁰⁵ Boyer, *By the Bomb's Early Light*, 364.

Late Cold War Films

A Hollywood blockbuster starring Matthew Broderick entitled *War Games* was released in 1983 and as the acclaimed film critic Gene Siskel aptly noted, “the time is right in world history, with worldwide nuclear protests at a record level, for a thriller about a nuclear disaster.”³⁰⁶ David Lightman (Matthew Broderick) is a self-taught computer whiz kid living a typical teenage life in Seattle, WA. He uses his computer skills and hacks into the report card section at his Seattle high school to change his failing high school grades to avoid summer school.³⁰⁷ David breaks into the war-warning system at the North American Aerospace Command in Cheyenne Mountain, Colorado and stumbles upon a computer game called “Global Thermonuclear War,” a simulation of nuclear exchanges between the United States and the Soviet Union, and he chooses to be on the Soviet side.³⁰⁸ According to one film reviewer, Jon Badham, director of *War Games*, “makes us believe in the idea of a vast, but easily penetrable computer world...his young protagonist gets into the Pentagon’s WOPR super computer and challenges it to a hot game of thermonuclear war.”³⁰⁹ Although merely a computer simulation, the issue is that the Pentagon interprets the situation as actually occurring and responds by moving its defense condition to the second highest level, DEFCON 4.

The two writers of the film, Lawrence Lasker and Walter Parkes, visited NORAD prior to composing the script and became intrigued over the concept of computer controlled nuclear detonations. Just three weeks before their visit in June 1980, “a faulty

³⁰⁶ Gene Siskel, “‘War Games’ Tale of Comp Evil Mushrooms into Top Entertainment,” *Chicago Tribune* (June 3, 1983), D3.

³⁰⁷ Jon Badham, *War Games* (United Artists, 1983).

³⁰⁸ *Ibid.*

³⁰⁹ Malcolm Johnson, “Exciting, Timely ‘Games’ a Winner,” *The Hartford Courant* (June 3, 1983), E7.

computer chip put the United States on a nuclear alert by mistake.”³¹⁰ The thought of a computer that controlled the world’s nuclear arsenals was a stretch of the imagination, but a unique approach towards popular fiction films in the early 1980s. “There is growing pressure,” Lasker said “to take the responsibility for launching a nuclear attack away from humans and to give computers more power to make decisions.”³¹¹ The interesting thing about *War Games* is that you never actually see a nuclear strike or mushroom cloud so the death and destruction so common among nuclear war films is not present. However, the audience is made to believe that a pre-emptive strike could occur through a simple computer malfunction with no human oversight to override final decisions. The F.B.I. eventually pick up David at a 7/11 store to remedy the situation and bring a peaceful resolution. With nuclear disaster averted he is released to his parents with a stern warning from defense officials.

How realistic was the film’s general thesis? Film critics questioned technology that “not only sorted out incoming data but also decided when and how to strike back and sends out executing orders...Air Force officers clarified that no such computer exists.”³¹² A spokesman at NORAD shed light on the logistics and protocols of launching a nuclear attack, whether it was pre-emptive or retaliatory, as he stated that “information from satellite and radar sensors goes through a computer and into displays and assessments only, with the President alone making the final decisions.”³¹³ While *War Games* is completely unrealistic in terms of a saboteur situation, millions of Americans flocked to

³¹⁰ Edward Edelson, “‘War Games’ Explores Workings of NORAD: Will Man or Computer Start WWII,” *The Hartford Courant* (June 22, 1983), D5.

³¹¹ Ibid.

³¹² Richard Halloran, “Let’s Play Thermonuclear War: Could ‘War Games’ Happen?” *Chicago Tribune* (June 26, 1983), L13.

³¹³ Ibid.

theatres to see a comedic account of a seventeen year-old that almost annihilates millions of people in the Soviet Union and United States. Realistic possibilities were sacrificed purely for entertainment value and the director's purpose was to fill investor's coffers with box office ticket sales. As seen with Badham's blockbuster hit, by the early 1980s popular fiction in the form of Hollywood movies had begun to cross the divide over stark, depressing tales of life in the post-attack aftermath and embraced nuclear weaponry as an important piece of the United States' military-industrial complex. Other films suggested the futility of defenses in a thermonuclear war.

The Day After was a made for television movie that the American Broadcasting Corporation (ABC) aired on 20 November 1983.³¹⁴ For weeks before the broadcast newspaper articles warned of the graphic nature of the film and the "National Education Association sent out its first ever national alert and suggested that children under 12 not be allowed to view the movie."³¹⁵ The scheduled airing of the film coincided with American thanksgiving, a time when "tens of millions of people would be gathering around television sets in living rooms, not to enjoy a heartwarming holiday special, but to watch Kansas City get blown off the face of the earth."³¹⁶ An estimated 100 million people tuned into the film and "it was widely discussed across America for weeks afterward."³¹⁷ The film graphically depicts the effects of a nuclear strike on the residents of Lawrence, Kansas, and Kansas City,

³¹⁴ Leffler, *For the Soul of Mankind*, 359.

³¹⁵ Beth A. Fischer, *The Reagan Reversal: Foreign Policy and the End of the Cold War* (Columbia, MO.: University of Missouri Press, 1997), 116.

³¹⁶ Renata Rizzo, "Will Millions Get the Message?" *Nuclear Times* (Vol. 2, No. 2, November/December 1983), 9.

³¹⁷ Rose, *One Nation Underground*, 222.

Missouri and its surrounding communities.³¹⁸ The movie largely centers around four American families; one family lives extremely close to a missile silo.³¹⁹

Jim Dahlberg is seen in the film informing his daughter that there is not enough food for the family, so Rusty, the family dog, has been left outside to die.³²⁰ The only people to survive until the end of the film is the Dahlberg farm family who, in the view of one film critic, “are at least shown to have taken shelter in their basement...their continued good health ascribed more protection than an ordinary basement would actually afford.”³²¹ At the end of *The Day After*, Jim Dahlberg is shot by a refugee and as journalist Edward Zuckerman writes: “here the film is very convincing. The picture it paints of post-attack social disintegration-food riots, looters, firing squads- seems an inevitable consequence of massive nuclear war. FEMA’s rosier version of the post-attack U.S...is shattered by *The Day After*.”³²² Upon completion of the movie, ABC inserted a disclaimer that was meant to calm fears expected to have increased exponentially with viewing the film. The disclaimer stated that the “catastrophic events you have just witnessed are, in all likelihood, less severe than the destruction that would actually occur in the event of a full nuclear strike against the United States.”³²³ Thus through the prism of popular media, depictions of nuclear war and civil defense on the big screen painted a bleak picture of the post-attack aftermath on American soil. A dichotomy existed in which defense against nuclear war was portrayed as

³¹⁸ Nicholas Meyer, *The Day After* (American Broadcasting Corporation, 1983).

³¹⁹ *Ibid.*

³²⁰ *Ibid.*

³²¹ Edward Zuckerman, “Film Rebutts Postwar Visions,” *Nuclear Times* (Vol. 2, No. 2, November/December 1983), 14.

³²² *Ibid.*

³²³ Meyer, *The Day After*.

utterly futile which contrasted with the overly optimistic reassurances that emanated from officials within the civil defense agency.

As historian Beth Fischer has written, the topic of nuclear war had been dealt with before in movies, “usually through documentary format, but never in such a graphic and hard-hitting manner...it was anecdotal, focusing on the daily lives of people in Lawrence, Kansas...this sense of familiarity made the subsequent events all the more horrific.”³²⁴ The audience had time to establish a connection with the families on the big screen as the nuclear attack does not occur until the half-way point in the two hour viewing. Therefore the ability to identify with individuals such as the Dahlbergs was strong and led many Americans to jump to the conclusion and see themselves in a similar situation.

The Day After primed over half of the U.S. adult population on the horrendous consequences of thermonuclear war and “in countless planned and unplanned discussions that followed”, reported Roger Shinn, “it aroused a public consciousness of vast proportions.”³²⁵ In one night, in less than 120 minutes, the futility of civil defense was showcased on prime time television and the vast majority of American adults tuned in. Over one hundred million viewers were exposed to a film that was at cross-purposes with the civil defense establishment. Public apathy was a re-occurring obstacle to overcome for civil defense planners and the made for television drama succeeded in piquing Americans’ interests towards the perils of the arms race, which was something FEMA officials were unable to achieve.

³²⁴ Fischer, *The Reagan Reversal*, 115.

³²⁵ Roger L. Shinn, “The Days After ‘The Day After,’” *Bulletin of the Atomic Scientists* (February 1984), 43.

Reagan viewed an advance private screening of *The Day After* on 10 October 1983 and claimed “it is powerfully done, all \$7 million worth. It is very effective and left me greatly depressed. So far they haven’t sold any of the 25 ads scheduled and I can see why.”³²⁶ According to one of Reagan’s biographers, Edmund Morris, Reagan’s diary entry regarding the film was the first and only time that he had indicated he had felt depressed.³²⁷ The private screening certainly was an anxious experience for the President and this changed his views on the subject of nuclear war. Comments from the press spoke to the realistic elements of the production that fostered national awareness of the dangers of nuclear war. “It could help jolt the U.S. out of its bemused drift towards disaster” wrote Roger Shinn, “or it could intensify anxiety into paralysis.”³²⁸ In their view, the hazards of nuclear war had finally been realistically portrayed on the silver screen but the jury was out on whether that would propel American citizens into action or scare them into submission.

Much like *The Day After*, *Testament* was also a made for television movie that aired on the Public Broadcasting Station in December 1983, and was picked up by Paramount Pictures and turned into a silver screen success. The tone of the movie is anti-civil defense and cast doubts over survival predictions of life in America after a nuclear bomb explodes. Set in San Francisco, California, the Wetherly family and the rest of the states’ residents receive an alert during a television program from the White House of an imminent Soviet attack on the west coast.³²⁹ At the town hall meeting that day in the church one concerned

³²⁶ Richard Rhodes, *Arsenals of Folly: The Making of the Nuclear Arms Race* (New York: Alfred A Knopf, 2007), 168.

³²⁷ Ibid, 169.

³²⁸ Shinn, “The Days After ‘The Day After,’” 43.

³²⁹ Lynne Littman, *Testament* (Paramount Pictures, 1983).

man expresses disbelief over emergency evacuation procedures as he lamented: “what civil defense, are you people crazy? You people are talking like it is a hurricane or earthquake!”³³⁰ Angry line-ups at the local gas stations became commonplace as residents were in a hurry to flee the city. The Wetherlys decided to take refuge in the basement and stuck together as a family unit.

Once the husband, Tom, becomes one of the first victims to die from radiation poisoning it was up to Carol to keep the family together.³³¹ Lynne Littman, the director, strove to emotionally attach the audience to the characters on the screen by showcasing the drama of a single family coping with the aftermath of chaos, death and radiation. At a pre-screening, “audience members rushed to the phone booth to call their loved ones...the movie made them just want to check if everyone was OK.”³³² Within a few months the movie “appeared among the highest grossing films tabulated each week by *Variety*, the show-business newspaper.”³³³ The film was part of the boom in nuclear related entertainment in the early 1980s.

The airing of *Testament* was met with mixed reviews among film critics. Some felt that it did a more effective job than *The Day After* portraying optimism in the face of Armageddon, and the unbreakable bonds of family. One reporter claimed that it was “more intimate, more sustained in its confrontation of the individual human dimension of holocaust, more indelibly affecting than *The Day After*.”³³⁴ Conversely, a reporter with the

³³⁰ Ibid.

³³¹ Philip Wuntch, “Testament a Family Affair,” *The Hartford Courant* (December 7, 1983), D2A.

³³² Ibid.

³³³ David Sterritt, “Holiday Season’s Crop of Comedies a Mixed Bag,” *The Christian Science Monitor* (December 29, 1983), 19.

³³⁴ Charles Champlin, “Testament Bucks Gloom Curse,” *The Los Angeles Times* (November 26, 1983), G1.

Christian Science Monitor blasted the film for “dodging too many issues by focusing on a town untouched by immediate destruction...the film errs by treating physical considerations almost entirely in emotional terms and concentrating all its energy on domestic melodrama.”³³⁵ Both movies depict the moral bankruptcy of humanity as society breaks down in the nuclear aftermath. Chaotic traffic jams, angry line-ups at gas stations and bandits stealing supplies from defenseless families were the result. The difference is that *The Day After* entails graphic depictions of people vaporized by a massive mushroom cloud from a nuclear bomb. One common theme between the two made for television movies was their messages of despair and the futility of civil defense preparations in the face of nuclear annihilation.

Through the lens of the silver screen, popular culture adopted a more sinister tone, with some exceptions, when dealing with nuclear issues. *Testament* continued that trend and “depicted the after-effects of a nuclear disaster by carving a bleak reality into everyday life.”³³⁶ Societal anxieties were stoked by popular accounts of nuclear war which created a sense of apathy towards the civil defense establishment. While American citizens continued to be reassured by FEMA officials’ overly optimistic assessments and an eighty percent survival prediction, the realm of popular culture offered a completely different view that usually painted scenes of utter chaos, annihilation and contamination.

Late Cold War Fiction

Societal fears at the grass-roots level were further stoked by popular fiction in the late Cold War period. Jonathan Schell wrote *The Fate of the Earth* on the impact of nuclear

³³⁵ Steritt, “Holiday Season’s Crop of Comedies a Mixed Bag,” 19.

³³⁶ Dolores Barclay, “The Boom in Bomb Films,” *The Washington Post* (December 15, 1983), D14.

war in 1982 and it originally ran as a series in *The New Yorker*.³³⁷ Millions of readers who had not yet read the monograph were exposed to Schell's grim outlook on the planet and human nature if a nuclear war occurred. The book is divided into three chapters which reflect his pessimistic assessment of the post-attack aftermath: a republic of insects and grass, the second death and the choice.³³⁸ Schell constantly stressed the theme of total annihilation and "dramatically described the direct and indirect effects of nuclear war: immediate blast, thermal and radiation effects, extreme weather changes, famine and plague."³³⁹ In his view, civil defense preparations were completely useless as "evacuation before an attack would be an exercise in transporting people from one death to another."³⁴⁰ There were no adequate safeguards to protect the population if the Soviet Union decided to launch a pre-emptive strike.

With regards to FEMA's crisis relocation plans and shelters, Schell maintained that they offered nothing more than false assurances to the American people. He was convinced if an enemy was determined to launch an attack they would "simply retarget its missiles against people in places to which they had fled."³⁴¹ Another disadvantage to emergency evacuation plans were the inherent possibilities of false alarms. Crisis relocation policies offered the Soviets a "means of utterly disrupting the society by threats alone, since an evacuated society would be one that stopped functioning."³⁴² The ability to handcuff the American economy merely with threats was a scenario that was envisioned.

³³⁷ Rose, *One Nation Underground*, 220.

³³⁸ *Ibid.*

³³⁹ Kerr, *Civil Defense in the U.S.*, 173.

³⁴⁰ Jonathan Schell, *The Fate of the Earth* (New York: Alfred A. Knopf, 1982), 59.

³⁴¹ *Ibid.*, 34.

³⁴² *Ibid.*

In terms of sheltering the population, Schell perceived the sophisticated technology of Inter-Continental Ballistic Missiles as being too quick to contend with. Dismissing the widely held belief of three days of advanced warning time prepare, *The Fate of the Earth* posits that “economically feasible shelters cannot provide protection against the blast, heat, intense radiation and mass fires that would probably occur in densely populated regions of the country.”³⁴³ Although he did not distinguish between the more exorbitant blast shelters or less costly expedient shelters the assessment was straight forward: there would be no winners in a thermonuclear war.

Schell expressed concern over the environment’s ability to withstand and rebound from nuclear annihilation. Put bluntly, the “vulnerability of the environment is the last word in the argument against the usefulness of shelters: there is no hole big enough to hide all of nature in.”³⁴⁴ Historian Thomas Kerr stated that Schell’s main conclusion is “simply that nuclear war would be so horrible that it is senseless to think of trying to cope with it at all.”³⁴⁵ Taken together with popular depictions in films like *The Day After* and *Testament*, there was a sense of realism that did not exist within FEMA. While civil defense proponents espoused reassurances to Americans that preparation could enable survival, popular accounts of the time period contradicted this philosophy and continued to drive home a bleak picture of a post-attack aftermath.

Another novel to tackle the complexities of a post-attack America was published in 1975 by Robert O’Brien. *Z for Zachariah* is a fictional, autobiographical story of a fifteen year-old girl named Ann Burden who struggles to deal with the loss of her parents after a

³⁴³ Ibid, 35.

³⁴⁴ Ibid, 61.

³⁴⁵ Kerr, *Civil Defense in the U.S.*, 173.

thermonuclear weapon destroys the United States. The only other person to survive the blast is John R. Loomis, a chemist at Cornell University. Loomis makes the journey from Ithaca to Claypole Ridge and encounters the only other survivor, Ann. However, it is not promising as it takes him ten weeks and “all that time, he had seen no living thing- no people, no animals, no birds, no trees, not even insects- only gray wasteland, empty highways and dead cities and towns.”³⁴⁶ While Ann survives in an underground shelter, John was spared due to his highly important work in developing a magnetized plastic radiation proof suit for the army “so that troops could live and fight on in places that had been atom-bombed.”³⁴⁷ He manages to finish the suit before the war breaks out.

Loomis eventually gets very ill from radiation poisoning and is plagued by intense episodes of delirium and a fever that reaches 106 degrees. The story ends with John’s retelling of a vivid dream of seeing birds to the west and views it as a positive sign of good things to come; “While I was sleeping the dream came, and in the dream I walked until I found the classroom and the children...the dream was gone, yet I knew which way to go. I am hopeful.”³⁴⁸ *Z for Zachariah* does contain a fairly optimistic ending that leaves the overall assessment up to the reader’s interpretation. However, the fictional novel clearly presents a sombre story of complete death and destruction. Technological advancements in the form of plastic radiation proof suits were still no match for the annihilation of thermonuclear warfare. In O’Brien’s view human ingenuity did not have the power to trump the atom.

³⁴⁶ Robert O’Brien, *Z for Zachariah* (New York: Atheneum, 1975), 57.

³⁴⁷ *Ibid*, 60-62.

³⁴⁸ *Ibid*, 249.

Unlike *The Fate of the Earth* and *Z for Zachariah* which explore the perils of nuclear war and the uninhabitable conditions of life in a post-attack America, *I, Martha Adams* strays from traditional novels in the sense that the U.S. eventually triumphs over the Soviets and there are minimal losses of American lives. Published in 1984 by Pauline Glen Winslow, it is a fictional account of a family trying to get to a secret missile silo after a Soviet pre-emptive strike and subsequent unconditional American surrender.

Martha Adams works for the United Nations at the World Health Organization and her husband Josh is an engineer who maintains and repairs the ICBM silos in Grand Forks, North Dakota. Together they have a son, Buzz, about to start his freshman year at Yale until the radio announces one morning that “at 5am EST Soviet missiles launched from Panama and Cuba by-passed our Early Warning System and struck our major missile sites in the west. A second simultaneous strike was launched against our bomber fleets and submarines.”³⁴⁹ President Carmody signs the Instrument of Surrender at the White House by 7am to avoid a third strike on major population centers.³⁵⁰ Initial assessments by the Environmental Protection Agency were opportunistic as the television news anchor informs viewers that “there should be comparatively little loss of life due to radiation. Our large population centres have been spared.”³⁵¹ Life for those who survive quickly changes as America gradually shifts towards a police state with limited free speech: *The New York Times* is taken over by the *Morning Star* and the White House changes to the People’s House.

³⁴⁹ Pauline Glen Winslow, *I, Martha Adams* (New York: St. Martin’s Press, 1984), 20.

³⁵⁰ *Ibid.*

³⁵¹ *Ibid.*, 21.

Martha suspects that Josh likely died in the nuclear attack but holds out hope until it is confirmed that Grand Forks is blown off the map. She grows more concerned as the days pass about her fellow countrymen and their defeatist attitudes. Her son, Buzz, spoke of getting an organized group together to overthrow the Soviets but “there was still nothing to rally around, no weapon with which to threaten the conqueror who had won by engendering the ultimate fear.”³⁵² In a moment of clarity Martha remembers a certain note that was sent by her husband that contains drawings of missile shelters.

One peculiar missile had a different reference number, code named MAGNANIMITY, that had a completion date of 18 December 1982; Martha knew that “this was a calling from beyond the grave but this was no voice of comfort: it was a call to arms.”³⁵³ Aside from a few other high-ranking U.S. government officials, “the only knowledge of the whereabouts of the Doomsday weapon was in the 5 feet 6 inches of this slender, good-looking American woman.”³⁵⁴ Martha, through Josh’s contacts, arranges a rendezvous with Cl. Fairfield and an Israeli intelligence agent and covertly travels to Moab, Utah which is the location of the MAGNANIMITY site. On 26 October as the anniversary parade is occurring in Moscow, Martha delivers a message to the United Nations general meeting and demands the immediate evacuation of all Soviet troops. Having the Doomsday weapon up her sleeve she sternly warns that “any delay or failure to expedite and complete the said evacuation will result in the annihilation of the U.S.S.R. from Smolensk to the Kolyma range.”³⁵⁵

³⁵² Ibid, 64.

³⁵³ Ibid, 67.

³⁵⁴ Ibid, 126.

³⁵⁵ Ibid, 339.

I, Martha Adams is a unique, fictional tale that departs from the typical doom and gloom nuclear themed literature of the late Cold War period. Although the President submits to Soviet demands it ends up saving countless numbers of lives. Radiation is contained to the west coast and it is largely the military installations that end up being targeted. The tone of the novel is triumphant; even though the U.S.' capacity to retaliate is effectively rendered obsolete there ended up being a secret weapon. Perhaps the message of the story was to reassure Americans that the government would always be able to find a way to respond with similar measures. Far from being anti-nuclear, Winslow seems to embrace thermonuclear weapons as a saving grace. In the late Cold War period the boom in nuclear war popular fiction took a different form when presented to a younger target audience.

Late Cold War Children's Books

How were children presented with the frightening material of nuclear war through the prism of popular culture in the 1980s? The medium of animation was often the preferred method as it enabled children's authors to tone down a serious subject matter with satirical and comedic observations. Two of the best well-known examples that were published in the early to mid-1980s were *The Butter Battle Book* by Dr. Seuss and Raymond Briggs' *When the Wind Blows*. *The Butter Battle Book*, published in 1984, is about the Yooks and Zooks which are two fundamentally different fictional species separated by a wall. The main difference is that "in every Zook house and in every Zook town, every Zook eats his bread with the butter side down!"³⁵⁶ Conversely, Yooks "as you know, when we breakfast

³⁵⁶ Dr. Seuss, *The Butter Battle Book* (New York: Random House, 1984), 5.

or sup, spread our bread with the butter side up.”³⁵⁷ Presented from the Yook side, the main protagonists are a grandpa and his grandson; the grandpa recounts the escalating arms race between the Yooks and Zooks and the desire to build powerful super weapons.

The Yooks and Zooks try to out-do one another by inventing ever more sophisticated weaponry such as the Triple-Sling Jigger, the Jigger-Rock Snatchem and the Eight-Nozzled, Elephant-Toted Boom-Blitz.³⁵⁸ Eventually the Yooks acquire a “gadget that’s newer than new...filled with mysterious Moo-Lacka-Moo, and can blow all those Zooks clear to Sala-ma-goo. They’ve invented the Bitsy Big-Boy Boomeroo!”³⁵⁹ The Yooks were ordered to stay underground by the Chief Yookeroo as they discovered that the Zooks had a Bitsy Big-Boy Boomeroo of their own. The story ends with the grandson asking the question “who’s going to drop it? Will you...? Or will he...? Be patient, said Grandpa. We’ll see.”³⁶⁰ The implicit lesson taught to a younger generation in *The Butter Battle Book* is that in a nuclear war neither side has the upper-hand. Furthermore, Dr. Seuss demonstrated that the ideological differences, manifested through a preference for how to eat bread with butter, were trifling.

The Yooks and Zooks’ escalating arms race is a great analogy that reflected the international situation between the two superpowers by the early 1980s. Reagan’s desire to negotiate from a “position of strength” ultimately led to the deployment of American Pershing II missiles in Europe in 1983³⁶¹ and the development of the highly controversial SDI program, which symbolized that the arms race would not exclude outer space. In that

³⁵⁷ Ibid, 6.

³⁵⁸ Ibid, 14-22.

³⁵⁹ Ibid, 34-35.

³⁶⁰ Ibid, 42.

³⁶¹ Peter Vincent Pry, *War Scare: Russia and America on the Nuclear Brink* (Westport, C.T.: Praeger, 1999), 34.

context, children's authors used the fictional accounts of cartoons and combined them with the realities of the Cold War to teach children the futility of nuclear weaponry. In doing so, literature icons such as Dr. Seuss were able to take a terrifying subject and turn it into a light-hearted, comedic form of entertainment suitable for children. The purpose was not just entertainment but to foster awareness to the realities of the international scene as well as educate the masses on the perils of nuclear weaponry.

Raymond Briggs released a children's comic in 1982 in the United Kingdom and it was published a few years later in the United States. *When the Wind Blows* provides a tongue-in-cheek analysis of civil defense, the concept of MAD and the rising international Cold War tensions. A retired couple named James and Hilda experience the trials and tribulations of preparing for a nuclear strike. James is much more proactive in the realm of civil defense planning by reading up on pamphlets and executing the instructions, but Hilda is portrayed as being more concerned with maintaining the aesthetics of their home. *The Householder's Guide to Survival* recommends taking refuge under doors, cushions and books and Hilda asks if they have to dig a hole like the Andersons did in WWII.³⁶² James wryly replies, "Oh no, dear. That's all old-fashioned. With modern scientific methods, you just use doors with cushions and books on top."³⁶³ Alluding to the inexpensive expedient shelters, Hilda is informed that the doors will be unscrewed from their home and was appalled; "You are not going to ruin the paintwork, James!"³⁶⁴ Balancing the theme of nuclear war with scenes of a stereotypical over-bearing wife allowed Briggs to inject satirical humour into a dark subject.

³⁶² Raymond Briggs, *When the Wind Blows* (New York: Schocken Books, 1982), 2.

³⁶³ *Ibid.*

³⁶⁴ *Ibid.*, 3.

After being alerted of incoming Soviet bombers via a radio address from the Prime Minister, Hilda and James get into their paper potato bags and prepare for the inevitable. As they lay waiting Hilda is enlightened on the prospect of MAD and comments that she thought her “old Dad was in the Mutual Assured Insurance...penny a week it was in those days.”³⁶⁵ With children not likely to understand or be aware of the concept of MAD, *When the Wind Blows* pokes fun at the naivety of the retired wife and the confusion she has with an insurance policy. The couple eventually endures extreme bouts of radiation poisoning and decide to wait for emergency personnel to arrive even though there had been no signs of other human life in the previous week. Popular culture depictions of nuclear annihilation took a myriad of forms as it was manifested through made for television dramas, Hollywood films, literature and even children’s comics. Children’s authors often chose the medium of animation to present a satirical and light-hearted story that had relevance to the international situation. Dr. Seuss and Raymond Briggs capitalized on the anxieties of an international confrontation during the early 1980s and added to the boom of nuclear themed forms of entertainment suitable for elementary aged children.

Late Cold War Music

Musicians, most often Rock-n-Roll bands, also weighed in on the phenomenon of nuclear Armageddon and were able to reach a larger segment of the population. Late Cold War music took aim at issues of nuclear weaponry and civil defense as recording artists voiced their opinions on the international arms race. Although musicians in the 1950s incorporated atomic themes in various genres, authors and recording artists had a

³⁶⁵ Ibid, 25.

“resurgence of concern”³⁶⁶ in the early 1980s and brought rising international tensions and civil defense into the mainstream of American popular culture. While some artists treated the subject as a serious threat to human civilization, other singers chose to poke fun at world leaders and the overly optimistic assessments of survival cited by government officials.

Paul Boyer posits that the American public “typically encounter the nuclear reality in indirect ways, often through mass-culture channels.”³⁶⁷ While primarily targeted towards a younger generation, rock-n-roll songs produced in the late Cold War period influenced a vast audience as forms of education and entertainment. In the song “2 Suns in the Sunset”, Pink Floyd recalled witnessing a sunset in a rear view mirror and experiencing “premonitions/confirm suspicions/of the holocaust to come.”³⁶⁸ Similar cautionary sentiments were expressed by the band Midnight Oil in the song “Put Down that Weapon”: “put down that weapon or we’ll all be gone/ you can’t hide nowhere with the torchlight on.”³⁶⁹ Rock musicians reacted to growing international tensions and the aggressive rhetoric employed by world leaders as they pleaded for peace and an end to stockpiling nuclear arsenals. Like children’s books, the purpose was not just entertainment but to educate and raise awareness to the consequences of the atom.

U2 released a single in 1987 entitled “Bullet in the Sky” and they sang about a hypothetical nuclear attack in which they could “see the face of fear/running scared in the

³⁶⁶ Winkler, *Life Under A Cloud*, 187.

³⁶⁷ Paul Boyer, *Fallout: A Historian Reflects on America’s Half-Century Encounter with Nuclear Weapons* (Columbus, OH: Ohio State University Press, 1998), 190.

³⁶⁸ Winkler, *Life Under A Cloud*, 193.

³⁶⁹ Midnight Oil, “Put Down That Weapon,” in *Diesel and Dust* (Australia: CBS, 1987).

valley below.”³⁷⁰ The tone of the track was dark as “droning guitars frighteningly simulated the sound of incoming missiles.”³⁷¹ The output of nuclear themed music in the late Cold War period was an international phenomenon. In the U.S., immensely popular rock-n-roll icon Sting wrote a track called “Russians” that was a hit among the 1985 billboard charts. Sting urged listeners to see the commonalities between people of different nations and sang: “there’s no such thing as a winnable war/ it’s a lie we don’t believe anymore.”³⁷² Recording artists generally viewed the world’s nuclear arsenals as posing a serious danger to human civilization. Musicians such as Pink Floyd, U2, Midnight Oil and Sting responded to late Cold War tensions between the Soviets and Americans which “reflected the depth of public concern” and “created widespread sentiment for doing something about the nuclear threat.”³⁷³

Some artists specifically criticized the Reagan Administration’s defense priorities and characterized the President as a brainless puppet. “Land of Confusion” by Genesis is a satirical, anti-nuclear song about the uncertainty of the times. The music video portrays a senile Reagan having a nightmare and when he wakes up to buzz the nurse, he accidentally hits the nuke button instead.³⁷⁴ Other members of the Reagan camp were also subject to derision on the pop charts.

T.K. Jones, an official with the Reagan Administration who advised Americans that all they needed to survive a nuclear Armageddon was a shovel, provided fodder for folksinger Fred Small with the song “Dig a Hole in the Ground.” Small instructed the

³⁷⁰ U2, “Bullet in the Sky,” in *The Joshua Tree* (Ireland: Island Records, 1987).

³⁷¹ Boyer, *Fallout*, 190.

³⁷² Sting, “Russians,” in *The Dream of the Blue Turtles* (U.S.: A&M, 1985).

³⁷³ Winkler, *Life Under A Cloud*, 194-195.

³⁷⁴ Genesis, “Land of Confusion,” in *Invisible Torch* (U.S.: Atlantic, 1986).

American people to “just dig a hole in the ground/ climb right on down/ lay some boards on top of you/ and sprinkle dirt around/ you won’t have to be dead/ if you only plan ahead/ you’ll be glad you kept a shovel on hand.”³⁷⁵ In direct response to Jones’ interview with reporter Robert Scheer, Small sarcastically exposed the overly optimistic assessment of one Republican politician. Crisis relocation procedures were also targeted in his music: “if your plates are odd-numbered please don’t panic, you’ll be fine/ just politely let those even-numbered cars go first in line.”³⁷⁶ The nuclear threat was serious enough to warrant the attention of some of the biggest recording artists in the 1980s. While some musicians used their influence to sway public opinion towards pushing for the end to nuclear weapons, others took aim at the Reagan Administration’s assurances of survival and left an important mark on American popular culture in the late Cold War period.

Chapter III - Conclusion

Tensions between the U.S. and Soviet Union in the late Cold War years were manifested through the phenomenon of privatized civil defense and were reflected in various aspects of popular culture. Non-government affiliated survivalists followed the dual-use approach advocated by FEMA, which included planning for natural and man-made disasters and, with some exceptions, provided an optimistic reassurance that a nuclear war was survivable.

A host of advice columns, manuals and monthly newsletters such as *Survival Tomorrow* emerged as the era of détente unravelled and offered a forum for privatized civil

³⁷⁵ Fred Small, “Dig a Hole in the Ground,” in *Breaking from the Line: The Songs of Fred Small* (Cambridge, MA: Yellow Moon Press, 1986).

³⁷⁶ *Ibid.*

defense tips. Due to it being outside the arm of government, survivalists were able to broach sensitive subjects such as the use of force in a post-attack aftermath, something FEMA was unable to weigh in due to moral and ethical concerns. All possible defense aspects were covered, even against biological and chemical weapon attacks no matter how remote the possibility. Claims of successful field-tests by survivalists were meant to show the ease of planning and execution that could be done by any American family but tests were without scientific backing. Non-government affiliated privatized survivalists provided practical tips out of genuine interest and concern and can be characterized as eager dogooders, however, increased public anxiety over the possibility of a nuclear attack created a convenient opportunity for profit seeking entrepreneurs.

The realm of popular culture stoked nuclear fears as depictions of civil defense and the post-attack America were treated with grim despair. Directors, authors, literary icons and musicians capitalized on the boom in nuclear themed entertainment in the late Cold War period and offered a more realistic view of life after nuclear Armageddon than the rosy outlook of FEMA officials. *War Games* and *I, Martha Adams* bucked the trend of doom and gloom so common among popular culture in the 1980s, but were exceptions as most forms were at odds with the civil defense establishment. Nuclear related movies and fictional works influenced the masses to reject the philosophy of civil defense proponents as they drove home the message that any defense against a nuclear strike was futile. The scenes painted by writers and producers were of utter chaos and extinction.

Children's authors touched on the perils of the nuclear arms race and chose the medium of animation to tone down a subject not suitable for kids. Nuclear war was treated

in a comedic, light-hearted manner and taught the implicit lesson that there was no such thing as a winner in thermonuclear war. Rock musicians helped to bring civil defense and nuclear issues into the mainstream of American popular culture. While some chose to use the stage to poke fun at world leaders and FEMA predictions, most treated nuclear weapon stockpiles as a serious threat to humanity. Entertainment and education were blended to foster awareness to the dire consequences of a mushroom cloud. Americans were exposed to rosy reassurances by both non-government affiliated survivalists and FEMA officials that planning and preparations would lead to survival in the event of a Soviet pre-emptive strike. The realm of popular culture imbued a completely different philosophy and taught people the perils and consequences of nuclear weapons as well as the futility of civil defense.

Conclusion

During the Nixon, Carter and Reagan administrations, civil defense director's employed a philosophy of dual-use and instructed citizens to be in a constant state of preparedness for both natural and man-made disasters. Officials emphasized the similarities between planning for a nuclear attack and a hurricane, for example, but this was met with derision from critics who believed that such disasters could not be lumped into a single category. Proponents, whether privatized or government affiliated, firmly believed in the efficacy of these programs but there is no doubt some chose to capitalize on public hysteria. Civil defense advocates framed the notion of civil defense as providing a credible posture of deterrence vis-à-vis the Soviet Union while detractors, mostly in the medical and scientific communities, argued that having a civil defense program promoted a false sense of security.

There were aspects of continuity with regards to popular depictions of nuclear war in the early to late Cold War period, as well as the privatization of civil defense. In the 1980s non-government affiliated survivalists continued the trend of providing overly optimistic assurances that honing up on survival skills would get anyone through a nuclear Armageddon. Developers and contractors in the early and late Cold War years offered services such as bomb shelter building during heightened period of international tensions and reported a surge in sales. Popular depictions of nuclear war and the possible defenses against it was a theme that was apparent in the 1950s and 1960s and reared again in the 1970s and 1980s. Portrayals in popular culture reflected more continuity than change as

late Cold War depictions contained graphic depictions of a post attack United States; much like it did in the early Cold War period.

Nuclear war and civil defense in the late Cold War period was portrayed through a myriad of popular culture channels including films, fiction, children's books and music. Rock musicians and science fiction writers brought awareness to the nuclear threat which suggests a pervasiveness of nuclear issues in popular culture. Whether it was films, fiction, children's books or music, late Cold War culture was at complete odds with policy. The rosy reassurances provided by government civil defense planners and privatized survivalists contrasted with cultural depictions of nuclear war and the futility of civil defense. In the realm of popular culture there was a stark contradiction between a political movement pushing for civil defense and a cultural movement resisting it.

Right wing American politicians, through lobbying organizations like the Committee on the Present Danger, pushed for an increased defense budget in the late 1970s as they firmly believed they had fallen behind the Soviet Union and a 'civil defense gap' existed. The national debate over a survivability gap brought greater national awareness to the urgency of civil defense on American soil. Supporters likened civilian defense to familiar analogies that stressed preventative measures and the ability to save American lives, but opponents argued the opposite; a strong civil defense program would only serve to provoke the Soviets and therefore increase the likelihood of a nuclear catastrophe. Throughout the 1970s and 1980s the confidence exuded by the various civil defense agencies never completely trickled down to the American people. For those concentrated in large, densely

populated urban centers, the apparent infeasibility of crisis relocation plans in the face of a nuclear attack created a sense of apathy.

Increased tensions between the United States and Soviet Union led members of the *Bulletin of the Atomic Scientists* to move the “doomsday clock” to three minutes to midnight by the early 1980s. The only time it was placed closer to midnight was thirty years earlier with the advent of the hydrogen bomb. The “doomsday clock” gauged the American public’s fear and anxiety and took into account factors such as the international arms race as well as relations between the two superpowers. Gallup Polls conducted during the early 1980s mirrored the concerns expressed by scientists as a majority of American citizens believed a nuclear war would occur before the decade was over.

The election of Ronald Reagan and the national debate over an alleged ‘civil defense gap’ added new energy and financial resources to the civil defense establishment. The President personally believed in having a strong civil defense program and was convinced of a survivability gap that existed between the Soviet Union. Reagan was elected with the mantra to promote public cynicism towards government and created a contradiction; how could you encourage skepticism towards government and expect public receptivity with government initiated civil defense planning? By the mid-1980s crisis relocation plan detractors outnumbered the cities with plans in place and the high profile Strategic Defense Initiative garnered the lion’s share of the American defense budget. Fiscal appropriations returned to the meagre levels that plagued the agency during the Johnson and Nixon years.

Bibliography

Primary Sources

Documents

Carter, Jimmy. *Public Papers of the Presidents of the United States*. Washington: Office of the Federal Register National Archives and Records Service General Services Administration, 1979.

Davis, John E. *Foresight: DCPA Annual Report FY1973*. Defense Civil Preparedness Agency, Department of Defense, Research Report no 2, 1974.

Federal Emergency Management Agency. "President Reagan Directs Implementation of Seven-Year Civil Defense Program." Washington: Office of Public Affairs, March 30, 1982.

------. "This is the Federal Emergency Management Agency." Washington: Office of Public Affairs, March, 1982.

------. "Backgrounder: FY 1983 Civil Defense Program." Washington: Office of Public Affairs, March 12, 1982.

------. "Emergency Management U.S.A." Washington: Office of Public Affairs, October, 1981.

------. "U.S. Crisis Relocation Planning." Washington: Office of Public Affairs, February, 1981.

Guiffrida, Louis. *Annual Report FY 1983: A Report to the President...* Maryland: U.S. Government Printing Office, 1984.

Reagan, Ronald. *Public Papers of the Presidents of the United States*. Washington: Office of the Federal Register National Archives and Records Service General Services Administration, 1983.

Films

Badham, Jon. *War Games*. U.S.: United Artists, 1983.

Littman, Lynne. *Testament*. U.S.: Paramount Pictures, 1983.

Meyer, Nicholas. *The Day After*. U.S.: American Broadcasting Corporation, 1983.

Our Cities Must Fight (1951). The Atomic Platters: Cold War Music and Educational Films from the Golden Age of Homeland Security. Germany: Bear Family Records, 2005.

Physicians for Social Responsibility. *The Last Epidemic: Medical Consequences of Nuclear Weaponry and Nuclear War*. Santa Cruz, California: Impact Productions, 1981

Protection in the Nuclear Age. New York: Defense Civil Preparedness Agency, 1978.

Popular Fiction Books

Briggs, Raymond. *When the Wind Blows*. New York: Schocken Books, 1982.

O'Brien, Robert. *Z for Zachariah*. New York: Atheneum, 1975.

Schell, Jonathan. *The Fate of the Earth*. New York: Alfred A Knopf, 1982.

Seuss, Dr. *The Butter Battle Book*. New York: Random House, 1984.

Winslow, Pauline Glen. *I, Martha Adams*. New York: St. Martin's Press, 1984.

Music

Genesis. "Land of Confusion." *Invisible Torch*. U.S.: Atlantic, 1986.

Midnight Oil. "Put Down That Weapon." *Diesel and Dust*. Australia: CBS, 1987.

Small, Fred. "Dig a Hole in the Ground." *Breaking from the Line: The Songs of Fred Small*. Cambridge, MA.: Yellow Moon Press, 1986.

Sting. "Russians." *The Dream of the Blue Turtles*. U.S.: A&M, 1985.

U2. "Bullet in the Sky." *The Joshua Tree*. Ireland: Island Records, 1987.

Newspapers/Journals/Newsletters

Boston Globe

Bulletin of the Atomic Scientists

Chicago Tribune

Dissent

Harper's Weekly

National Review

Nuclear Times

Society

Survival Tomorrow

The Christian Science Monitor

The Hartford Courant

The Los Angeles Times

The New York Times

The Wall Street Journal

The Washington Post

Time Magazine

U.S. News & World Report

Secondary Sources

Blanchard, B. Wayne. *American Civil Defense 1945-1984: The Evolution of Programs and Policies*. Maryland: Federal Emergency Management Agency, 1985.

Boyer, Paul. *By the Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age*. Chapel Hill: University of North Carolina Press, 1994.

----- . *Fallout: A Historian Reflects on America's Half-Century Encounter with Nuclear Weapons*. Columbus, OH.: Ohio State University Press, 1998.

Clayton, Bruce D. *Life After Doomsday: A Survivalist Guide to Nuclear War and Other Major Disasters*. Boulder, CO.: Paladin Press, 1980.

Davis, Tracy. *Stages of Emergency: Cold War Nuclear Civil Defense*. Durham N.C.: Duke University Press, 2007.

Dowling, John and Evans M. Harrell eds. *Civil Defense: A Choice of Disasters*. New York: American Institute of Physics, 1987.

Farber, David. *The Rise and Fall of Modern American Conservatism: A Short History*. Princeton, N.J.: Princeton University Press, 2010.

Fischer, Ben. "The Soviet-American War Scare of the 1980s," *International Journal of Intelligence*. Vol.19, No.3, 2006: 480-518.

Fischer, Beth A. *The Reagan Reversal: Foreign Policy and the End of the Cold War*. Columbia, M.O.: University of Missouri Press, 1997.

Garrison, Dee. *Bracing for Armageddon: Why Civil Defense Never Worked*. New York: Oxford University Press, 2006.

- Goure, Leon. *War Survival in Soviet Strategy: USSR Civil Defense*. University of Miami: Center for Advanced International Studies, 1976.
- Henriksen, Margot. *Dr. Strangelove's America: Society and Culture in the Atomic Age*. Berkeley: University of California Press, 1997.
- Kerr, Thomas J. *Civil Defense in the U.S.: Bandid for a Holocaust?* Boulder, Colorado: Westview Press, 1983.
- Krugler, David F. *This is Only a Test: How Washington, D.C. Prepared for Nuclear War*. New York: Palgrave Macmillan, 2006.
- Leaning, Jennifer and Langley Keyes eds. *The Counterfeit Ark: Crisis Relocation for Nuclear War*. Cambridge, MA.: Ballinger Publishing Company, 1984.
- Leffler, Melvyn P. *For the Soul of Mankind: The United States, the Soviet Union and the Cold War*. New York: Hill and Wang, 2007.
- Leppzer, Robert. *Voices from Three Mile Island: The People Speak Out*. New York: The Crossing Press, 1980.
- Mann, James. *Rise of the Vulcans: The History of Bush's War Cabinet*. New York: Penguin Books, 2004.
- McEnaney, Laura. *Civil Defense Begins at Home: Militarization Meets Everyday Life in the Fifties*. Princeton, N.J.: Princeton University Press, 2000.
- Perry, Ronald. *The Social Psychology of Civil Defense*. Lexington, MA.: Lexington Books, 1982.
- Powaski, Ronald E. *Return to Armageddon: The U.S. and the Nuclear Arms Race, 1981-1999*. New York: Oxford University Press, 2000.
- Pry, Peter Vincent. *War Scare: Russia and America on the Nuclear Brink*. Westport, C.T.: Praeger, 1999.
- Rhodes, Richard. *Arsenals of Folly: The Making of the Nuclear Arms Race*. New York: Alfred A Knopf, 2007.
- Rose, Kenneth D. *One Nation Underground: The Fallout Shelter in American Culture*. New York: New York University Press, 2001.
- Scheer, Robert. *With Enough Shovels: Reagan, Bush and Nuclear War*. New York: Random House, 1982.
- Schwartz, Stephen. *Atomic Audit: The Costs and Consequences of U.S. Nuclear Weapons Since 1940*. Washington, D.C.: Brookings Institution Press, 1998.

- Shaw, Jennifer and Henry Stanhope eds. *Nuclear Attack: Civil Defense- Aspects of Civil Defense in the Nuclear Age*. London, U.K.: The Royal United Services Institute for Defence Studies, 1982.
- Sills, David, C.P Wolf and Vivien Shelanski eds. *Accident at Three Mile Island: The Human Dimensions*. Boulder, CO.: Westview Press, 1982.
- Vanderbilt, Tom. *Survival City: Adventures among the Ruins of Atomic America*. New York: Princeton Architectural Press, 2002.
- Walker, J. Samuel. *Three Mile Island: A Nuclear Crisis in Historical Perspective*. Berkeley: University of California Press, 2004.
- Winkler, Allan M. *Life Under a Cloud: American Anxiety About the Atom*. New York: Oxford University Press, 1993.
- Zelizer, Julian. *Arsenal of Democracy: The Politics of National Security – From World War II to the War on Terrorism*. New York: Basic Books, 2010.
- Zeman, Scott and Michael Amundson eds. *Atomic Culture: How We Learned to Stop Worrying and Love the Bomb*. Boulder, CO.: University Press of Colorado, 2004.