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"LITTLE HOLES TO HIDE IN": CIVIL DEFENSE AND THE PUBLIC BACKLASH
AGAINST HOME FALLOUT SHELTERS, 1957-1963

by

JOHN WHITEHURST

Under the Direction of John McMillian

ABSTRACT

Throughout the 1950s, U.S. policymakers actively encouraged Americans to participate in civil defense through a variety of policies. In 1958, amidst confusion concerning which of these policies were most efficient, President Eisenhower established the National Shelter Plan and a new civil defense agency titled The Office of Civil and Defense Mobilization. This agency urged homeowners to build private fallout shelters through print media. In response, Americans used newspapers, magazines, and science fiction novels to contest civil defense and the foreign and domestic policies that it was based upon, including nuclear strategy. Many Americans remained unconvinced of the viability of civil defense or feared its psychological impacts on society. Eventually, these criticisms were able to weaken civil defense efforts and even alter nuclear defense strategy and missile defense technology.

INDEX WORDS: Civil defense, Cold war culture, Nuclear defense, Nuclear strategy, Peace studies, Policy history, Print media

"LITTLE HOLES TO HIDE IN": CIVIL DEFENSE AND THE PUBLIC BACKLASH AGAINST HOME FALLOUT SHELTERS, 1957-1963

by

JOHN WHITEHURST

A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of

Master of Arts

in the College of Arts and Sciences

Georgia State University

2012

"LITTLE HOLES TO HIDE IN": CIVIL DEFENSE AND THE PUBLIC BACKLASH AGAINST HOME FALLOUT SHELTERS, 1957-1963

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August 2012

DEDICATION

This work is dedicated to my loving spouse and best friend Jamie Lauren Johns.

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There are many people who deserve my appreciation and gratitude for their efforts toward helping me complete this thesis. I will first single out my advisor John McMillian for his ever positive and insightful criticisms and advice throughout this project. His expertise and encouragement have been incredibly influential in my scholarly development. Likewise, I would like to thank Alex Cummings for his continued interest in my research and for his always intuitive suggestions and ideas. In addition to these two excellent mentors, I must express gratitude to the History Department at Georgia State University. In particular, the lectures and influences of Christine Skwiot, Joe Perry, Ian Fletcher, Jacob Selwood, Dennis Gainty, Michelle Brattain, Jared Poley, and Charles Steffen have substantially influenced how I approach history.

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Although much time has passed since their involvement, I feel it is important to acknowledge at least two very influential people during my time as an undergraduate. My first interest in civil defense developed during a women's history course developed by Andrea Radke-Moss. Her confidence and encouragement was paramount to my decision to continue researching civil defense. Also, archivist and friend John Powell was continually supportive and helpful during much of the foundational research for this thesis.

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1 INTRODUCTION

In the preface of his three part tome on the history of the nuclear disarmament movement, peace historian Lawrence Wittner explained that "there is considerable reason to believe that government officials have been painfully conscious of – and occasionally responsive to – public criticism of nuclear weapons." Wittner's works focus on the oft overlooked struggles between policymakers and activists and the give-and-take policies that have resulted from these confrontations. In a similar fashion, and inspired by recent efforts among both peace and policy historians, this thesis argues that the study of popular opposition to civil defense programs throughout the United States during the early Cold War period can help us to understand how public discourse can drive and influence national policies. Specifically, during the early Cold War years, public policymakers hoped to encourage Americans to participate in civil defense efforts and build home fallout shelters. However, many everyday Americans refused to do so and instead presented countervailing messages through various forms of print media including newspapers, magazines, and science fiction novels. Their messages, alongside the broader antinuclear testing movement, helped to undermine many of the harmful ideological foundations of civil defense policies embodied by the Office of Civil and Defense Mobilization (OCDM).

Post World War II civil defense programs emerged in response to the bombings of Hiroshima and Nagasaki, nuclear weapons testing, and rampant diplomatic concerns during the early Cold War. While these programs were founded upon pre World War II precedents, the use of nuclear weapons increased both the scope and need for civilian protection and preparation for possible hostilities. These programs were formed in order to manage public fears, provide

¹ La wrence Wittner, The Struggle Against the Bomb, Volume One, One World or None: A History of the World Nuclear Disarmament Movement through 1953. (Stanford Calif.: Stanford University Press, 1993), xii.

material protection, and increase public participation toward achieving a consensus for national and foreign policies. As a result, these programs also became a focal point for expressing discontent toward a variety of national policies and ideologies. For many people, civil defense drills, educational efforts, and materials fostered an interest in peace, anti-war, and nuclear disarmament activities. Lawrence Wittner is one of many such examples. Wittner locates his interests in writing the history of international nuclear disarmament movements from his early experiences with school wide civil defense drills and having to wear identification plates (dog tags) during his childhood.² Many others have also credited similar experiences for inspiring their activism against nuclear weapons. Civil defense programs worked as a catalyst for contesting nuclear weapons, nuclear strategy, and foreign policy.

U.S. civil defense efforts continually transformed in response to the technological advances in nuclear weaponry. Initially, the U.S. programs experienced difficulty in producing coherent policies for protection. Policymakers struggled to produce effective policies partly because of the rapid innovations being made in offensive weaponry research. Eventually these policies provoked a popular backlash and strong public opposition. By the late 1960s, the programs began to shift their focus from nuclear disasters toward environmentally centered ones, effectively keeping the civil defense agency from being discarded.

The opposition to civil defense has played a larger role than has often been asserted. Civil defense agencies sought to engage with the public directly through media campaigns. These campaigns created a sort of battleground between policymakers and public opposition. Remnants of these battles may be found in various forms of popular print media, particularly through local and national newspaper op-eds. There also emerged a strong current of opposition within popular

² Ibid., x.

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fiction, television, and film productions that criticized civil defense programs and policies. These sources reveal how some authors disseminated a popular dismissal of civil defense to the general public. While these sources do not necessarily represent a majority of those involved in the discussions over civil defense, they certainly represent a viable and real threat to such programs. An in-depth analysis of some of these sources coupled with a cultural analysis reveals the powerful parameters that popular opposition was able to place on public policymakers, eventually resulting in the deterioration of civil defense programs and later nuclear defense programs such as missile defense.

My research engages with the broader studies on Cold War culture as well as peace studies. Historians have continued to refine and rethink the idea of a U.S. Cold War culture. Many of the ideas concerning a Cold War culture were distributed through academic giants such as Stephen Whitfield and Paul Boyer in the 1980s. Their works highlight the military, religious, and political emergence of a general consensus among Americans. Much of this consensus was focused on the expansion of the military and a national security state. My work has been heavily influenced by Peter Kuznick's anthology *Rethinking Cold War Culture*, published in 2001. Addressing the issue of how to better define what Cold War culture is, the essays in this book look at the precedents of Cold War culture as well as its continuities. This book points out ways that people contested the Cold War while nonetheless appropriating Cold War rhetoric and assumptions. In analyzing the opposition that arose against U.S. nuclear defense programs, my research largely follows this model.

Opposition to civil defense programs originated from across the political spectrum.

³ Paul Boyer, By The Bomb's Early Light: American Thought and Culture at the Dawn of the Atomic Age, 1st ed. (New York: Pantheon, 1985); Stephen Whitfield, The Culture of the Cold War (Baltimore: Johns Hopkins University Press, 1991).

⁴ Peter Kuznick, *Rethinking Cold War Culture* (Washington: Smithsonian Institution Press, 2001).

Arguments against civil defense programs emerged from a variety of military, political, religious, and academic sources. Pacifists generally criticized nuclear defense for its ability to condition Americans toward an acceptance of an inevitable war, while militarists sometimes criticized the programs for their high costs and implicit acceptance of "defeatism." Historians have recently begun to rethink the characteristics of culture in the U.S. during the Cold War and this thesis seeks to add to this literature by describing and analyzing the widespread opposition to nuclear defense programs.

Peace studies have sought to highlight the importance of public opinion on nuclear strategies and domestic policies. While earlier interpretations of Cold War politics gave little agency to the protesters of the disarmament movement, more recent scholarship has demonstrated that public policy was often restricted by such popular movements. Most influential to this thesis is Lawrence Wittner's trilogy on global disarmament movements *The Struggle Against the Bomb*. Wittner argues that popular opinion and resistance through public demonstrations forced political leaders and national governments toward arms control agreements. Further, the public pressure for nuclear disarmament and arms control often took precedent over strategic concerns, such as deterrence theory. Largely supportive of these arguments, this thesis will show how print media was instrumental for this popular opposition. By looking at popular print media during the fight against nuclear defense programs a broader political scope of opposition appears.

⁵ Wittner, The Struggle Against the Bomb, Volume One, One World or None: A History of the World Nuclear Disarmament Movement through 1953.; Lawrence Wittner, The Struggle Against the Bomb, Volume Three, Towards Nuclear Abolition: A History of the World Nuclear Disarmament, 1971 to the Present. (Stanford Calif.: Stanford University Press, 2003); Lawrence Wittner, The Struggle Against the Bomb, Volume Two, Resisting the Bomb: A History of the World Nuclear Disarmament, 1954-1970. (Stanford Calif.: Stanford University Press, 1997); Lawrence Wittner, Confronting the Bomb: A Short History of the World Nuclear Disarmament Movement. (Stanford Calif.: Stanford University Press, 2009).

Civil defense historiography also provides a solid foundation for this research. Civil defense has generally been studied because of its implications on civil-military relationships, gender and racial impacts on American culture, the American political system, popular culture, and military strategy. Specifically, Dee Garrison's *Bracing for Armageddon* highlights the importance of popular opposition toward civil defense drills and public rehearsals. Laura McEnaney's *Civil Defense Begins at Home* offers insight into the ramifications of militarizing the family and how these perceptions affected public dissent. Guy Oakes's *The Imaginary War* investigates the normalization of nuclear weapons through civil defense in order to bolster Cold War era foreign and domestic policies. Similarly, Andrew Grossman's *Neither Dead Nor Red* looks at how civil defense programs were used to create a "garrison state" and increase support for Cold War policies. Kenneth Rose's *One Nation Underground* demonstrates the profound impacts of fallout shelters on American culture during the early Cold War. Finally, Tracy Davis's *Stages of Emergency* looks at the rehearsal aspect of civil defense drills and civil defense administrators' reasons for asking the public to engage in these activities.

The majority of the sources for this thesis are taken from popular print media. This includes popular magazines, both national and local newspapers, journals, and science fiction novels. Magazines such as *Life*, *Time*, and *Newsweek* offered space to a variety of opinions on civil defense. Articles published in these magazines are beneficial as they often sought to explain complex problems to a general readership, while also offering propositions and possible

⁶ Dee Garrison, Bracing for Armageddon: Why Civil Defense Never Worked. (Oxford; New York: Oxford University Press, 2006); Laura McEnaney, Civil Defense Begins at Home: Militarization Meets Everyday Life in the Fifties. (Princeton N.J.: Princeton University Press, 2000); Andrew Grossman, Neither Dead nor Red: Civil Defense and American Political Development During the Early Cold War. (New York: Routledge, 2001); Kenneth Rose, One Nation Underground: The Fallout Shelter in American Culture. (New York: New York University Press, 2001); Tracy Davis, Stages of Emergency: Cold War Nuclear Civil Defense. (Durham N.C.: Duke University Press, 2007); Guy Oakes, The Imaginary War: Civil Defense and American Cold War Culture. (New York: Oxford University Press, 1994); David Krugler, This is Only a Test: How Washington, D.C. Prepared for Nuclear War., 1st ed. (New York: Palgrave Macmillan, 2006); Matthew Grant, After the Bomb: Civil Defence and Nuclear War in Britain, 1945-68. (Basingstoke UK;;New York: Palgrave Macmillan, 2010).

solutions to these problems. Some area specific magazines will also be used such as *Popular Science*, *Popular Mechanics*, and *The Rotarian*. These offer insights into how popular writers often took scientifically and technologically difficult topics and conveyed them to a more general readership.

Newspapers contain many of the op-eds that were written about the civil defense programs. Further, since they were generally published on a daily basis, these sources offer a much more consistent source for the debates revolving around the various policies civil defense administrators implemented. While national newspapers tend to represent the broader American public, local newspapers will also be used to demonstrate the personal nature of such debates as well as their importance on local communities. In addition, the Office of Civil and Defense Mobilization kept track of what it considered to be "favorable" op-eds that were written about its program. These lists are valuable because the favorable op-eds were often followed by a backlash of letters to the editor sparking local and regional debates.

Journals, political magazines, and newspapers provide insight into a range of opinions on civil defense. Political magazines such as *The Nation, The National Review*, and *American Opinion* offer a clear view as to how civil defense was discussed by proponents of diverse political ideologies. These periodicals will demonstrate the changes in rhetoric toward civil defense programs over time. Journals such as *The Bulletin of Atomic Scientists* also allow for a more specific look into the arguments being made against civil defense.

Although not unique to the early Cold War era, a relatively new genre of science fiction emerged in response to atomic weapons. Historian Kenneth Rose has termed this genre the

⁷ These can be found in the OCDM's own monthly newspaper. Portions of this may be found in the Georgia Archives. Georgia Department of Education, Division of Negro Education, Director of Negro Education Subject Files, RG 12-6-71, Georgia Archives.

"nuclear apocalyptic." During the OCDM's media campaign within newspapers and magazines, several important novels offered commentary on civil defense planning. These novels help to further contextualize the debates surrounding civil defense within the period. These books were influential on both civil defense planners and the general public alike.

In order to lay the groundwork for some basic concepts surrounding civil defense,
Chapter 1 elaborates on some of the foundational rationales and the historical background of
civil defense programs in the United States. While this thesis specifically focuses on the Office
of Civil and Defense Mobilization, it is important to understand its predecessor agencies and
their contributions to civil defense planning. Also, while civil defense administrators were
charged with disseminating information to the general public, several other key actors also
participated in the decision making process surrounding civil defense. Some of these include
nuclear strategists, military strategists, and local and national politicians. Understanding the
various rationales emerging from these groups also reveals their roles and contributions to
information that civil defense administrators relayed to the public.

Chapter 2 investigates the successes and failures of an intense media campaign carried out by the OCDM starting in 1959. This campaign hoped to increase public knowledge about the dangers of a nuclear war and inspire everyday Americans to build home fallout shelters. A barrage of pamphlets, television promotionals, and especially newspaper op-eds were presented to the public throughout this period. This chapter particularly focuses on the implicit and explicit messages that the OCDM was relaying and the responses from the general public that they then provoked. Americans responded in a variety of ways, and general criticism of civil defense seemed to increase over time. Eventually, these criticisms crippled civil defense programs based on protection from nuclear weapons. As a result civil defense planning shifted toward policies

focused on national disasters. While the OCDM was somewhat successful in informing Americans of the dangers of nuclear weaponry, their hope of arousing citizens to build fallout shelters was less victorious. Another powerful source in informing Americans about the dangers of nuclear war was an emerging genre in science fiction novels known as the "nuclear apocalyptic."

During the reign of the OCDM, there were several important nuclear apocalyptics that were influential in depicting the horrors of nuclear war. Chapter 3 extrapolates the messages found within these works and contextualizes them within the larger debates surrounding civil defense at the time. In addition to informing the public about the horrors of nuclear war in general, these novels often drew reactions from civil defense administrators as well, allowing for a greater understanding of how the books were perceived at the time. Understanding the particular elements used in depicting nuclear warfare demonstrates how writers hoped to mold and influence their readers' perceptions of civil defense. These works then became influential and didactic in their ability to criticize and increase the pressure on the OCDM to provide sound answers to difficult questions surrounding survival.

The Conclusion of this thesis displays some of the long term effects that the crippling of civil defense has had on nuclear strategies and policies. Just a decade after civil defense was beginning to wane, a newer and more complex system of nuclear defense emerged in its place: missile defense systems. In some ways, missile defense hoped to solve the same problems faced by civil defense programs. However, as Robert McNamara and many nuclear strategists pointed out later on, in order to create an effective missile defense system, a sound civil defense program for the public was required. Once opponents of missile defense realized the connection between civil defense and missile defense programs they soon began echoing the arguments made against

civil defense a decade earlier. For many, these two systems became linked and increasingly delegitimized by their association. Proponents of a strong missile defense system like Robert McNamara found themselves again trying to provide difficult answers to the American public revolving around their survival.

2 CIVIL DEFENSE: AN OVERVIEW AND ITS VARIOUS RATIONALES

In the wake of WWII, Americans expressed mixed emotions about the advent of nuclear weapons. As cultural historian Paul Boyer has described in detail, after the initial excitement for the end of the war, Americans quickly expressed concern over the possibilities of nuclear warfare. These fears were allayed briefly by the nuclear testing in the Bikini Islands during Operation Crossroads in 1947, but were quickly revived with the Soviet acquisition of nuclear weaponry in 1949.8 In response to these fears, U.S. policymakers quickly expanded the role of civil defense policies for national security. From the emergence of nuclear weapons until the mid 1960s, civil defense was based on a myriad of rationales. Civil defense was both informed and molded by national security policies. Beyond its ability to delve into national security policies, civil defense is also helpful in understanding foreign policy, nuclear strategy, and domestic policies of the early Cold War period. These various aspects of civil defense were often interconnected and dynamic. In a broad sense, civil defense was a tool used to increase security through public support for national policies. It was hoped that civil defense would foster a psychologically hardened society in preparation for nuclear warfare. In order to understand how opponents of civil defense contested these programs, the historical context and rationales underlying civil defense must be clearly laid out.

2.1 Organization

In a broad sense, civil defense may be defined as any effort to provide safety for non military civilians in a natural or manmade disaster. During WWII, the United States and many other nations had civil defense programs and agencies that informed civilians on how to protect themselves against enemy attacks. Although civil defense existed prior to and during the Second

⁸ Boyer, By the Bomb's Early Light, 352.

World War, it was fundamentally altered by the introduction of nuclear weapons in 1945. After the bombings of Hiroshima and Nagasaki, Americans initially celebrated the new force of atomic energy. This excitement was soon replaced, however, by an overwhelming sense of concern. Boyer describes this circulation between hope and fear as a cyclical phenomenon occurring throughout the post WWII U.S. Several key events such as the Soviet acquisition of nuclear weaponry in 1949, extensive U.S. nuclear testing throughout the 1950s, and the partial nuclear test ban in 1963 have influenced this cycle of fear and hope around nuclear weaponry.

With the successful testing of a nuclear device in 1949 by the Soviet Union, both U.S. policymakers and the American public became increasingly concerned over national security. With these concerns on the rise, policymakers amplified their civil defense efforts. December 1, 1950 saw the creation of the Federal Civil Defense Administration (FCDA) and on January 12, 1951, Congress passed the Federal Civil Defense Act of 1950. The FCDA offered the most organized efforts at domestic defense from nuclear weapons up until its replacement by the Office of Civil and Defense Mobilization in 1958. Nevertheless the FCDA, like its subsequent agencies, was riddled with dilemmas on the nature of civil defense. The agency desperately needed to define its purpose and address unanswered questions. For example, was civil defense to be a federal, local, or individual responsibility? What areas in the country were considered primary targets for nuclear weapons: cities, suburbs, industrial, or rural ones? Who was to foot the bill for these programs? And what was the most effective method for ensuring personal survival? These questions particularly set back the FCDA during its eight year reign as it varied in its answers. Inevitably, these questions were engaged with by policymakers and an interested public. Slowly, policymakers within the FCDA began to solidify some of these answers.

⁹ Oakes, *The Imaginary War*, 31.

It should come as no surprise that civil defense increasingly became the responsibility of the individual throughout the early Cold War period. At the same time, this trend should not be viewed as an inevitable outcome of a conservative era. The debates surrounding federal, local, and individual responsibilities for civil defense remained throughout the FCDA and subsequent programs' existence. There were very few within these debates who favored a fully centralized civil defense program or an exclusively individualist approach. One example of a plan that incorporated elements of both individual initiative and federal encouragement was New York Governor Nelson Rocke feller's "mandatory shelter plan," that would have required homeowners to individually build fallout shelters within their homes with the assistance of state aid and tax deductions. Predictably, his plan was viewed as too centralized or intrusive by some, and not centralized enough by others. ¹⁰ These debates carried on throughout the 1950s and early 1960s, but an overall consensus remained. In general, federal civil defense agencies believed it was their responsibility to inform citizens about civil defense and expect individual civilians to be responsible for participating. This was especially the case for building home fallout shelters, which increasingly became the focus for the FCDA's successor agency, the Office of Civil and Defense Mobilization.

With the emphasis on personal responsibility for safety, concerns emerged based on the location of one's residence. Civil defense agencies were preoccupied with helping the United States to survive a nuclear war and therefore had to prioritize which areas were most vital to recovery. Cities were particularly vulnerable to nuclear attacks during the 1950s, as airplanes were the primary delivery system for nuclear weapons. This was problematic because cities included much of the nation's industry and the largest population centers for the country. Historian David

¹⁰ Chapter 2 discusses this in greater detail. Chet Holifield and a few others believed that an expensive and national civil defense program should be favored over local and individual efforts.

Krugler argues that the dispersal of industry and populations from cities during the 1950s was a result of both long term economic and social trends as well as intentionally planned security measures. Specifically, Krugler demonstrates how Washington D.C. influenced federal agencies such as the CIA to relocate outside of the urban areas in order to maintain a "continuity of government" in case of a nuclear attack. 11 Government agencies and industry were not the only focus for dispersal however. Urbanites were also told of the dangers of residing in a city during a nuclear attack. The most notorious example of this message was illustrated in the 1952 FCDA poster titled, "Enemy Target No.1, Civilians" that detailed a metal fist pounding into a cityscape. 12 Civil defense administrators presented evacuation as a solution for fearful urbanites. As will be seen however, this answer only remained viable for a short time before technological innovations in nuclear weaponry, particularly rocketry, shortened the most valuable resource in evacuation efforts: time.

Historian Andrew Grossman has explained that while urbanites were given a message of hopelessness from the FCDA, those in the suburbs were told something quite different. The FCDA's message to the suburbs mitigated the terrifying nature of nuclear weapons and projected a sense of normalcy in its place. 13 A quick look at civil defense publications throughout the 1950s and early 1960s reveals that the target audience for civil defense information was the suburbs. While civil defense agencies provided information for farmers, urbanites, and industrial centers, the majority of its publications centered on middle class suburban families. As David

¹¹ The term "continuity of government" was used by civil defense agencies to describe their efforts to ensure that national military leaders and policy makers would be able to survive a nuclear attack. Krugler, This Is Only a Test, 63.

12 Grossman, Neither Dead nor Red, 85.

¹³ Ibid.

Krugler has stated so succinctly, "civil defense wasn't just about saving lives – it was also about saving a *way* of life" that was enjoyed by mostly middle class, white Americans. ¹⁴

The FCDA focused less on industrial and Agricultural civil defense, but it also addressed their place in the nation's security. Companies who participated in industrial civil defense preparations were often highlighted within civil defense publications and newsletters. FCDA and later OCDM publications showcased industrial civil defense efforts through pamphlets and public displays such as parades (See Figure 2.1). One such publication was the Standard Oil Company of New Jersey's *Blueprint for Industrial Security*. This publication boasted of the company's fallout shelters for their employees and its installation of safety sprinklers on their facility's roof. ¹⁵

Like industrial civil defense, rural preparations were prioritized by the OCDM because of their influence on American production. The economic impact of a nuclear war, it was hoped, could be stymied by a fortified industrial and agricultural base within the United States. During the early 1950s, when cities were considered to be primary targets, heavy industry was encouraged to decentralize. Farmers, on the other hand, were already outside of these expected target areas. Therefore, civil defense programs stressed rural defense much less in the early 1950s when compared to the years after 1954. It was only after the Castle Bravo tests in 1954 that radioactive fallout was beginning to emerge as the source of nuclear fears. Once fallout became more prominent in civil defense discourse, so did rural civil defense. Farmers would need to protect their crops from wind driven fallout drifting across the countryside if agricultural production was to be continuous. Just as industrial defense was highlighted throughout civil defense publications, rural

¹⁴ Krugler, *This Is Only a Test*, 80–81.

¹⁵ Office of Civil and Defense Mobilization, "Information Bulletin" 1960 No.164, 7. Georgia Department of Education, Division of Negro Education, Director of Negro Education Subject Files, RG 12-6-71, Georgia Archives.



Figure 1 - A Southern Bell float advertising its contributions to civil defense in an annual Civil Defense Week parade in Atlanta, Georgia. Courtesy of the Georgia Archives, RG 22-7-46, Box 3A

programs were piloted and displayed throughout the country, especially during the late 1950s and early 1960s (See Figure 1.2). Even after suburban civil defense efforts were beginning to recede in the mid 1960s, rural programs continued on. In 1961, the OCDM announced a national youth program for rural civil defense aimed at over 3,000 counties across the U.S. The program was adopted by 4-H clubs, the Future Farmers of America (FFA), and the Future Housewives of America (FHA). It was hoped that these programs would encourage youth to lead the way in planning and building their own home fallout shelters, learn the importance of agricultural fallout protection, and encourage others to follow their lead. According to its designer W. L. Shaffer, the program's purpose was "to help boys and girls do their share in America's Civil Defense mission in saving lives and property in event of nuclear war or natural disaster." ¹⁶ The Rural Civil Defense Program received support not only in youth organizations, but also within "the American Farm Bureau Federation, the National Grange, the Farmers Union, the American Association of Land Grant Colleges, and many others. ¹⁷ President of the OCDM at the time Leo Hoegh explained that, "In all of America's past wars, the rural people of this country have never been found wanting. If this nation ever again is attacked, its ultimate victory will depend heavily on the ability of our farmers to survive, to sustain themselves, and then to provide the whole nation with the food and other things needed for survival and recovery." ¹⁸

Civil defense was never exclusively about material and human protection however. Historian Jenny Barker-Devine has explained that "the rhetoric of these programs reinforced the notion that rural Americans contributed not only food and raw materials to the American economy,

 ^{16 &}quot;New Releases, January 24th, 1961" Civil Defense Material; Subject Files, 1951-1968; Secretary of the Interior; Record Group 48; Box 11; National Archives and Records Administration – Southeast Region (Atlanta).
 17 "New Releases, December 2nd, 1959" Civil Defense Material; Subject Files, 1951-1968; Secretary of the Interior; Record Group 48; Box 11; National Archives and Records Administration – Southeast Region (Atlanta).
 18 Ibid.



Figure 2 - The Office of Civil and Defense Mobilization exhibiting a family fallout shelter during a civil defense fair, ca. 1960. Courtesy of the National Archives, Photo No. 311-D-9(1)

but also served as the moral backbone of a democratic nation."¹⁹ Rural residents were not only expected to survive in order to continue food production, but were also viewed as a "moral base of the nation, responsible for taking in refugees."²⁰ Rural preparations would include the possibility of taking in urban and suburban survivors who would need food, shelter and healthcare. Because of these responsibilities, rural civil defense became increasingly important as nuclear weapons and delivery systems increased in speed and power.

With all of these questions being slowly answered by the FCDA, there were two in particular that continued to plague the agency until its disbandment in 1958. First, who was to foot the bill for national preparedness from nuclear weapons? Second, what was the best method toward insuring survival? These two questions were argued over by policymakers and the general public alike. While many people followed the logic that civil defense was an individual responsibility, this became increasingly contested as the nuclear arms race and testing amplified. By the late 1950s, concerns emerged over the Soviet civil defense preparations in comparison to those of the U.S. As one article claimed, the Soviets had spent "between six and 12 times as much as... spent for training and information distribution by the Federal, state and local governments in the United States during fiscal 1960." The conservative *National Review* also expressed concerns in 1960 that U.S. "cities are more vulnerable than Russian cities, and we trail Russia in developing a civil defense system." With burgeoning concerns about the costs of civil defense, some began to call for a more centralized role in providing protection.

¹⁹ Jenny Barker-Devine, "'Mightier Than Missiles': The Rhetoric of Civil Defense for Rural American Families, 1950-1970," *Agricultural History* 80, no. 4 (October 1, 2006): 415.

²⁰ Ibid 416

²¹ "Russian Civil Defense," *The Science News-Letter*, 79, no. 25 (June 24, 1961): 386.

²² "One Year to Blackmail?," The National Review, July 2, 1960, 416.

The second question was the most difficult one faced by the FCDA during its reign. As David Krugler has asked, was one supposed to flee "downtown, out of town, or underground?" 23 In other words, what was the best method for physically protecting oneself from a nuclear attack? Was it community fallout shelters in cities, dispersal to rural areas, or individual fallout shelters? Each of these methods were emphasized simultaneously throughout the 1950s. Dispersal was primarily focused on making permanent relocations, such as those that David Krugler has researched surrounding Washington D.C. This was widely manifest by the relocation of federal buildings and the formation of "green belts." ²⁴ Dispersal was a preparation that was to be pursued prior to an attack. As mentioned earlier, this was particularly a motivation for industrial civil defense. As historian Margaret Pugh O'Mara has explained, the military-industrialacademic complex gave rise to high tech industry throughout the early Cold War era. These industries were willing to locate their plants and offices into the peripheries of larger cities and often received significant federal funding for doing so. ²⁵ Pugh O'Mara's Cities of Knowledge looks at how high-tech industry suburbanized. She explains that, "Concern about the vulnerability of central business districts during nuclear attack prompted officials to build in a number of powerful incentives into federal defense contracting policy that encouraged contractors to choose suburban locations over urban ones."²⁶ Because dispersal mainly applied to those in government and industries tied to the military-industrial-academic complex, this option was more or less removed from the larger debate surrounding everyday citizens. The choice facing most of the population was one between evacuation and shelter building.

²³ Krugler, *This Is Only a Test*, 59.

²⁴ Ibid., 33.

²⁵ Ibid 185

²⁶ Margaret Pugh O'Mara, Cities of Knowledge: Cold War Science and the Search for the Next Silicon Valley (Princeton University Press, 2004), 6.

Evacuation was especially stressed in the 1950s and was manifest throughout the many drills held during the era. From 1954 until 1961, the largest series of these drills occurred annually. These drills were named Operation Alerts, or simply the acronym OPALs. The first of these drills, OPAL 54, involved only those who worked within the FCDA. From 1955 to 1961, the drills became increasingly more inclusive, calling for the participation of everyday Americans. These drills also became increasingly more accurate in representing the effects of nuclear weapons. However, drills only began to address the issue of fallout later on. ²⁷

These drills, and other civil defense preparations, may best be understood as rehearsals. Historian Tracy Davis explains that, "Rehearsal was the predominant technique of exploring the viability of civil defense plans and policies."28 Because the drills requested (and sometimes required) citizens' involvement in civil defense, they became the initial site for protesting the program. As more people became involved in the OPALs each year, protest began to kindle and increase. According to historian Dee Garrison, "Operation Alert failed partly because its observance required that the public be given enough information to justify a civil defense program and to ensure widespread public cooperation with civil defense drills."²⁹ One of the first influential people during these protests was the Catholic social activist Dorothy Day. She was arrested during OPALs 55 through 57. Civil rights activist Bayard Rustin was also influential in the protests, as the War Resisters League (WRL) participated in civil disobedience during OPAL 55. Each year, protestors increasingly ramped up their efforts against the OPALs. This was particularly true for OPAL 58. The 1958 drill was bolstered by international attention being given to *The* Golden Rule, a vessel captained by anti nuclear activist Albert Bigelow that attempted to sail into the U.S. military's nuclear testing zone in May. These efforts spurred similar anti-testing move-

Oakes, The Imaginary War, 95.
 Davis, Stages of Emergency, 23.

²⁹ Garrison, Bracing for Armageddon, 116.

ments across the country, such as Dorothy Hutchinson and other protestors fasting inside the Atomic Energy Commission's headquarters in Germantown, Pennsylvania. ³⁰ In 1959, activists Mary Sharmat and Janice Smith refused to participate in OPAL 59 and began encouraging others to join them with the Women Strike for Peace (WSP). According to Garrison, by 1960 the protests against civil defense had become national in scope. ³¹

2.2 Reformation

Increasing protest against the OPAL drills coupled with the FCDA's difficulty in settling the shelter vs. evacuation debate placed civil defense in a tough spot. The centralized vs. individual approaches to civil defense were also relentless as civil defense proponent Chet Holifield chaired a congressional committee that recommended that civil defense be primarily a federal responsibility to its citizens. With these two questions on the table and in the midst of growing protest, President Eisenhower decided to reform civil defense through the creation of a National Shelter Policy and the establishment of the Office of Civil and Defense Mobilization (OCDM) in 1958. This approach effectively answered the two dominant questions. Civil defense was to be an individual responsibility and shelters from fallout (not blast) would provide the most practical answer to insuring personal survival.

Announced in May 1958, the National Shelter Policy held "that in the event of enemy attack, fallout shelters offer the best single non-military protective measure for the greatest number of people." This policy was encouraged among local and state governments and industrial and rural regions. Once this policy was laid out, the OCDM initiated a highly concentrated media

³⁰ David Hostetter, "House Guest of the AEC: Dorothy Hutchinson, The 1958 Fast at the Atomic Energy Commission, and the Domestication of Protest," *Peace and Change* 34, no. 2 (April 2009).

³¹ Garrison, Bracing for Armageddon, 113.

³² Ibid 65

^{33 &}quot;New Releases, October 19th, 1959" Civil Defense Material; Subject Files, 1951-1968; Secretary of the Interior; Record Group 48; Box 11; National Archives and Records Administration – Southeast Region (Atlanta).

campaign targeting suburban families, particularly housewives. This period within civil defense offers an excellent window into the ideological protest against the program. It was at this point that the messages, rationales, and rhetoric surrounding civil defense were most consolidated. Fallout shelters were to provide safety for Americans and it was to be an individual responsibility. Just as the OPALs had encouraged physical protests and refusals to participate in civil defense, the OCDM's media campaign also received a strong ideological backlash. Because civil defense was based upon national security, foreign policy, and nuclear strategy, these aspects of the program were also heavily contested in print media. Just as Chet Holifield and others had accused civil defense of being a "phantom" program existing primarily to ease American's nuclear anxieties, civil defense opponents soon adopted this claim and argued that Americans were being "conditioned" to accept an inevitable war. 34 The OCDM only lasted three years and was scrapped in 1961. Nonetheless, it offers an excellent view into the ideological claims of civil defense as well as the concerns of those arguing against its existence.³⁵

2.3 Decline

In a sense, the United States' civil defense program went out with a bang. Taking office in 1961, President Kennedy had been a long time proponent of civil defense efforts. Once in office, Kennedy established and worked with the new Office of Civil Defense (OCD), the successor of the recently scrapped OCDM. Kennedy held strong to his convictions on civil defense and secured massive congressional funding for the program, amounting to nearly 60 percent of the total expenditures on the program throughout the entire 1950s. 36 However, as historian Dee Gar-

³⁴ Garrison, *Bracing for Armageddon*, 64. "Conditioning for War," *The Berkshire Eagle*, September 9, 1959, 22.

This is discussed further in Chapter 2.

³⁶ Garrison, Bracing for Armageddon, 105.

rison has pointed out, the vitality of Kennedy's program lasted less than a year. ³⁷ Like the media campaign efforts of the OCDM, civil defense maintained a public marketing strategy at least into the mid 1960s. It was during the early 1960s that fallout shelters really became more prevalent in popular media as well. In 1961, President Kennedy addressed the nation amidst the Berlin Crisis by calling on Americans to protect themselves through home fallout shelters. This resulted in an intense public request for additional information on shelters. Soon Life magazine released an issue including Kennedy's exhortation to build shelters. The issue then illustrated some prototype shelter plans and claimed that "97 out of 100 people can be saved" if their homes were prepared. 38 According to Kenneth Rose, "Shelters very quickly produced their own fallout, attracting a torrent of criticism and making them popular objects of vilification." ³⁹In September of 1962, The Twilight Zone aired an episode titled "The Shelter." The episode revolved around what was then being termed "shelter morality" or the moral dilemma of owning a shelter. In this particular episode one civil defense minded neighbor hosts a birthday party, but the party is disrupted by a CONELRAD warning. 41 Immediately, the party's host (the only person in the neighborhood with a shelter) kicks his friends out of his home and locks his family in the basement shelter. After his neighbors desperately return, the host refuses to allow them into his shelter because of the insufficiency of supplies. The neighbors break their way into the shelter only to hear the radio announcement that the aforementioned alert was a false alarm. With that, the viewers were left to consider just how far they would be willing to go to protect themselves during a nuclear war. Writing of this episode and other popular cultural anti-shelter productions during this

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³⁷ Ibid

³⁸ "Fallout Shelters: You Could be Among the 97% to Survive if You Follow the Advice in this Article," *Life*, September 15th, 1961, 95.

³⁹ Rose, One Nation Underground, 81.

⁴⁰ Garrison, *Bracing for Armageddon*, 118.

⁴¹ CONELRAD was the predecessor of the Emergency Broadcast System located on AM 640 and AM 1240 during the early Cold War. This system was created to warn Americans of an impending attack and keep communication after one.

period, Kenneth Rose explains that, "Proponents of an American fallout shelter system were never able to gain the moral high ground or capture the sympathies of the American public. To a great extent shelterists lost the political war because they lost the metaphorical war." ⁴²

Even prior to these criticisms, popular fiction had been addressing the dilemmas of nuclear war and civil defense efforts. Three particular novels that poignantly addressed these issues were Neville Shute's *On the Beach*, Mordecai Roshwald's *Level 7*, and Pat Frank's *Alas, Babylon!* Each of these works contained explicit criticisms of nuclear warfare, the arms race, and civil defense programs. Chapter 3 will take a further look into how these novels each engaged with these ideas.

By the mid 1960s, civil defense strategies were becoming increasingly outdated and unbelievable. As technological innovations increased the power and speed of nuclear warheads and their delivery systems, civil defense found itself facing extinction. These trends were easily gleaned by the public. As Tracy Davis points out, fallout shelters in the 1950s were to be stocked with one week of supplies, by the 1960s it was two weeks, and by the 1980s at least three weeks. There was also what Paul Boyer calls "the Big Sleep" concerning nuclear fears spanning from the mid 1960s until the early 1980s. During this period, civil defense agencies across the world began focusing more on environmental disasters and less on manmade ones. This happened in the U.S., as well as in Australia, Canada, and the UK. While the 1980s saw a brief revival of civil defense rhetoric, the notion of home fallout shelters and mass evacuations had run its course by the late 1960s. Throughout its existence however, civil defense was founded upon and influential in a variety of rationales.

⁴² Rose, One Nation Underground, 112.

⁴³ Davis, *Stages of Emergency*, 81.

2.4 Rationales

Although national security was the primary rationale underlying civil defense, the various programs also illuminate how foreign policy, nuclear strategy, and domestic concerns were addressed. In some ways, civil defense offers a window into each of these somewhat disconnected areas. In writing about the British civil defense programs, Matthew Grant has explained that, "it allows us to penetrate Whitehall thinking about nuclear war, what a post-attack Britain would look like, and what measures could be implemented to alleviate the effects of such an attack."44 Sociologist Guy Oakes has been particularly influential in tying civil defense to the national security policy of deterrence. According to Oakes, "The instrument chosen to convince the American people to pay the price for the failure of deterrence was civil defense."⁴⁵ In other words, only if Americans believed that survival was possible, could they support a nuclear arms race and tough policy stances towards the Soviet Union. Civil defense reveals much more about American political policy than one might expect.

2.5 Nuclear Strategy

Civil defense was inherently bound up with nuclear strategy throughout the Cold War. One of the most outspoken proponents of a functioning federal civil defense program was nuclear strategist Herman Kahn. An incredibly controversial figure, Kahn was said to have been the model for Dr. Strangelove, from the famous Stanley Kubrick film of the same title. 46 In 1960, Kahn published his work *On Thermonuclear War*, a book dedicated to peeping into the horrors of nuclear war and finding ways to prepare for it. Kahn viewed civil defense as particularly important for U.S. deterrence policy. Accordingly, Kahn and other nuclear strategists designated

Grant, After the Bomb, 4.
 Oakes, The Imaginary War, 6.

⁴⁶ According to Stephen Whitfield, Kahn even asked Stanley Kubrick for a royalty after watching the movie. Whitfield, The Culture of the Cold War, 222.

three various types of nuclear deterrence. What Kahn labeled Type I and Type II deterrence were most directly linked to the importance of possessing a strong national civil defense program. Type I deterrence, or "passive deterrence" was the notion that the U.S. would guarantee a counterattack if it were harmed. Type II deterrence, or "active deterrence" is essentially the same concept as "nuclear blackmail," or the use of threats to deter an opponent from an aggressive act. 47 Military planners believed that for either of these two strategies to work, there must be an efficient civil defense system intact.

In the Type I scenario, the U.S. policymakers would have to be kept safe from harm so that a counterattack could be managed. This was often referred to in civil defense pamphlets and literature as "continuity of government" plans. Building deep blast and fallout shelters for the Legislative and Executive Branches of government were fundamental to this. In 1962, what became known as the Greenbrier Bunker was built underneath the Greenbrier Hotel in West Virginia. This was to be the congressional bunker for the survivors of the U.S. House of Representatives and Senate. 48 The Executive branch was also provided a blast shelter, first at Raven Rock bunker in Pennsylvania (1950), and later High Point bunker in Mt. Weather Virginia (1958). 49 Although these bunkers were classified until the 1990s, it was common public knowledge that they existed. The concept was a simple one; for a Type I deterrence counterattack to occur, those able to launch such an attack must survive. These tactical designations of who was considered most important were a cause of much contention however. As will be discussed in chapter 3, this was a major point of concern and discontent toward civil defense planning that was addressed in the novel *Level 7*.

Kahn, On Thermonuclear War, 282.
 Rose, One Nation Underground, 114–115.

⁴⁹ Krugler, This Is Only a Test, 64, 108.

Type II deterrence also needed a strong civil defense program to be effective. In this scenario, the public would need to be convinced of their safety if a tense political struggle were to erupt. If U.S. policymakers hoped to use nuclear weapons to deter another nuclear power holder's actions, then Americans would only support such aggression if they could be convinced that their personal safety wasn't on the line. These arguments became even more complex through the concept of "counterforce." 50

According to nuclear strategists, counterforce was the scenario where policymakers would choose to aim all of its nuclear weapons at an opponent's weapon sites. During the early Cold War years, this would have been a strategy of hitting Strategic Air Command bases in order to weaken the opponent's expected counterattack. Later on, it would entail being able to destroy an opponent's missile sites. This however became increasingly complicated as nuclear delivery systems expanded and diversified into "the three S's," or Strategic Air Command, submarines, and silos. According to Kahn, this would be the most logical use of nuclear weapons as opposed to "countervalue," which meant targeting ones weapons at civilian populations in an attempt to break a nation's manpower and psychological will to survive. 51 According to this logic, Kahn and others believed that civil defense made sense. If, for example the Soviets initiated a first strike against the U.S.'s military targets, then civilians would mostly be residing in areas some distance away from such sites. If this were the case, then simple fallout shelters with enough supplies could theoretically allow these people to escape the radiation from such an attack. In the later 1960s, after civil defense had become increasingly delegitimized by popular opinion, political elites such as Secretary of State Robert McNamara would try to revamp the programs in order to support the building of anti-ballistic missile (ABM) sites. Ironically, civil defense both

⁵⁰ Kahn, On Thermonuclear War, 16; Rose, One Nation Underground, 152.

⁵¹ Kahn, On Thermonuclear War, 184; Oakes, The Imaginary War, 156.

bolstered and harmed McNamara's efforts. By refusing to support civil defense, the federal go vernment looked toward other methods for providing nuclear protection such as ABMs. On the other hand, these ABM sites tended to support "counterforce" logic and could be much more efficient with an active civil defense program in case of an enemy's first strike. ⁵² It is no surprise however, that pacifists and others who had been aware of the twentieth century's wars doubted this theory. Throughout the twentieth century, civilians had increasingly become targeted by military weapons. ⁵³ This was a point that was made by many who had opposed civil defense preparations, who argued that by building fallout shelters in one's home, civilians were being asked to increasingly blur the line between civilian and soldier.

2.6 Foreign Policy

Civil defense was tied to the U.S. policy of containment abroad. As Odd Arne Westad's *Global Cold War* points out, both the U.S. and Soviet Union viewed themselves as models of modernity. In describing their Cold War interventionism he wrote, "Locked in conflict over the very concept of European modernity – to which both states regarded themselves as successors – Washington and Moscow needed to change the world in order to prove the universal applicability of their ideologies, the elites of the newly independent states proved fertile ground for their competition." While some might consider the superpower standoff between the U.S. and Soviet Union to have been "cold," these ideologies were played out in very "hot" wars throughout the globe. According to Westad, the policy of containment was one of intervention that was justified by U.S. policymakers, "everywhere, where Communism could be construed as a threat." 55

⁵⁵ Ibid., 38.

⁵² Ernest J. Yanarella, *The Missile Defense Controversy: Technology in Search of a Mission*, REV and Updated. (The University Press of Kentucky, 2002), 87.

⁵³ Lawrence J. Vale, *The Limits of Civil Defence in the USA*, *Switzerland*, *Britain and the Soviet Union: The Evolution of Policies Since 1945* (Palgrave Macmillan, 1987), 16–17.

⁵⁴ Odd Westad, *The Global Cold War: Third World Interventions and the Making of Our Times.* (Cambridge; New York: Cambridge University Press, 2005), 4.

Civil defense was particularly tied to containment through the concept of "nuclear blackmail." Nuclear blackmail is a scenario where one nuclear power holder uses its capabilities to threaten another nation if it refuses to cooperate. Within the policy of containment, this strategy could be used to keep the U.S. from intervening into an area or newly independent communist leaning nation. The concept of nuclear blackmail was consistently named as a major rationale for civil defense throughout the late 1950s and early 1960s. 56 It was believed by policymakers and nuclear strategists that if the U.S. could convince the Soviets that it had a functional and efficient defense against nuclear weapons, then it could also unilaterally intervene in developing countries. Also, if the Soviets decided to intervene in a nation and the U.S. wanted to check their involvement, nuclear blackmail could provide a useful tool, but only if the Soviets could be convinced that the U.S. had an efficient defense system. Due to this possibility, civil defense was viewed by some as a threat to the United Nations and multilateral agreements. In a sense, civil defense not only needed to convince the American public of its effectiveness, but also the Soviet Union. Civil defense was not only operating as a façade to bolster foreign policies, but also domestic ones.

2.7 Domestic Policy

According to sociologist Guy Oakes, civil defense was used to convince Americans that that nuclear war was not to be feared, because if people believed they could protect themselves, they were more likely to buy into deterrence theory. ⁵⁷ In this way, civil defense acted as a façade in order to accomplish what Oakes terms an "emotional management" of the public. ⁵⁸ In order for Americans to support deterrence theory and the nuclear arms race, the public would need to

⁵⁶ The rationale of nuclear blackmail was particularly adopted by policymakers and politicians. The term was consistently used by CIA director Allen Dulles and New York civil defense stalwart Nelson Rockefeller in order to support civil defense measures. "Civil Defense: Right to Die," *Time*, August 17, 1959, 22.

Oakes, The Imaginary War, 7.

⁵⁸ Ibid., 46–47.

believe that survivability was possible. Many influential policymakers viewed the public as weak minded, apathetic, and soft. Also, during the early Cold War years, it was believed that a nuclear war would have a stronger psychological impact than material one. It was vital to maintain a sense of calm then if the U.S. were ever attacked. Many policymakers hoped that civil defense could take the edge off of this terror. As many historians of civil defense have pointed out, early civil defense programs were largely based on the what has been called "the Bible of civil defense," or Project East River. ⁵⁹ The findings of this government funded project held that Americans needed to be emotionally managed and strengthened in order to survive a nuclear attack. The board urged that civil defense was the tool by which this could be accomplished. If Americans could be convinced that nuclear war was real and horrific, this was a first step towards building a more resilient and hardened society. This mentality was not only expressed through civil defense publications and materials, but even within popular fiction. This is particularly the case with Philip Wylie's 1954 novel *Tomorrow!* discussed in chapter 2 and Pat Frank's *Alas*, Babylon! in chapter 3. Many people however began to recognize the psychological rationale of civil defense and opposed the program for what they viewed as a "conditioning" of Americans toward an acceptance of war. 60 In an unusual way, both proponents and opponents of civil defense could agree that the program was tantamount toward emotionally managing the American public, but disagreed on whether it should be done.

2.8 Conclusion

Civil defense held various meanings for different people. For some nuclear strategists, civil defense was a practical means to assure the physical survival of civilians living in cities during a counterforce style attack. If such an attack should occur, everyday people could remain

⁵⁹ Ibid., 50

^{60 &}quot;Conditioning for War," The Berkshire Eagle, September 9, 1959, 22.

alive and healthy if only they had fallout shelters. For other strategists and for many policymakers, civil defense provided a façade that would encourage Americans to support a strong deterrence policy, containment, and the nuclear arms race. Many policymakers also believed civil defense provided the emotional management necessary to ensure that the American public was battle hardened and prepared to face the psychological impacts of a horrific nuclear war. Whether it was considered a physical protection or a mere amulet that could ward off nuclear fears, civil defense was supported by a wide range of Cold War policymakers. These policies were implemented primarily in three areas: industry, agriculture, and the suburbs. While some nuclear strategists believed urbanites could be saved, civil defense programs generally demarcated these areas as hopeless. Civil defense agencies such as the FCDA and later the OCDM became riddled with questions by the American public, especially during times of international crisis. These agencies eventually began to solidify their answers to the skeptical and reluctant public. As technological innovations such as thermonuclear warheads and intercontinental ballistic missiles increasingly became public knowledge, opposition towards civil defense policies also increased. Amidst this expansion of information into the public sphere, civil defense agencies made a significant push towards creating a favorable media campaign. Understanding the reactions toward this campaign through local and national print media illuminates just how rampant these criticisms truly were.

3 "CONDITION YELLOW": THE REGULATION OF INFORMATION IN CIVIL DEFENSE DISCOURSE

"Chuck recognized him, though he was ash-pale, almost blue-lipped and his features were screwed up with the torture of his fears and his determination. It was River City's Mayor Clyde. 'I repeat, General,' he said almost in a shout, 'if we are not yet threatened, we must maintain Condition Yellow! You start those sirens and you sign the death warrant of maybe a thousand people. Great God! The whole population and the county around is jammed downtown and they'd panic!'" – *Tomorrow!*⁶¹

Throughout most of the early Cold War period, a succession of U.S. civil defense programs struggled to convince Americans of their viability and effectiveness in offering protection against nuclear weapons. These federal agencies soon recognized that a balance of information must be presented to the public, a sort of "condition yellow," or a state of equilibrium in which people were concerned, but not debilitated by the implications of supporting civil defense. If either too much or too little information about the effects of nuclear weapons was given, the public would continue to disregard their future wartime roles. It was believed that both under-informed and over-informed civilians were at the root of a public paralysis regarding civil defense policies. In response to this inaction, the federal government established a new civil defense agency titled the Office of Civil and Defense Mobilization in 1958 that hoped to mobilize these unresponsive citizens through a media campaign. Well respected and popular writer Philip Wylie encouraged higher participation in civil defense procedures through his writings, including his novel Tomorrow! and several magazine and journal articles. Despite putative support on Democratic and Republican Party platforms, the OCDM's attempts immediately became a site of contestation from the political Right and Left. Also during this period, Wylie reversed his support for nuclear protection and began openly questioning civil defense policies. An analysis of popular print media discourses responding to the OCDM's media campaign and Wylie's transformation uncovers a

⁶¹ Philip Wylie, *Tomorrow!* (Bison Books, 2009), 232.

significantly different perspective to the traditional historiography's focus on the 1950s consensus towards Cold War foreign and military policies. While much attention has been placed on institutional histories of civil defense, print media responses regarding civil defense policies demonstrate the potency that public disillusionment wielded on federal policies.

3.1 Civil Defense: A Mercurial Past

The Soviet acquisition of an atomic bomb in 1949 prompted the United States government to strengthen its WWII civil defense program. ⁶² While WWII civil defense policies focused on blackouts and air patrols, nuclear weapons rendered these policies less relevant. It is in this fashion that civil defense programs continually struggled to exist, mistakenly embracing yesterday's defenses for tomorrow's weaponry. The first significant postwar program was embodied in the Federal Civil Defense Administration. This organization, however, was plagued by debates about how civilians should protect themselves. Should, in the event of a nuclear war, civilians evacuate cities, duck and cover, or build home fallout shelters? Unfortunately, the Federal Civil Defense Administration oscillated between each of these options, which resulted in a confused public. ⁶³ As one op-ed explained, civil defense was receiving a poor response because in the past there "was confusion among the experts and government leaders.... Policies and projects were shifted repeatedly and many of them seemingly didn't make much sense." By late 1959 however, the writer opined that the, "Differences and conflicts among various agencies holding some responsibility for civil defense seem largely to have been ironed out." ⁶⁴

⁶² This is demonstrated clearly by the Federal Civil Defense Act of 1950.

⁶³ Krugler, This Is Only a Test, 60.

⁶⁴ "Advances in Civil Defense." The Milwaukee Journal, October 11, 1959, 2.

3.2 The National Shelter Policy and the OCDM

Recognizing these problems in 1958, President Eisenhower approved the National Shelter Policy. 65 This policy prioritized the building of private or home fallout shelters over a full evacuation (See figure 3.1). To advance the National Shelter Policy, the OCDM replaced the FCDA. Its central responsibility was to orchestrate a national media campaign to inculcate public participation in the building of home fallout shelters. In 1959, the Director of the OCDM, Leo A. Hoegh, asked the readers of *The Washington Evening Star*, "Have you been hearing more about civil defense lately? It's no accident.... We planned it that way."66 The OCDM was fortified by other allies also. Placing civil defense into the national limelight, New York Governor Nelson Rockefeller proposed of a bill that mandated every homeowner in New York to build a private fallout shelter. 67 Like the National Shelter Policy, Rockefeller's plan was viewed by some as an answer to "civil defense's chronic black eve" of indecisiveness. 68 As will be demonstrated however, Rockefeller's shelter bill functioned as a lightning rod for national opposition towards civil defense. Although deployed earlier than the OCDM or Nelson Rockefeller's bill, a third component in the push for civil defense education was popular writer Philip Wylie's book Tomorrow!. All three advocated civil defense as a viable and necessary component of national security and personal survival.

⁶⁵ Many have pointed out that Eisenhower was actually rather ambivalent about the viability of fallout shelters and their costs. The National Shelter Policy largely served to appease civil defense concerns by placing the financial burdens on the public. Garrison, Bracing for Armageddon, 91. Stephen Schwartz, Atomic Audit: The Costs and Consequences of U.S. Nuclear Weapons Since 1940 (Washington D.C.: Brookings Institution Press, 1998), 319.

⁶⁶ Richard Frykland, "First Real Program for Civil Defense," The Washington Evening Star, August 23, 1959, C4.

67 "For New Yorkers: Compulsory Shelters," Newsweek, July 20, 1959, 24.

^{68 &}quot;All American 'Ace in the Hole." The Marion Star, July 10, 1959, 6.



Figure 3 - A model fallout shelter displaying two weeks' worth of supplies (circa 1957). Courtesy of the National Archives, Photo No. 311-D-15(7)

Because the OCDM was viewed by many as the first focused civil defense program offering a coherent plan for action, it provides an excellent case for understanding the public's response to it. ⁶⁹ Since the OCDM engaged in a media campaign that used local, regional, and national print media, its discourse offers a unique window into how everyday Americans perceived civil defense. Newspapers around the country, both large and small, printed op-eds supporting the OCDM's National Shelter Policy and urging Americans to participate. The OCDM fostered this discourse with the American public. A list of these "favorable" op-eds was published annually by the agency, providing insight into the areas where discourse was inaugurated. ⁷⁰

3.3 The Ill-Informed Public and Psychological Hardening

The OCDM believed that proper information distribution lie at the heart of the civil defense dilemma. The term "public apathy" was consistently invoked as an explanation for the torpidity of the American citizenry regarding fallout shelters. Civil defense publications and Philip Wylie's popular novel *Tomorrow!* portrayed this inaction as rooted in public ignorance on the topic of nuclear survival. Speaking to the medical field in 1960 Gerhard Blieken, a member of the National Academy of Sciences Advisory Committee on Civil Defense gave an address titled "Apathy and Defense" that sought to understand the underlying causes associated with disengaged Americans. Quoting from Oskar Morgenstern's book *The Question of National Defense*, he claimed that American insouciance was rooted in two causes: "The first is the unbelievable complexity of the problems. The second is that the horrendous nature of the problems makes

⁶⁹ Richard Frykland, "First Real Program for Civil Defense," *The Washington Evening Star*, August 23, 1959, C4

^{1959,} C4.

To Office of Civil and Defense Mobilization, "Information Bulletin" 1960 No.164, 7. Georgia Department of Education, Division of Negro Education, Director of Negro Education Subject Files, RG 12-6-71, Georgia Archives.

them difficult of personal and public acceptance."⁷¹ Educating the public and the creation of honest, public dialogue could allay this fear. Bleicken theorized that much of the problem was caused by a "superstitious fear of acknowledging the reality of the threat."⁷² Civil defense media provides a potent illustration of this concern. In one civil defense cartoon a medical patient is diagnosed with "nuclearosis," a disease whose symptoms included "nuclear blindness, all he can see is a mushroom cloud, he is blinded from the fear of it, deaf from the sound of it."⁷³ The patient's doctor explains the purpose of a fallout shelter and the man is miraculously cured. If the public could only be informed as to what this war would look like, and more importantly how to survive it, then their paralysis could be cured and they would begin preparing.

The accusation of "public apathy" was a staple of the OCDM's favorable op-eds and frequently mentioned in writings by civil defense administrators both local and national. This was generally articulated through accusations of "defeatism" and "fatalism" towards the American public. In national and local newspapers, proponents of civil defense railed against the 'apathetic public' for having a "head in the sand attitude." In response to an earlier article criticizing the effectiveness of fallout shelters, Illinois Civil Defense Director Robert Woodward even claimed that "The Russians have convinced many gullible people that nothing can be done under atomic bombing." In another case where an expert on school building construction testified that there was nothing schools could do to be protected from the enormous force of a hydrogen bomb *The Nashville Tennessean* explained that "fatalism isn't the answer [,] for the more concerned people

⁷¹ "Talks on Civil Defense 2." Subject Files 1961; Center for Disease Control; Record Group 442; Box 8; National Archives and Records Administration – Southeast Region (Atlanta).

⁷³ Archives Project; Docurama; New Video Group, *The Atomic Cafe* (New York): Docurama: Distributed by New Video, 2002.

^{74 &}quot;Letters to the Editor: Cites Value of Civil Defense," Chicago Daily News, July 22, 1959, 18.

⁷⁵ Ibid.

become with nuclear peril the surer we will move toward solutions for survival."⁷⁶ Front and center in educating the public against indifference was popular writer Philip Wylie.

3.4 Philip Wylie

Although a household name in the 1950s, Philip Wylie is now remembered mostly by science fiction buffs and feminists. Like many talented writers of the period, Wylie was interested in a variety of topics and studies including psychology, science, and religion. In his New York Times obituary, he was described as a "prolific iconoclast" who "was very often ahead of his time in his thinking." As with many other science fiction writers he was enamored with the idea of harnessing the atom well before the feat was accomplished. After writing about the possibilities of a German acquisition of an atomic bomb in 1932, Wylie's article was censured and he was placed on house arrest. 78 Even after the first use of atomic weapons in Japan Wylie wrote an article for *Colliers* praising the possibilities for the newly unleashed energy, while nonetheless calling for the nationalization of atomic energy and an internationalization of scientific knowledge. 79 After a bitter disagreement with a professor at Princeton, Wylie discontinued his formal education. 80 Nonetheless, Wylie's broad knowledge of atomic energy and weapons were embraced by the public. For this reason, his name was consistently listed as a contributor to the Bulletin of Atomic Scientists alongside Albert Einstein, Leo Szilard, J. Robert Oppenheimer, and David Lilienthal. Because of this expertise, Wylie was asked to serve as a consultant for the Federal Civil Defense Administration in 1949. This was in part because of his incredible ability to convey complex topics to a general readership. One biographer explained that Wylie excelled at

⁷⁶ "Thinking Towards Survival is in Order," *The Nashville Tennessean*, November 9, 1959, 6.

⁷⁷ Martin Arnold, "Prolific Iconoclast," *The New York Times*, October 26, 1971, 44.

⁷⁸ Clifford P. Bendau, Still Worlds Collide: Philip Wylie and the End of the American Dream (Borgo Press, 2007)., 42.
Wylie, Philip, "Deliverence or Doom?," *Colliers*, September 29, 1945, 79.

⁸⁰ Bendau, Still Worlds Collide, 5.

"Taking difficult concepts and translating them into the language of everyman... alienat[ing] university pedants, but slowly gathered a following of Middle Americans." In 1954 Wylie focused his abilities toward teaching Americans about the importance of civil defense in his didactic novel, *Tomorrow!*

Dedicated to "the gallant men and women of the Federal Civil Defense Administration and to those other true patriots, the volunteers, who are doing their best to save the sum of things," *Tomorrow!* forced its readers to imagine the destructiveness of an all-out nuclear war. ⁸² Years later Wylie explained that his motivations for writing *Tomorrow!* emerged from his "near despair at the apathy of the average citizen" to the threat of a nuclear attack. ⁸³ *Tomorrow!* centers around the fictional twin cities of Green Prairie and River City, separated by a river and state boundaries. While Green Prairie has a strong civil defense program, River City, like the readers Wylie hoped to reach, believed the entire concept farcical. This disdain swiftly changes when a Soviet attack on the entire United States occurs and the twin cities are among those targeted. Soon families are split, the unprepared are killed (either physically or psychologically) due to their neglect and complete mayhem ensues.

The messages in *Tomorrow!* are presented with impressive clarity. Civil defense was not unequivocally going to save everyone physically, but it could certainly provide a psychological protection. In other words, civil defense could mentally prepare people to live through the realities of a nuclear war. To do this, they would need to repeatedly practice and imagine the horror of nuclear weapons so that they could become psychologically hardened. In the same way that blast shelters were to become "hardened" against nuclear weapons, civil defense hoped to "har-

⁸¹ Bendau, Still Worlds Collide, 25.

⁸² Wylie, Tomorrow!.

⁸³ Wylie, Philip, "Why I Believe There Will Be No All-Out War," *The Rotarian*, September 1960, 22. In another scenario, Wylie claimed the work was written to awaken a "sleepwalking nation." Bendau, *Still Worlds Collide*, 25.

den" the public psyche through a consistent use of drills and operations. ⁸⁴ This process was similarly described by Gerhard Bleicken who claimed that, "the situation here... is not dissimilar to that facing students in medical school the first time the class in anatomy enters the morgue. Little anatomy is studied until the students have become used to death." In the end, when cities were rebuilt and families reunited, this psychological protection would be a valuable resource. The dividing factor between survival and death, according to *Tomorrow!*, was the ability to be courageous and calm in the face of danger. While fearful characters are trampled to death, courageous ones remain healthy and happy even after they have encountered high levels of radiation. ⁸⁶ In this way, Wylie had entered into the debates over the importance of psychology in the role that civil defense was to play. In his own words, he "felt certain that in any nuclear war the nation best ready to bear such horrific assault on its civilian front would win the war."

Certainly, Wylie was much more concerned about the under-informed public and believed that a realistic portrayal of nuclear war would help allay their concerns. In reality howe ver, Wylie portrayed a nuclear war far more gruesome than anything the OCDM was publishing.
Tomorrow! describes children being sliced in half in their mother's arms, footless men running on their shins through the streets, and countless people being trampled to death during the attack. Even those fortunate enough to avoid physical harm, but unprepared mentally, suffered psychological impairment leaving them as good as deceased. The OCDM did not necessarily view these depictions as harmful towards their goals either. Tomorrow!'s ability to describe in detail the

⁸⁴ This focus on rehearsal as a way towards investigating the feasibility of civil defense has been convincingly researched and presented by Tracy Davis. Davis, *Stages of Emergency*.

⁸⁵ "Talks on Civil Defense 2." Subject Files 1961; Center for Disease Control; Record Group 442; Box 8; National Archives and Records Administration – Southeast Region (Atlanta).

⁸⁶ One revealing example of this is the irradiation of one of the main characters in the book, and future daughter-in-law of the protagonist who is a 'giegerwo man.' Despite her exposure to high levels of radiation, Wylie chose to conclude *Tomorrow!* with the announcement of her pregnancy. Philip Wylie, *Tomorrow!* (Bison Books, 2009).

⁸⁷ Wylie, Philip, "Why I Believe There Will Be No All-Out War," *The Rotarian*, September 1960, 22.

horrors of a nuclear war was praised by the director of the Federal Civil Defense Administration at the time. Director Val Peterson hailed Wylie's description of "helpless, confused, panicky, badly informed people, whose ignorance leaves them completely unprepared for what befalls them." Wylie and the OCDM's educational discourse soon backfired, shifting the balance of fear towards those who claimed to understand the effects of nuclear weapons.

3.5 The Over-Informed Public and Conventionalization

Philip Wylie and the OCDM hoped that educating the public would serve as a catalyst for the building of fallout shelters within homes. But these preparations never occurred on any significant scale in individual homes. ⁸⁹ On the contrary, it appears that as Americans became more informed about nuclear weapons, and specifically about their increasingly devastating effects, the less interested they were in civil defense. Like the General in *Tommorow!*, civil defense needed to cause alarm, or awaken the apathetic without over-informing the public. To do this, civil defense was forced to maintain a sort of "condition yellow." Failing to strike the correct balance would inevitably result in the destruction of lives and nations.

While simultaneously educating the public on the heat, blast, and radiation produced through nuclear explosions, the OCDM purposefully downplayed the radioactive aspects of nuclear weapons. To be fair to the OCDM, its publications consistently acknowledged that fallout shelters were **not** blast shelters. However, the OCDM and more specifically the National Shelter Policy undermined this by placing the focus on shelters over evacuation. In fact, the OCDM often downplayed the possibility that cities would be targets claiming that, "One thing is certain if this country is attacked with nuclear weapons our air and missile bases will be primary tar-

⁸⁸ Val Peterson, "They Said It," *The New York Times*, January 7, 1954, BR4.

⁸⁹ Garrison, Bracing for Armageddon, 103.

gets...."90 Not only redirecting the focus from urban areas, the OCDM also consistently deemphasized nuclear fallout. As revealed by sociologist Guy Oakes, this was an attempt to conventionalize the atomic bomb, a psychological tactic of downplaying nuclear weapons to make them seem like nothing more than larger conventional explosives. This was a staple of the official civil defense discourse. In pursuing this tactic, the dangers of radioactive fallout was consistently minimized. In a speech to physicians, longtime champion of civil defense, Edward Teller explained that the American public had been "scared by words like fallout" which "amounts to one or two per cent of the radiation that we get from natural sources, from cosmic rays, from radioactivity, in our blood from potassium, from radioactivity in our food or in our soil."91 Teller continued, "About that one or two extra per cent, some fear-mongers will scare you. They will tell you we don't know its effects, therefore we should eliminate it. The effects are so small that we can't observe them. Shall we be afraid of everything that is so small that it has no noticeable effects?"92 It was perceived that through this conventionalization, Americans could be psychologically soothed even in the case of an actual attack. 93 In many ways, conventionalization appealed to civil defense as the "condition yellow" needed to maintain the balance between healthy fear and uncontrollable panic. As implied by Teller's arguments, the authors of conventionalization used technical arguments to ease psychological fears. However, technologically informed arguments also undercut this process. Philip Wylie's switch over civil defense provides a nice example of these powerful criticisms.

Family Fallout Shelter, Washington, D.C.: Government Printing Office, 1959, 4.
 "Talks on Civil Defense 1." Subject Files 1961; Center for Disease Control; Record Group 442; Box 8; National Archives and Records Administration – Southeast Region (Atlanta).

⁹³ Oakes, The Imaginary War, 50–51.

3.6 Technological Advances

As science fiction historian and writer Sam Moscowitz explained "Tomorrow! was outdated within six months of its publication in 1954; the development of fusion weaponry destroyed its validity." As fission weapons based on highly enriched uranium and plutonium evolved into fusion weapons such as the Hydrogen bomb, the destructive effects of these weapons were multiplied. Worse, within five years of Tomorrow!'s printing, both the United States and the Soviet Union had successfully tested and deployed Intercontinental Ballistic Missiles or ICBMs. This dramatically truncated the amount of time from hours to minutes before an attack could be implemented. Some of this threat was real and some perceived. In retrospect, the late 1950s fears about the Soviet acquisition of ICBMs never materialized into the "missile gap" that was perceived to exist. Some of this was known by only a few people including President Eisenhower who had access to information being gathered by U2 spy planes over the Soviet Union. While the threat of hoards of ICBMs was a myth, thermonuclear (or fusion based) warheads were not and when compared pound for pound with atomic fission weapons, they released three times the amount of energy.

3.7 Wylie's Betrayal

In the midst of the OCDM's media campaign and just six years after publishing *Tomorrow!*, Philip Wylie broke with his earlier involvement in civil defense and published an article in *The Rotarian* titled, "Why I Believe There Will be No All-Out War." Much had changed since Wylie had tried to convince Americans not to panic if confronted with a nuclear attack. By 1960

⁹⁴ Bendau, Still Worlds Collide, 50.

⁹⁵ Garrison, Bracing for Armageddon, 86.

⁹⁶ Ibid.

⁹⁷ Samuel Glasstone and Philip Dolan, *The Effects of Nuclear Weapons*. 3rd ed. (Washington: U.S. Dept. of Defense, 1977), 21.

⁹⁸ Philip Wylie, "Why I Believe There Will be no All-Out War," *The Rotarian*, September 1960.

hydrogen bombs and missile technology had rendered civil defense publications and information even more obsolete than they had been throughout the 1950s. Wylie dissuaded that, "no plan – whether of city evacuation, shelters, early-warning-radar lines, or anything else – would be of value" during a full scale nuclear attack. 99 Relinquishing the prospect of convincing Americans that nuclear war would be survivable if only the public were psychologically hardened and prepared, Wylie now charged the OCDM with avoiding four major factors in its program. First, an all out nuclear attack would likely be lengthened over time in order to render the suggested two weeks supplies insufficient. Second, firestorms such as those in WWII (only much larger) would surely erupt after an H-bomb attack, asphyxiating any shelter dwellers. Third, nearly everyone within miles of ground zero would be instantly blinded when they reflexively watched the fireball of the explosion. And last, the ecological ramifications of an absolute conflict would make the earth "a death chamber for man for decades." Once viewing mental preparedness as the key component of civil defense, Wylie now focused on technicalities of warfare. These criticisms reflected not only Philip Wylie's concerns over civil defense, but coincided with those voiced by critics throughout the country as demonstrated in local and national newspapers. Wylie's popularity empowered his message. The OCDM took these criticisms seriously, as Wylie had only too recently been one of its most ardent supporters and even an advisor to the program.

Just as local criticisms of the OCDM often resulted in rebuttals by local civil defense leaders, Wylie's attack against the program in *The Rotarian* resulted in a rebuttal from OCDM director Leo A. Hoegh. In his attempt to refute Wylie's article, Hoegh initially addressed Wylie's technical criticisms, highlighting the alterations in civil defense since Wylie had been involved with the program. According to Hoegh, the National Shelter Plan, NORAD's warning system,

⁹⁹ Ibid., 22.

¹⁰⁰ Ibid., 25.

and an abundance of stockpiled supplies across the nation, "assures us that America cannot be destroyed even in the worst possible attack." Nevertheless, this vague description of transformations in civil defense was not Hoegh's central focus. Heogh's rebuttal, titled "Beware A Failure in Nerve," claimed that Wylie had become a pusillanimous "defeatist" since writing Tomorrow! 102 Ironically, like Wylie half a decade prior, he was more concerned over the psychological impacts of civil defense than its technicalities. Hoegh's rebuttal reveals that civil defense's greatest rhetorical weaknesses were partially rooted in the neglect to addressing technological aspects of nuclear conflict. Hoegh did not address any of Wylie's scientifically driven arguments about the increased power of the hydrogen bomb, instead focusing on the "will" of Americans and the importance of being psychologically prepared for war. Other than mentioning them in passing there was no clear explanation as to how the National Shelter Plan or NORAD's warning system would alleviate the problems of a full scale nuclear attack.

After Hoegh's attempted rebuttal *The Rotarian* was filled with sympathetic responses to Wylie's article. One letter even recommended publishing the article throughout the World to inform readers of the "hair raising" effects of fusion weapons. 103 Another explained that "The American people may not have thought through this thing as clearly as Mr. Wylie has done, but they have reached the same conclusion, and have expressed it with their massive indifference to the whole idea of building little holes to hide in." ¹⁰⁴ The exchange between Wylie and Hoegh represents a much larger discussion being carried out across America in the late 1950s over the importance of psychological hardening and preparation. Their conversation demonstrates that there existed a concern over the supposedly apathetic mentality keeping Americans from adopt-

 $^{^{101}}$ Leo Hoegh, "Beware A Failure in Nerve," *The Rotarian*, November 1960, 1-2. Ibid.

¹⁰³ Ibid., 6.

¹⁰⁴ Ibid., 6.

ing the OCDM's recommendations. These arguments seemingly consisted of determining who the real defeatists were: those who built shelters or those who did not. These concerns were the grounds for much of the debate emerging throughout print media on local, regional, and national levels. A closer look into the responses to the OCDM's favorable op-eds reveals a nationwide disillusionment with civil defense.

3.8 Popular Dissent: Contesting Civil Defense in Print Media

Civil defense programs were supported throughout both Republican and Democratic Party platforms in 1956, 1960, and 1964. In 1956 the Democratic platform even attacked the Eisenhower administration's policies as obsolete when matched up to the advances in nuclear weapons, claiming the Democratic Party would place more attention on the programs. This emphasis was significantly scaled down for the 1964 platforms. Despite the broad bipartisan support for civil defense, newspaper op-eds reveal that there was a significant amount of the population who did not support the ideas or discourse of civil defense. ¹⁰⁵

On the psychological question over civil defense, the Left perceived civil defense as a threat as it tended to condition Americans towards an acceptance of a nuclear war. It appears that these critics understood the psychological hardening purpose of civil defense with astounding perspicacity, placing them in near agreement with Wylie. What Wylie and the OCDM viewed as the cure to public insouciance, dissidents viewed as the symptom of the militarization of the private sphere. As Freda Sass of Massachusetts demurred, "Until recently it has been bigger and better armaments that were supposed to keep us from being attacked. Now something new has been added – wholesale building of bomb shelters as a means of maintaining peace." Sass, among others, believed that fallout shelters were convincing Americans of the inevitability of an

¹⁰⁵ John T. Woolley and Gerhard Peters, The American Presidency Project [online]. Santa Barbara, CA. Available from World Wide Web: http://www.presidency.ucsb.edu.

^{106 &}quot;Conditioning for War," The Berkshire Eagle, September 9, 1959, 22.

austere war. This conditioning was largely associated with the coalescing roles of military and non-military actors during the Cold War. This erosion between civil and military lines was also acknowledged and sometimes embraced by civil defense advocates. ¹⁰⁷As Gerhard Bleiken explained to the American Chemical Society, "any real distinction between military and nonmilitary defense is meaningless."

Soon civil defense discourse was co-opted by others who began linking it with foreign policy, urban renewal, and disarmament. In response to a pro-civil defense op-ed in *The New York Post* several letters to the editor criticized both the conditioning effects of civil defense as well as articulating disdain for the foreign policies the programs were based upon. Calling the push for home shelters "frightening," George Bernstein wrote, "if put into effect it would lead people to assume that there is after all, some protection against atomic war. If they believe this, then presumably they will be even less concerned with preventing such a catastrophe." Bernstein finally concluded that, "If as much initiative, intelligence, time, and imagination were devoted by the average citizen to compelling a basic transformation in foreign policy, then we might not find ourselves in this grotesque cul-de-sac." If after all, every American could be convinced that shelters would provide protection, then nuclear war would be that much more acceptable. Other reactions that appeared in *The Post* demanded that the readers realize "the crazy shelter plan," demand peace through the United Nations, and demonstrate, "that Uncle Sam is not a war-monger." Using civil defense as a platform for discussing nuclear armament was

¹⁰⁷ The militarization of the domestic sphere has been heavily researched in Laura McEnaney's *Civil Defense Begins at Home*, which points out that rather than a top-down militarization, the process was embraced by many policy makers and citizens alike. McEnaney, *Civil Defense Begins at Home*.

¹⁰⁸"Talks on Civil Defense 2." Subject Files 1961; Center for Disease Control; Record Group 442; Box 8; National Archives and Records Administration – Southeast Region (Atlanta).

^{109 &}quot;Sheltered From the Real Issue," The New York Post, July 14 1959, 47.

¹¹⁰ Ibid

^{111 &}quot;A Shelter Is Not Protection," The New York Post, July 24, 1959, 27.

also prevalent throughout this exchange. 112 Jack Coolidge of Massachusetts chided civil defense as an unfruitful approach to more immediate policy concerns. Calling for disarmament, he explained that, "if we expect to alleviate the threat of annihilation, then nuclear war should cease to be an instrument of our own national policy. In fact, I consider it much more vital than the question of \$200 bomb shelters that we strive to develop some policy more flexible, more hopeful, and less ruthless than 'massive retaliation.'"113 Even concerns over urban development were discussed through civil defense. In reaction to Rockefeller's proposed mandatory shelter bill, Brooklyn resident Diana Guadagnino wrote a letter to the editor of *The New York Times* asking, "if the state government has the authority to compel citizens to build fall-out shelters, why is it not possible for our state and local government to compel landlords to provide decent housing?"114 Guadagnino, along with a multitude of other critics, questioned government's authority to intervene into their private spheres for defense, yet neglect to regulate housing standards for tenants in the slums.

Similar arguments also emerged from the Right. Much of this commentary was focused on Rockefeller's shelter bill. These advances gained momentum despite Rockefeller's insistence that shelters would be subsidized by financial incentives, like "property tax abatements, income tax deductions, low cost state loans, and other inducements."115 Resistance to the bill appeared in the conservative New York Daily News. In an op-ed criticizing the Rockefeller bill titled, "Fallout Crawl-ins for All?" the writer regarded shelter building as an acceptance of Soviet superiority in a psychological Cold War. Turning the OCDM's arguments on their head, this viewpoint

¹¹² This was specifically manifest in large protests against civil defense by disarmament groups such as the Women Strike for Peace, Women's International League for Peace and Freedom, etc. These protests have been well documented and discussed by Dee Garrison. Garrison, Bracing for Armageddon.

^{113 &}quot;No Hiding Place," *The Berkshire Eagle*, September 4, 1959, 16.
114 "Housing, Not Shelters, Asked," *The New York Times*, March 1, 1960, 32.

^{115 &}quot;For New Yorkers: Compulsory Shelters," Newsweek, July 20, 1959, 24.

held that Americans were accepting defeat if they built shelters. Unlike liberal opponents who viewed shelters as a conditioning agent, this writer viewed civil defense as a way of dismissing the effectiveness of deterrence based on offensive nuclear capabilities manifest through a superior position in the arms race. Using the same terminology that the OCDM used against opponents of civil defense, the op-ed claimed that the shelter bill "smells of defeatism." Considered to be an attack on private property and individual freedom, many conservative critics viewed Rockefeller's plan as invasive. As the *Daily News* op-ed explained, Rockefeller's bill was "like unto other well-meaning persons' efforts to terrorize people concerning cigarets [sic], liquor, and so on." Another critic of the Rockefeller bill humorously warned those who considered building fallout shelters against such action as, "New York City's building laws probably make such shelters illegal to use under any circumstances." Linking Rockefeller's mandatory shelter bill with the intense New York building codes reveals how civil defense discourse was often appropriated to voice larger concerns.

Criticisms of civil defense from the Right were not only confined to attacks on Rockefeller's bill, but were often directed towards broader implications of civil defense policy. Accurately pointing out that fallout shelters would not protect from an atomic blast, several articles acknowledged that "humanitarian insurance" could not be guaranteed for owners of shelters. ¹¹⁹ Further, op-eds often invoked a religious argument claiming that, "Every one of us is going to die when the Good Lord sends for him or her; not before, not after. Why then, fear atomic fallout, or anything else? Why not... refuse to live in terror – which is akin to dying and takes a lot

¹¹⁶ "Fallout Crawl-ins for All?" The New York Daily News, July 8, 1959, 35.

¹¹⁷ Ibid

^{118 &}quot;Voice of the People," The New York Daily News, July 11, 1959, 15.

¹¹⁹ Hu manitarian Insurance was one of the major rationales used to urge civil defense participation. This is addressed in Lawrence Vale's work. Vale, *The Limits of Civil Defence in the USA, Switzerland, Britain, and the Soviet Union*, 39-40.

longer?"¹²⁰ A similar sentiment was expressed in The New York Times when a writer lambasted that, "Within my memory, individuals in some societies compelled a man about to be executed to dig his own grave. A refinement of this custom is the proposal by Governor Rockefeller to compel families to dig their own self-sealing, prefab tomb."¹²¹ Summing up many of the op-eds by conservative critics, one cartoon showed a silhouetted man and woman with the caption, "To my mind, fear is just a lingering death, I'll meet death gaily - but not daily."¹²²

Many opposed civil defense simply because of its costliness. In describing the financial burdens of supporting civil defense, opponents often called the program a "Maginot Line" defense. One op-ed in Long Island's *Newsday* explained that, "We do not think that the American people favor a 'Maginot Line' philosophy, The Maginot Line having been a costly chain of fortifications supposed to keep the Nazis out of France but totally useless when the moment of attack came." The Maginot Line example was used to point to the financial mistakes of trying to create an expensive and stagnant defense against an evolving threat. According to this argument, the money could be better spent on the escalating arms race. As one writer's op-ed explained, "The answer is not to be found in a home-made Maginot Line. The bombs get bigger every year. The answer is to be found in a dual, nationwide program – First, speed up our ballistic missiles program to the maximum possible, so that we can at the earliest date match Russian production; second spend this proposed shelter money on guaranteeing world peace by guaranteeing the stability of our allies." From this viewpoint, civil defense was undermining the arms race and

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 $^{^{120}}$ "Fallout Crawl-ins for All?" The New York Daily News, July 8, 1959, 35.

^{121 &}quot;Family Shelters Opposed," The New York Times, August 7, 1959, 22.

¹²² "Fallout Fear," *The New York Daily News*, July 8, 1959, 35.

¹²³ "The Bomb and Us," Long Island Newsday, June 29, 1959, 33.

^{124 &}quot;Nelson in Never-Never Land," Long Island Newsday, July 8, 1959, 41.

more specifically the "missile gap" that was then believed to be widening between the U.S. and Soviet's intercontinental ballistic missile programs.¹²⁵

3.9 Losing Ground: Civil Defense's Steady Erosion

Certainly by 1960, the OCDM's media campaign had failed to present itself as a viable option for national security. Nelson Rockefeller's mandatory shelter bill for New York had met intense criticism not only from New Yorkers, but from across the country. Rockefeller soon acknowledged that his program "would not receive whole-hearted public support" and backed off. 126 Remaining a stalwart however, Rockefeller later used civil defense to challenge Kennedy's policies on nuclear planning. Accordingly, Kennedy who was already a longtime advocate of civil defense responded by reinvigorating the program in the successor agency of the OCDM, the Office of Civil Defense. According to Dee Garrison, Kennedy largely used this program to defend himself against Rockefeller who was expected to be the 1964 Republican challenger to the presidency. Announced in May, the Office of Civil Defense was ephemeral, lasting in name only after December the same year. 127 The OCDM's director Hoegh soon vanished from the public stage as well. By late 1960, Hoegh had offered his resignation to President Eisenhower. 128 Despite contrary reports, Heogh insisted that fallout shelters were being built throughout the country. After resigning from the OCDM, he re-focused his efforts towards civil defense within the private sector by starting the Wonder Building Corporation, a company that sold prefabricated fallout shelters. 129 Neither Rockefeller or Hoegh lost interest in civil defense, instead redi-

¹²⁵ Garrison, *Bracing for Armageddon*. The "missile gap" myth was accepted by many leaders during this time including John F. Kennedy one of its largest proponents.

¹²⁶ Warren Weaver Jr. "Rockefeller Drops Fight to Require Shelters in Home," *The New York Times*, March 24, 1960, 1.

¹²⁷ Garrison, Bracing for Armageddon, 105.

¹²⁸ John T. Woolley and Gerhard Peters, The American Presidency Project [online]. Santa Barbara, CA. Available from World Wide Web: http://www.presidency.ucsb.edu.

^{129 &}quot;Building: Shelter Skelter," Time Magazine, September 1, 1961.

recting their efforts elsewhere. In a sense, the OCDM was successful in creating public discourse on civil defense, but failed in its ability to contain it.

3.10 Conclusion: Immobilizing

Throughout the 1950s and early 1960s, the federal government believed that civil defense could provide valuable resources to maintain stability within the country in the horrific occurrence of a nuclear attack. Its value could be found in its ability to provide both psychological and physical protection to one of the most valuable resources the nation's recuperation relied upon. human labor. Despite the OCDM's best attempts toward educating Americans into an active role in protecting themselves, this education often backfired by providing Americans with additional information about the horrors of nuclear weapons. Philip Wylie also hoped that by guiding his readers through the visual realities of nuclear war, he could stir their interest in protecting the mselves from an inevitable Soviet attack. In attempts to educate the apathetic, Wylie and the OCDM generally stressed the psychological promises held by civil defense preparation, that it would provide psychological hardening so that one could remain panic free in an actual crisis. On the other hand, in order to rein in the over-informed opponents of the program, Edward Teller and the OCDM engaged in arguments about the scientific aspects of nuclear weapons. This was most effectively pursued through the *conventionalization* of nuclear weapons. Notwithstanding, conventionalization arguments proved much more difficult as technological advances were made throughout the early Cold War period. The shifts from aerial bombs to land based missiles and from fission to fusion chain reactions largely eroded the discourses concerning conventional weaponry. Ironically, it was through novels such as *Tomorrow!* and civil defense educational publications that many readers gradually became less interested in designating themselves as soldiers in a future war. Americans, both conservative and liberal, not only maintained their inert

positions toward building shelters, but soon began appropriating the language of civil defense to criticize a plethora of military, foreign, fiscal, and domestic policies. Eventually, protest against civil defense drills resulted in the beginnings of a more encompassing anti-nuclear movement.

As Dee Garrison points out, civil defense protests successfully transitioned into anti-nuclear protests over the course of the 1960s and 1970s. ¹³⁰

An analysis of popular print media sources including newspapers, magazines, and journals reflects the broad immobilization against civil defense policies after government discourses failed to successfully regulate the information available to its citizenry. Articulated in a variety of ways, critics of civil defense arose from a wide spectrum of the American public. As historians have increasingly noted, the 1950s might better be understood as a period of liberalizing values and not as an era of stagnant political consensus. 131 An in depth analysis and review of popular print media discourse emerging from the debates around civil defense certainly substantiate this trend. It is not coincidental that as civil defense programs lost popular public support, they transitioned towards concerns over natural disasters instead. ¹³² This trend largely reflects the demands of those opposed to civil defense programs. Just as Wylie's Rotarian article expressed concern over the environmental degradation of a nuclear war, anti-nuclear groups also fixated on environmental damage being done by nuclear testing. In response to the Atmospheric Nuclear Test Ban Treaty in 1963 anti-nuclear groups shifted their focus. 133 Just as many opponents of civil defense "immobilized" against the OCDM's admonishment for building shelters, so did they eventually mobilize against the environmental impacts of nuclear power. The story of

¹³⁰ Garrison, *Bracing for Armageddon*, 10.

¹³¹ Alan Petigny, *The Permissive Society: America*, 1941-1965, 1st ed. (Cambridge University Press, 2009).

This trend occurred on a global scale. Civil defence in the UK, Australia, and Canada also refocused their efforts towards recuperation after natural disasters. The simultaneous occurrence of this within the U.S., U.K., and Canada is noted in Tracy Davis's *Stages of Emergency*. Davis, *Stages of Emergency*.

¹³³ Lawrence S. Wittner, *Toward Nuclear Abolition: A History of the World Nuclear Disarmament Movement, 1971-Present,* 1st ed. (Stanford University Press, 2003), 21.

the OCDM provides a salient example of how political institutions and organizations may occasionally be molded and reshaped in accordance with popular opinions.

4 THE DIDACTIC ROLE OF THE NUCLEAR APOCALYPTIC IN SCIENCE FICTION

"Survival after World War III has been the subject of enough fiction to stock a sizable fallout shelter." ¹³⁴ Ward Moore, Author of *Greener Than You Think*

"Make a list of the 'science fiction' books which have won wide acceptance in recent years, and you will find they have one thing in common: they are parables, warning of political or military disaster. The remoteness of imagined worlds is what charms a science-fantasy reader: the immediacy of these books is what sells them to the public." 135 Damon Knight

Just as Philip Wylie used popular fiction to disseminate his pro-civil defense message in Tomorrow!, he and many others later used nuclear apocalyptic fiction to criticize civil defense efforts and its ideological foundations. After his damning 1960 criticism published in The Rotarian, Wylie would go on to publish yet another nuclear fiction titled Triumph in 1963. Like Tomorrow!, Wylie painted a grim and disturbing portrait of nuclear warfare. However, whereas Tomorrow! offered readers a sense of hope through civil defense, Triumph is void of nearly any positive message about nuclear survival. Many other novels during the period both implicitly and explicitly dealt with civil defense. As noted in Chapter 2, the reign of the Office of Civil and Defense Mobilization and its concomitant media campaign witnessed an increased public backlash against civil defense and particularly fallout shelters. This backlash was not confined to newspapers and magazines but was also present within popular fiction. Notable examples of this include Neville Shute's On the Beach (1957), Pat Frank's Alas, Babylon (1959), Mordecai Roshwald's Level 7 (1959), and Philip Wylie's aforementioned Triumph (1963). ¹³⁶ Each of these writers used popular science fiction to voice criticisms of civil defense and its underpinning rationales of national security, nuclear strategy, and foreign and domestic policies.

¹³⁴ Ward Moore, *The Magazine of Fantasy and Science Fiction*, September, 1963, 93.

¹³⁵ Damon Knight, "Level 7," The Magazine of Fantasy and Science Fiction, July 1960, 78.

¹³⁶ Nevil Shute, *On the Beach*, (Ballantine Books, 1983); Pat Frank, *Alas, Babylon*, 1st Perennial Classics ed. (Harper Perennial, 1999); Mordecai Roshwald, *Level 7*, ed. David Seed, 1st ed. (University of Wisconsin Press, 2004); Philip Wylie, *Triumph* (Bison Books, 2007).

4.1 On the Beach (1957)

Although it was written prior to the OCDM's media campaign, Neville Shute's *On the Beach* was one of the most influential nuclear apocalyptic fictions ever written. It was not only a bestselling novel in 1957, but was also made into a major film just two years later. According to Kenneth Rose, "Of the countless science fiction pieces produced during this era that addressed nuclear holocaust, clearly the one that had the greatest impact on the public was Neville Shute's *On the Beach....*" The book was perceived to be so influential on public opinion, that a swath of policymakers and civil defense administrators had to address its message.

The majority of *On the Beach* takes place in two settings: inside a U.S. nuclear powered and equipped submarine and in Australia. A nuclear war was spurred by a minor incident in the Balkans that escalates into a full blown nuclear holocaust. Due to the powerful new developments in nuclear weapons, this war is over in a matter of 37 days. ¹³⁸ Unlike Wylie's *Tomorrow!* the intimate horrors of nuclear warfare are left out and the novel takes place after the initial nuclear strikes. Because of the timing of this book, several key components of a nuclear explosion have been left out. According to nuclear physicists, a typical nuclear explosion will release four major forms of energy; initial nuclear radiation (gamma rays make up much of this), blast and shock, thermal radiation (heat), and residual nuclear radiation (commonly known as fallout). ¹³⁹ *On the Beach*, like many of its readers during the late 1950s was more concerned with fallout than with any of the other elements. This particular phenomenon is what historian Paul Boyer has termed "the fallout scare." ¹⁴⁰ Largely a reaction to the disastrous results of the 1954 Castle Bravo testing in the Pacific, nuclear fallout soon became a leading concern for the public. Why

137 Rose, One Nation Underground, 42.

¹³⁸ Shute, On the Beach, 3.

Glasstone, ed., The Effects of Nuclear Weapons, 8.

¹⁴⁰ Boyer, By the Bomb's Early Light, 353.

then were so many people concerned about this if, as some nuclear scientists claimed, fallout only represented about 5 percent of the energy released by a nuclear explosion? One reason might very well be that the other three elements (initial radiation, blast, and heat) of an explosion were likely to instantly kill anyone exposed. Another reason for this concern was the slippery nature of radiation poisoning caused by fallout. As one writer in *The Saturday Evening Post* expressed, it was truly "the silent killer." This particular element of nuclear weapons was horrifying because according to many civil defense publications, you could neither see it, taste it, nor smell it. Also, deaths resulting from fallout or radiation poisoning would likely be painfully longer and more agonizing. Due to these factors, *On the Beach* paints a rather horrifying picture for its readers. As one of its reviewers warned that, "Even hardened veterans of countless fictional Armageddons will find this an emotional wallop. It should be made mandatory reading for all professional diplomats and politicos." 142

In the novel, Australia is the last country to survive the nuclear war. The entire globe North and West of it has been encompassed by nuclear fallout making the Australians and one remaining U.S. submarine crew the last inhabitants of the Earth. Because the Australian Navy believes it is receiving some sort of garbled radio communication from Alaska, they decide to send the U.S. submarine to locate and determine the possibility of life and therefore an inhabitable location North of them. This mission is vital because the fallout that has killed everyone else is slowly creeping towards the Australian continent. If survivors exist in the Northern Hemisphere, then some Australians might be able to escape to safety. Unfortunately, the U.S. crew is able to determine that the messages have been sent by an overturned Coke bottle teetering in the

 ¹⁴¹ Ibid., 352. Steven M. Spencer, "Fallout: The Silent Killer," Saturday Evening Post, August 29th, 1959, 26, 89.
 ¹⁴² "Galaxy's 5 Star Shelf," Galaxy Science Fiction Magazine, March 1958, 120.

wind onto the keys of a radio transmitter. ¹⁴³ Once the crew returns to Australia, reports of radiation sickness have crept into the Northern areas of the country. Probably one of the most harrowing and depressing bestsellers ever written, the book concludes with the deaths of everyone. Oddly, the Australian government concocts "suicide pills" that many people take prior to dying from the radiation poisoning. This message, that it was better to commit suicide than to die of radiation poisoning was particularly disconcerting for civil defense officials who read the book.

Unlike most depictions of nuclear war (particularly *Tomorrow!* and *Alas, Babylon*),

Shute's characters and civilization as a whole remains unbelievably calm as they approach their imminent deaths. Submarine Commander Dwight Towers even goes so far as to purchase toys for his deceased American children and wife. Up until the last few days, the Australians continue to work at their places of employment and goods continue to be stocked and sold from shelves as if nothing has happened. This aspect of *On the Beach* was probably particularly harrowing for civil defense administrators who believed the program's most important work was to create a psychologically hardened public. Despite the surreal calmness that the people in *On the Beach* show in the face of nuclear catastrophe they die anyway. Unlike the numerous deaths in Wylie's *Tomorrow!* caused by trampling and panic, those in *On the Beach* are a result of a very real and unavoidable physically external element or by those who have thoughtfully calculated their options and have chosen to commit suicide. This of course was incredibly antithetical with the civil defense message that if you are able to stay calm and underground for two weeks, then you would likely be among the many to survive.

The reaction to both the novel and film *On the Beach* from public policymakers and civil defense administrators was widespread. Much like the Wylie article in *The Rotarian* earlier,

OCDM director Leo Hoegh personally responded within the public sphere in order to quell con-

¹⁴³ Shute, On the Beach, 173.

cerns. 144 Civil defense publications also responded to the threat of Shute's novel. The American Medical Association's Civil Defense Review, quoted one civil defense administrator's response that.

With proper measures, prepared in advance, and a properly indoctrinated public, we would not all be left 'On the Beach,' despite the grim prediction of the moving picture by that name which is having such a great success. Indeed the movie is considered by many the wrong kind of dish. It merely encourages the feeling that 'scare-em-to death' is the only policy to follow and, if that should fail, 'Oh why think about it.' 145

The sentiment expressed in this quote was one felt by many civil defense administrators around the country as they tried to counter the doom and gloom messages of On the Beach. The message of On the Beach (both the novel and film) was incredibly bothersome to those who supported civil defense efforts. For example one op-ed in *The New York Daily News* described the film as, "defeatist" and claimed that it "plays right up the alley of (a) the Kremlin and (b) the Western defeatists and/or traitors who yelp for the scrapping of the H-bomb." ¹⁴⁶ Considered a treasonous message by some, it was particularly considered dangerous not just as a criticism of civil defense but for its message of disarmament. This message was certainly not lost on nuclear scientist, civil defense proponent, and "father of the H-bomb" Edward Teller. In speaking to a conference sponsored by the Council on National Security and the American Medical Association in 1960 Teller gave On the Beach a significant amount of attention. Speaking to a group of doctors on "The Physician's Role in a Nuclear Disaster," Teller admitted that On the Beach

is very frightening, not because it predicts that the human race will be wiped out by the next war. It cannot be done.... What frightens me rather is the description of our state of society. If there is a disaster, what should we do? Let's throw up our hands, let's take suicide pills, and let's die. Is that the solution? Ladies and gentlemen, a society where a book is written about his topic, where this book is a best-seller, where a movie is made

¹⁴⁴ Rose, One Nation Underground, 43.

^{145 &}quot;Civil Defense Review, February, 1960." Subject Files 1960; Center for Disease Control; Record Group 442; Box 9; National Archives and Records Administration – Southeast Region (Atlanta), 3.

146 "Talks on Civil Defense 2." Subject Files 1961; Center for Disease Control; Record Group 442; Box 8;

National Archives and Records Administration – Southeast Region (Atlanta).

about this topic, where none of the reviewers point out that this is dangerous nonsense, and where this book and this movie are great successes, I say there is something wrong with the state of mental health of that society, that is what scares me. 147

For Teller and others who believed that civil defense was a viable option, concerns were usually shifted away from the details of the programs and placed squarely on the shoulders of society's psychological state. Most of the talks given on civil defense and dealing with the messages in *On the Beach* were far more concerned with the suicide pill taking society than they were with the nuclear escalation that resulted in human annihilation. Ironically, while civil defense administrators and policymakers had earlier held that a panicky society would be the largest danger during a nuclear war, they now were claiming that a society who would rather take suicide pills than risk nuclear radiation was just as disconcerting. Clearly, the popularity of *On the Beach* was a piece of popular media that was considered anywhere from annoying to treasonous.

4.2 Alas, Babylon (1959)

Just two years after *On the Beach* was published and the same year that it featured as a film, at least three more nuclear apocalyptic novels appeared in bookstores across the country. Nuclear warfare was certainly on the public mind during the year 1959. As noted earlier, fallout had become a particularly harrowing aspect of nuclear weapons. It was also during this time that the OCDM initiated a massive media campaign resulting in the publication of articles in newspapers and magazine across the country in support of civil defense. New York Governor Nelson Rockefeller had just announced his bill that hoped to mandate fallout shelters within the homes of New Yorkers and the discovery of strontium 90 in milk had just surfaced. With all of these events, the publication of nuclear apocalyptic novels provided the public with a myriad of possi-

¹⁴⁷ "Talks on Civil Defense 1." Subject Files 1961; Center for Disease Control; Record Group 442; Box 8; National Archives and Records Administration – Southeast Region (Atlanta).

bilities for what the future of the world could look like after a nuclear disaster. Probably the most positive of these novels in regards to civil defense was Pat Frank's *Alas, Babylon*.

Pat Frank was the pen name for Harry Hart Frank, born in 1907. Frank worked as a go vernment consultant as well as a newspaper writer during most of his life. In 1959, he published what has become one of the most famous nuclear apocalyptics of the period, *Alas, Babylon*. Like *Tomorrow!* the book was also incredibly supportive of the general aims of civil defense during the time. Nonetheless, upon a close reading of the novel, there appear several instances when civil defense administrators are painted in a negative light. Overall however, the novel reinforced many of the implied messages coming from the OCDM and its campaign to convince Americans that nuclear war was survivable if individuals took the initiative in protecting themselves and their families.

Alas, Babylon takes place in the early Cold War setting of a rural central Florida town named Fort Repose. The protagonist Randy Bragg is a liberal minded lawyer who stands out from most of the local residents of his community. Randy's brother Mark, who is a high ranking U.S. military officer, calls Randy to inform him that there is an imminent nuclear war ahead. Due to the circumstances, Randy allows his brother's wife and children to come live with him. As Mark predicted, a full scale nuclear attack is mounted against the U.S. and Randy becomes a sort of local hero for his ability to survive in the post nuclear conditions. Much like *Tommorrow!* written five years earlier, Mark Bragg blames the nation's impending destruction on U.S. policymakers for their effete approach towards nuclear weapons development. Mark even uses the term "missile gap," that was famously used by candidate John F. Kennedy during the 1960 presidential election, to describe this perceived policy failure. According to Mark Bragg, the U.S. had failed to update its nuclear technology and had become far too reliant upon the Strategic Air

Command bombers. When Randy asks his brother if he believes the Soviets could get away with the attack, Mark replies, "Three years ago they couldn't. Three years hence, when we have our own ICBM batteries emplaced, a big fleet of missile toting subs, and Nike-Zeus and some other stuff perfected, they couldn't. But right now we're in what we call 'the gap.'" Frank, like many others believed that the U.S. had fallen behind in the arms race. Although this perception later proved to be false, many at the time held such views. Mark Bragg also believes that civil defense efforts are one of the best deterrents for avoiding a nuclear war. During their last conversation together Mark tells Randy that, 'Personally, I think everybody ought to be digging or evacuating right this minute. Maybe if the other side knew we were digging, if they knew that we knew, they wouldn't try to get away with it." 149 While the narrative in Alas, Babylon overwhelmingly supports the message of survivalism and individual responsibility, it also attacks the inefficiency of civil defense as a program.

Pat Frank, like Chet Holifield, Herman Kahn, and many other serious civil defense proponents did not believe that the government was doing enough in the way of nuclear protection. Throughout the events of Alas, Babylon, Frank's descriptions of civil defense administrators and decisions are negative. For example, during the same conversation between Mark and Randy Bragg mentioned above, Randy asks Mark if he could "tip off" some of his friends and family about the impending attack. In reply, Mark states, "I don't see any objection. It is something Civil Defense should have done weeks – months ago." Fort Repose's local civil defense administrator, Mr. Offenhaus, is a depicted as a greedy opportunist who isn't willing to inform his area about the dangers of fallout. When asked about it, he replies, "why worry about something you can't see, feel, hear, or smell... it's just as bad to frighten people to death as kill them with radia-

¹⁴⁸ Frank, Alas, Babylon, 33.149 Ibid.

¹⁵⁰ Ibid., 35.

tion..."¹⁵¹ Accordingly, Mr. Offenhaus had been attracted to civil defense mainly because, "At the time it seemed quite an honor." Despite the prominence it brought upon him "he had considered civil defense a boundoggle, like handouts to foreign countries and spending millions on moon rockets and such."152

Alas, Babylon also mentions the conditioning aspects of civil defense on children, but like many other proponents of civil defense positions it in somewhat positive terms. When Helen (Mark's wife) mentions that her children are living relatively comfortable lives in a postnuclear environment, Randy replies that it is because "They're conditioned." He later mentions that, "Maybe one day I'll get conditioned. I'll accept things, like the children." ¹⁵³

Despite the negative depictions of civil defense administrators and the incompetence of the country's civil defense throughout Alas, Babylon, the novel overwhelmingly presents a pro civil defense message. Like many proponents of a "real" civil defense program in the U.S. at the time, the novel urges greater participation from individuals while at the same time calling for a more expensive and comprehensive civil defense program. The message of Alas, Babylon was that this course should be taken and as soon as possible. According to one particularly didactic quote within the novel, "This chaos did not result from a breakdown in Civil Defense. It was simply that Civil Defense, as a realistic buffer against thermonuclear war, did not exist. Evacuation zones for entire cities had never been publicly announced, out of fear of 'spreading alarm.' Only families of military personnel knew what to do, and where to go and assemble." ¹⁵⁴ In a sense, Alas, Babylon was a more recent and updated version of Tomorrow! This is particularly true when one inspects the conditions of nuclear war addressed in Alas, Babylon such as fallout,

¹⁵¹ Ibid., 76. ¹⁵² Ibid., 214.

¹⁵³ Ibid., 85.

¹⁵⁴ Ibid., 118.

the use of Intercontinental Ballistic Missiles, and the resulting firestorms. Despite these updated elements of nuclear weapons, some critics still found Frank's depictions of nuclear survival unconvincing. As one reviewer explained, "Survival, though hard... looks too easy.... As a post-Bomb Swiss Family Robinson-type adventure, the story is fine, but my impression is that Frank stopped too soon with too little." These of course were all elements that Wylie later listed as his reasons for abandoning civil defense. However, while Wylie dedicated his work to those working within civil defense, Frank depicts those within the program as opportunists in search of public recognition who are more concerned about causing panic than with saving lives. Although *Alas, Babylon* was highly supportive of the messages within civil defense and an idealized version of the efforts, it nonetheless reads as a criticism of what civil defense looked like at the time. As noted by historian David Krugler, civil defense agencies had a history of being viewed as corrupt and as being a prime location for appointing ones friends. ¹⁵⁶ As described in chapter 2, these same criticisms of the various civil defense agencies also surfaced among opponents of the program from the political right and left.

4.3 Level 7 (1959)

While *Alas*, *Babylon* largely reinforced the individualist centered and optimistic perspectives of the OCDM and civil defense, Mordecai Roschwald's *Level 7* could not have been more pointed in its attacks against civil defense and its rationales. The novel is presented as a journal written by a high level military personnel member who has been trained to carry out specific orders for firing nuclear weapons. The majority of the book takes place within a massive underground and self sufficient shelter system that has seven subterranean levels. The main character's nationality remains unknown throughout the book, leaving readers to guess whether this is a So-

^{155 &}quot;Galaxy's 5 Star Shelf," Galaxy Science Fiction Magazine, December, 1959, 150.

¹⁵⁶ Krugler, *This Is Only a Test*, 13. This is particularly demonstrated by the controversies surrounding the WWII era Office of Civilian Defense and Eleanor Roosevelt.

viet or American bunker. Roshwald took this approach specifically to criticize both U.S. and Soviet policies during the nuclear arms race, even dedicating the book itself to "Dwight and Nikita." Like *Alas, Babylon* and *On the Beach, Level 7* does not neglect to include the aspects of nuclear fallout and the efficiency of nuclear missiles in his scenario. As the main character, known simply as X-127, continues through the novel, he increasingly questions his role and the importance and structure of the bunker.

One of the most potent criticisms found within the book is the bunker's physical layout. Each level houses different people, and the higher levels (that are actually deeper in the earth) house the most important people. For example, level 7 contains only those who like X-127 are necessary to launch a nuclear attack. These then, are the people that the designers hoped to keep most safe. Those in level 6 are engaged with a nuclear missile defense system. Levels 5 to 3 included elite civilians, politicians, and some military leaders. Then of course levels 1 and 2 include everyday civilians. Not only are the higher levels better protected from nuclear blasts and fallout, they are also better supplied and receive better treatment. The very setup of this bunker is a criticism of civil defense policy, especially the notion that military personnel and government officials would be able to make decisions in safer locations and conditions than those whom the decisions would affect most directly. This was particularly troublesome to many within civil defense who felt that much more effort was being focused toward insuring a "continuity of government" than on the everyday civilian. Although these concerns were also present within the U.S., this was especially apparent when a group of disarmament demonstrations in the U.K. chose to march to one of the supposedly classified regional bunkers and hold their rally on site. 157

¹⁵⁷ A group known as the "Spies for Peace" released a pamphlet titled "Danger – Official Secret! – RSG6" in April of 1963 (RSG was one of 12 regional bunkers). These "Spies of Peace" not only found RSG 6, they were

Although the bunker's very layout spoke volumes about the values that were given to different groups within society, the rest of the book solidifies this notion. Eventually X-127 is asked to carry out a nuclear strike by pushing a serious of buttons, representing the escalation of the war. Within the course of a few hours nearly everyone in the outside world is dead. Even shorter than the wars depicted in *On the Beach* and *Alas, Babylon*, this conflict lasts less than three hours. However, as the radioactive fallout continues to slowly spread throughout the world, X-127 and others are able to pick up the occasional radio signals of neutral nations around the world slowly dying off. This is particularly distressing as people in levels 1 and 2 begin to slowly die as well. Eventually, each level begins to contract radiation poisoning until everyone, included X-127 himself is dead.

Some of X-127's last thoughts are particularly revealing. During the time between the war and his death, he learns much more about the bunker and the world around him. To begin with, he realizes that the intercom voice that has been giving him commands is only a computer, not an actual person. This computer, like the "doomsday machine" idea attributed to nuclear strategist Herman Kahn, was programmed to give specific commands according to particular situations. X-127 also learns that the war was started by an accidental misunderstanding between his and the enemy nation. As each level is gradually dying, bickering and fighting erupts between the different levels, especially within level 5 amongst policymakers. Finally, contact is made with the enemy nation, who has constructed a similar bunker and is also experiencing the gradual loss of life. Upon realizing the similarities, X-127 realizes, "So the enemy's lot is similar to ours.

able to break in and take pictures as well as remove certain contents including the telephone numbers of other RSGs. The release of this pamph let was strategically distributed during the Aldermaston March (an annual anti-nuclear march in England). Because this pamphlet was released prior to the march, several of the marchers made a detour from their destination to the location of RSG 6. Not only effectively revealing the location of RSG 6, the "Spies of Peace" also brought to the fore the inherent problem with civil defense planning, the inequality between funding for government verses public shelters. Duncan Campbell, *War Plan UK: the Truth about Civil Defence in Britain* (Burnett Books, 1982), 264.

We have not been told exactly what their system of shelters was, but they are all graves except the military one, which must correspond to our Level 7." During one particularly thoughtful passage, X-127 realizes that, "It has become so easy to destroy and kill. With a push-button a child, an innocent baby, could do it. In a sense, the idea that the present disaster happened because war became dehumanized may have something in it." ¹⁵⁹ He eventually decides that war was a slippery slope and that technology only enabled humans to carry the rationale behind war to its logical conclusion. Dwelling on the horrific world remaining, he remarks that, "Death works fast. In a second it can kill a man, a thousand men, a million men. A thousand millions it can kill in one second. The pushing of a button can do it." As those within the shelter continue to die off, X-127 asks himself, "So why should we be surprised if a shelter perishes, even one which looks completely safe? Look at what sometimes happened to submarines. And what are our levels but subterranean? Why should we consider ourselves so completely safe? Just because the surface is so fatally dangerous?"¹⁶¹

It seems that Roshwald held nothing back from his criticisms of civil defense and the very foundations that it stood upon including the nuclear arms race, the safety of shelters, the mechanization of warfare, and even the prioritization of people's lives within civil defense planning. Like Philip Wylie, Roshwald eventually aims his criticisms not only at nuclear weapons but even nuclear energy. Ironically, right before the death of X-127, the source of everyone's radiation poisoning is a leak in the nuclear reactors used to power the shelter.

Unlike On the Beach or the writings of Philip Wylie, Level 7 does not seem to have created an enormous stir among civil defense administrators. It never reached the level of popu-

¹⁵⁸ Roshwald, *Level 7*, 168. ¹⁵⁹ Ibid., 165.

¹⁶⁰ Ibid., 168.

¹⁶¹ Ibid., 171.

larity that On the Beach did, but it did embody some of the common criticisms made against civil defense, the arms race, and the advancing military technologies within the field of nuclear weapons. The novel's message was certainly understood within the context of its timing as well. One reviewer reminded readers that, "Governor Rockefeller of N.Y. has gone on record advocating bomb shelters for the common man. Roshwald's book is an extension of this idea of escape into a grave." Like the other novels, Level 7's fictional genre was under some dispute. As put succinctly by one reviewer, "Well then, is this science fiction or not? I submit regretfully, that it is not.... When reviewers of such novels as Level 7, The Last Canticle, and On the Beach assure us that in spite of superficial resemblances, these are not really s.f. [science fiction], they are perfectly sincere, and they are right." ¹⁶³ In *The New York Times* a reviewer explained to readers that Level 7, "is an earnest tract rather than a novel." ¹⁶⁴ Mordecai Roshwald was not a fiction writer, but an academic when he wrote Level 7. According to The New York Times reviewer, "Mr. Roshwald's idea in delivering his grim message in fictional form doubtless was that a story would reach a greater audience than an article." Like Philip Wylie before him, Roshwald was highly educated about nuclear strategy, the technological advances in nuclear weaponry, and the effectiveness in spreading their messages through popular fiction. Indeed both men were contributors to The Bulletin of Atomic Scientists over the years, a magazine that had similar aims to broaden the public's knowledge on the dangers and implications of nuclear weapons and energy. While Roshwald was criticized for his writing style and even accused of "the all too common mistake of trying to substitute intelligence for talent," his work nevertheless attracted the endorsements of other prominent activist scientists such as Bertrand Russell and Linus Pauling.

Galaxy Science Fiction Magazine, February 1961, 41.
 Damon Knight, "Level 7," The Magazine of Fantasy and Science Fiction, July 1960, 78.
 Robert. O Erisman, "Pushbutton World," New York Times, 13th March 1960, BR34.

¹⁶⁵ Ibid.

The messages within *Level 7*, like many newspaper op-eds and opinions expressed by everyday people, were critical of civil defense policies ranging from the building of shelters to the prioritization of protecting the military and elite policymakers over themselves.

4.4 Triumph (1963)

If Philip Wylie had abandoned the prospects of civil defense, he certainly had not ceased thinking about it. Nearly three years after his statements in *The Rotarian*, Wylie decided to inscribe his opinions in yet another nuclear apocalyptic fiction. The differences between his descriptions of nuclear warfare, civil defense efforts, and human psychology throughout each of his novels is worthy of a detailed description. Wylie, like Neville Shute, Mordecai Roshwald, and Pat Frank, was not exclusively or primarily a science fiction writer. Science fiction novels, then, provided an excellent vehicle for these writers to move their message to a broader audience. Wylie used his work *Triumph* to display not only the problems associated with the physical survival of a nuclear war, but also the psychological ramifications for the few who could manage that. Ironically, the messages within *Triumph* are in some ways inverted from those within *Tomorrow!* The characters in *Tomorrow!* primarily use civil defense to psychologically protect themselves, while being more vulnerable to the physical dangers of a nuclear war. In *Triumph*, the characters are conversely able to physically protect themselves (although, this process is much more difficult than the evacuation techniques in *Tomorrow!*) while succumbing to psychological terrors and struggles. According to one review of *Triumph*, Wylie had "done some rethinking of the atomic holocaust story. The good little town that was saved in 'Tomorrow!' because it kept up its civil defense program wouldn't stand a chance in this new war." ¹⁶⁶

¹⁶⁶ Analog Science Fact Science Fiction Magazine, August 1963, 91.

In the pattern of the aforementioned nuclear apocalyptics, *Triumph* takes place in a recognizable future where the United States and Soviet Union are each equipped with nuclear tipped intercontinental ballistic missiles, submarines, and strategic bombers. During this period a wealthy business magnate, Vance Farr, has a high end blast shelter built inside a mountain next to his mansion. While several of his friends and family happen to be visiting, a nuclear war breaks out between the U.S. and the Soviet Union. Farr then rushes all of his visitors into his shelter deep in the mountain as the world above them is being obliterated. Although initially there are only ten occupants in the shelter, not long after their submersion they rescue an additional four. In contrast to his book *Tomorrow!*, Philip Wylie doesn't attempt to conventionalize the effects of nuclear weapons in *Triumph*. Whereas *Tomorrow!* described nuclear weapons based on the elements of blast and heat, he now fully detailed the more unique effects. Triumph dedicates an entire five pages just to describing these effects to the reader, pointing out the same conditions that Wylie did in *The Rotarian* three years earlier. Some of these elements described include the initial radiation in the form of gamma rays, the blinding effects of a fireball, the effects of nuclear fallout (which was relatively minimized in Tomorrow!), and the implications that these would have on a typical home fallout shelter. For example, the book describes in detail both the asphyxiation and suffocation of those attempting to weather the attack in their basement shelters. In addition to this critique of home shelters, the novel also depicts the Soviet Union as staggering its attacks on the United States, therefore negating the current civil defense advice to be stocked with supplies for a period of two weeks. Probably the clearest portrayal of home fallout shelters is given when Vance Farr and others rescue four additional characters in the book. During the construction of his deep shelter, Farr had an additional tunnel built underneath his mistress's house in a suburban neighborhood nearby. Although each of the homes in this neighborhood came with fallout shelters, the only people to survive include Farr's mistress, her lover, and two abandoned children. They too would have been asphyxiated had they not began making their way into the connecting subterranean tunnel. Farr's \$200 million shelter proves to be inadequate over time, and the occupants are only saved after two years of waiting to be rescued by those South of the equator. Ben Bernman, the main protagonist throughout the book, is a forward thinking scientist who ponders that even the \$200 million shelter was "a refuge that had now been proven inadequate, owing to conditions no man, however imaginative, could have predicted." Although fictional, Wylie was able to present the reader with a clear argument against building a home fallout shelter.

Although *Triumph* presents the reader with a fairly straightforward critique of civil defense, Wylie's anti-Soviet Cold Warrior rhetoric had not receded a bit since *Tomorrow!* Indeed, several elements within the book point to the broader concerns being expressed in popular print media such as newspapers and magazines at the time. Two such examples are the superiority of the Soviet's nuclear arsenal (or the so called "missile gap") and their civil defense program. Both of these components actually constitute the Soviets' rationale for striking first. After elaborate deep shelter civil defense plans, the Soviets purposefully blanket the Northern Hemisphere with radiation and wait for death to follow, including many within its own borders. Much like the reasoning behind the Soviet attack in *Alas, Babylon* this one occurs based on timing itself during the "gap" between U.S. and Soviet missile technologies. Much like *Level 7* and several other works, *Triumph* even attacked the rationales and underpinning of civil defense policy. In one revealing instance, Ben Bernman proclaims that,

...if the Pentagon, White House, Rand Corporation, civil-defense people and the rest ever had taken a realistic view of a third war, they'd have foreseen, at most, what your father [Vance Farr] did. With the result that they'd have realized it would cost about ten

¹⁶⁷ Wylie, *Triumph*, 266.

million bucks a person to shelter any part or all of the U.S. population for the at-least-conceivable period of two years. And then *that* would have proven far too short a time. Wouldn't such a situation have put our so-called and long-deceased leaders in a tizzie!¹⁶⁸

Wylie then was fully aware of and pointing out the difficult situation that civil defense administrators must have found themselves in, the realization that fallout shelters would only work under a very strict set of circumstances that an enemy would be equally aware of. This then was the difficulty in preparing everyday Americans for the possibilities of nuclear war.

4.5 Conclusion

During the late 1950s and early 1960s, popular opposition to civil defense programs was expressed not only through newspapers and magazines but was also embodied within popular fiction. These "nuclear apocalyptic" novels expressed similar concerns as those writing in to their national and local newspapers. The level and direction of these criticisms, much like those expressed within newspapers, varied as well. Some novels such as *Level 7* seem to criticize the core rationales behind civil defense head on. Roshwald's work confronts the reader with an implied hierarchy of human lives within civil defense planning. Missiles and their operators were to be kept most secure, while politicians, military strategists, and scientists followed. Least important of all within civil defense planning were everyday civilians. Unlike *Alas, Babylon* or *Triumph*, however, *Level 7* does not concern itself with national politics, leaving the reader guessing throughout the book which superpower they are reading about only to find out that each side has prepared similar shelters with presumably identical priorities. The message within *Level 7* strikes at the roots of civil defense policies and their implications for nuclear strategy and foreign and domestic policies in general.

¹⁶⁸ Ibid.

Less critical of civil defense itself, *Alas, Babylon* seemed to imply that civil defense had to be an individual effort. Not a criticism of civil defense itself, the work seemingly attacked the weaknesses within the program, especially within its administrative ranks. *Alas, Babylon* then seems to most closely correspond with the conservative criticisms of civil defense as a financial "boondoggle." Accordingly, the money spent on these programs could better be spent in closing the perceived "missile gap" during the time. Although this same concern for "the missile gap" was expressed by Wylie as well, *Triumph* holds out no hope for the effectiveness of civil defense planning. His disillusion with civil defense was expressed both within popular newspapers and magazines as well as popular fiction. Also, Wylie increasingly focused his attention on the environmental effects of nuclear weapons and would eventually transition his nuclear concerns into an overall fear for the well being of the planet. This transition was a common one throughout the mid to late 1960s, as anti-nuclear testing activists increasingly turned their attention to nuclear power and other energy sources.

While it is the most vague in its references to civil defense, *On the Beach* overwhelmingly concerned civil defense proponents the most out of each of the nuclear apocalyptics. The astonishing popularity of the novel and its subsequent film concerned civil defense administrators enough that they found it necessary to address it regularly. This was done within newspaper and magazine columns, agency newsletters, and even training seminars. The deadliest message of all, according to administrators, was that it was better to die than to dig. Whether they believed civil defense was necessary for "psychologically hardening" the public or for physically protecting them, they were increasingly frustrated by the ever more devastating effects of nuclear weapons.

The response to these criticisms aimed at civil defense became overwhelming. Public opposition to the programs would eventually cripple even the most ardent supporters. Throughout

the mid to late 1960s, civil defense began to focus much more on the less controversial aspects of its programs, especially on natural disasters. Much like the anti-nuclear testing activists in the late 1950s, civil defense too became increasingly concerned with environmental concerns and less so with man-made ones. Print media played a large role throughout this process. Newspapers and magazines allowed everyday Americans to voice their concerns over civil defense. These concerns were also expressed by writers of popular fiction and further disseminated to a broader readership. These same tools were used by the Office of Civil and Defense Mobilization throughout its existence. Nevertheless, for many readers the images of cozy fallout shelters filled with serene nuclear families accompanied by articles encouraging private shelter building did not go uncontested. The reaction to these programs and the rationales underpinning them were both prominent and significant.

5 CONCLUSION: MISSILE DEFENSE, THE NEW CIVIL DEFENSE?

After Philip Wylie carefully detailed the failures of civil defense in his damning Rotarian article as well as his novel Triumph, a few years later he took aim at another form of nuclear defense, Secretary of State McNamara's "thin shield" anti-ballistic missile program. Published in the January 1968 issue of Popular Science, Wylie explained to his readers each component of the "thin shield" program as well as its purpose: to protect the U.S. from Chinese ICBMs. Wylie then criticized the program for its probability of juggernauting costs, its impotency in the case of a high altitude nuclear attack causing an electromagnetic pulse (EMP), and the problem of the system being outdated by the time of its completion. Not necessarily a fiscal conservative, Wylie conceded in the article that "cost is not meaningful if the program offers reliable protection." 169 Of course, even spending on security has to pass some sort of cost-benefit analysis, and for Wylie, the "thin shield" system simply did not. Further, and probably most important to his argument, Wylie argued that as the "thin shield" system admittedly could not protect the U.S. from competent Soviet ICBMs, it was only a matter of time before the system was obsolete. Finally, Wylie condemned the system to "no more than a double Maginot Line" a term that was used to criticize civil defense only a few years prior. 170

5.1 Nuclear Defense Systems

Throughout the late 1950s and early 1960s, there existed a general consensus among military and nuclear strategists, political elites, and anti-nuclear activists that civil defense and missile defense programs were interconnected. In looking at how these two programs were viewed by each of these groups, one uncovers a variety of different rationales for thinking about the systems as connected. The most revealing aspect of these systems is the way that both the

^{169 &}quot;McNamara's Missile Defense: A Multibillion Dollar Fiasco," *Popular Science*, January 1968, 62.170 Ibid. 182.

proponents and opponents of them seemingly redeployed the arguments over civil defense in the 1950s when discussing missile defense in the late 1960s. By looking at the continuities in these debates, the opposition against missile defense reveals itself as highly influenced by the earlier activism aimed at civil defense programs, mapping out an important link between anti-war protest in the 1950s with that of the 1960s. Finally, as civil defense became less popular among the American public and legislators, it became a useful precedent for discussions over missile defense. Through this process, civil defense and missile defense were continually entangled. The interconnectedness of these two programs circumscribed the possibilities of nuclear strategy and missile defense technology in the future.

5.2 Nuclear Strategists – Active and Passive Defense

When thinking about the possibilities of a nuclear war, strategists constructed a couple of helpful terms to better their understanding of military components. First, strategists made a distinction between offensive and defensive capabilities. Offensive weapons included the nuclear triad, or bombers, submarines, and eventually missiles. These of course were countered with defensive capabilities. In speaking of these capabilities, strategists worried about the eclipsing of defense by offense. In his 1960 work *On Thermonuclear War*, Herman Kahn explained that, "Parochial or uninformed people sometimes measure our offensive power – our power to regulate enemy behavior – just in terms of the number, quality, and operational capability of the offensive vehicles we own. Actually, our ability to regulate enemy behavior depends as much, if not more, on our active and passive defensive capability as on our offensive capability." Kahn hoped to highlight the importance of nuclear defense as it had previously been neglected. In doing so, he delineated two different types of defensive capabilities: active and passive. Each of these defenses had more specific identities when explored further. When writing of passive defense, this

¹⁷¹ Kahn, On Thermonuclear War, 112.

almost always meant civil defense. ¹⁷² Active defense, on the other hand, generally includes any effort to disarm an enemy attack after it has been launched. This then, could include air defense by manned aircraft or an anti-ballistic missile system. ¹⁷³ While passive defense almost always equated to civil defense, active defense may refer to the Strategic Air Command or missile defense systems and must be understood within the time frame of its invocation.

According to Kahn, active defense was essential to passive defense and vice versa. These defenses were viewed as essential to protecting a nation from complete annihilation. Speaking for RAND, Kahn explained that, "it is our conjecture that... feasible combinations of active defense, active offense, and nonmilitary defense can, with at least medium confidence if not with high confidence, protect a nation in the sense that without these measures the nation may be almost totally destroyed."174 As these systems would all fortify and support each other, they would theoretically provide safety for the American public. According to Kahn, air defense in the form of Strategic Air Command (SAC) bases or Intercontinental Ballistic Missile sites would force the enemy to give these spaces a higher priority for attacks than on cities. This was true because, if these sites were spared, then the enemy would have to absorb their counter attack soon afterwards. This situation would result in cities being spared and therefore a civil defense program could offer protection from the radioactivity upwind at the SAC bases or ICBM sites. ¹⁷⁵ In this way, active and passive defense were to work together to provide safety to the U.S. On Thermonuclear War is important for understanding the links between civil and missile defense as it was written in 1960. At this point, civil defense was receiving a popular backlash against its pro-

¹⁷² Ibid., 662.

¹⁷³ Ibid., 653.

¹⁷⁴ Ibid., 101.

¹⁷⁵ Ibid., 16. This strategy is also known as Counterforce. It embodies the idea that a logical enemy will attempt to strike your retaliatory forces and equipment first. Kahn, however, defined counterforce much broader than most nuclear strategists.

grams and the ideas for implementing a missile defense were just beginning to take off. For Kahn, the active defenses carried the same responsibilities for protecting Americans against enemy attacks. Always willing to venture into the unknown, Kahn even postulated that eventually ABMs would be an important aspect of active defenses. ¹⁷⁶ Nonetheless, *On Thermonuclear* War reveals how the systems of civil and air defense (as the predecessor of missile defense) were to work together in softening a nuclear strike from an enemy attack.

Herman Kahn stands out not only for his works as a nuclear strategist, but for his broader association with the RAND Corporation. The majority of Kahn's research for *On Thermonuclear* War was taken from a surfeit of RAND studies. 177 RAND, an acronym for Research and Development, was formed to advise the Air Force in 1946. Just a couple of years later, RAND evolved from a project into a non-profit corporation, becoming RAND Corporation. ¹⁷⁸ Offering advice on a plethora of subjects RAND was heavily involved in studies of both civil and missile defense programs. In its own history under the title of "nuclear weapons" RAND pointed out that, "RAND has investigated other means for limiting war damage should deterrence fail. Prominent among them is civil defense. Much can be done to alleviate the consequences of even total war, if all kinds of defense, including passive defense, are used."¹⁷⁹ With regards to missile defense RAND's history also takes plenty of credit noting that by 1954, "Rand had begun work on ICBM defense studies, with results applicable to the ballistic-missile early-warning system and to the problems, for offense and defense, of ICBM decoys." ¹⁸⁰ Producing an array of studies using a

¹⁷⁶ Ibid., 519.Written prior to the term ABM, Kahn termed the defenses AICBM or Anti Intercontinental Ballistic Missiles. Kahn questioned the feasibility of such a system in response to a large scale attack however, focusing on their ability to force a sense of uncertainty upon an enemy planning an attack.

¹⁷⁸ Rand Corporation, The Rand Corporation: The First Fifteen Years. (Santa Monica, CA: The Corporation, 1963).

179 Ibid., 18.

¹⁸⁰ Ibid.

variety of theories and methods (including John von Neumann's Game Theory), RAND had a direct effect on military strategy in the United States.

For nuclear strategists such as Kahn, civil defense was linked with air defense and later missile defense through an intricate series of assumptions based on theoretical models. In this case, air defense and later missile defense sites offered the enemy an irresistible target that in turn would spare civilians from a direct attack by the enemy. Further, civil defense's vulnerability to a direct attack was unimportant as it would only need to provide defense against the effects of nuclear fallout. In this way, nuclear strategists viewed each system as a valuable component in providing strength and safety to the United States. Further, the linking of these programs soon became absorbed by political elites who were looking at the possibilities of implementing a missile defense just a few years after Kahn's *On Thermonuclear War*.

5.3 Political Elites – Robert McNamara

Think tanks such as RAND influenced political elites as they were responsible for making influential decisions about nuclear defense systems. One excellent example of this was Robert McNamara's decision to support a "thin shield' anti-ballistic missile system during the Johnson Administration. ¹⁸¹ It should be noted that McNamara's program differed from a "thick shield" program because it sought to create a system that could only provide safety from a few incoming missiles (in this case the focus was on China). McNamara supported this because it was cheaper than a "thick shield" program and considered such a program to be unachievable. Intense pressure from President Johnson also played heavily on McNamara support for such a system. ¹⁸² As political scientist Ernest Yanarella explained, "In describing the relationship of a

¹⁸¹ I use "thin shield" in this paper because it was used to describe the ABM system from its early inception under the Johnson Administration into its ultimate decline into the Nixon Administration. It was also referred to as the Safegaurd Program.

Yanarella, The Missile Defense Controversy, 123-124.

fallout shelter program to any ABM effort, McNamara stressed the inextricable link between the two."183 Accordingly, McNamara was concerned that without a civil defense program ABM would be counterproductive. This is because anti-ballistic missiles during the 1960s and 1970s were composed of nuclear tipped warheads. This then meant that even if an incoming missile could be intercepted it would still result in an abundance of nuclear fallout. Further, McNamara was concerned about the possibility of enemy missiles detonating prior to being within range of ABM systems so that they could simply "saturate civilian population centers with highly radioactive fog." ¹⁸⁴ In many ways, McNamara even supported civil defense over missile defense explaining that, "I personally will never recommend an anti-ICBM program unless a fallout program does accompany it. I believe that even if we do not have an anti-ICBM program, we nonetheless should proceed with the fallout shelter program." ¹⁸⁵ Eventually, McNamara would have to concede on this point as neither the public nor Congress would accept civil defense by the mid 1960s. Nonetheless, McNamara's viewpoint of civil defense largely mirrors that of earlier nuclear strategists such as Herman Kahn.

The continuities between Kahn and McNamara's strategic thinking should be highlighted. Kahn, writing in an earlier time focused on the importance of active defense in diverting enemy attention away from cities and towards SAC bases and ICBM sites. This diversion would theoretically make civil defense worthwhile as it would now be able to provide fallout protection to civilians downwind from these sites. In McNamara's case, ABM sites added a new element by protecting the SAC bases and ICBM sites. Much like nuclear strategists before him, McNamara supported a linkage between the two systems working in a scheme to provide safety to the American public. McNamara believed that if the Anti-Ballistic Missile systems could

¹⁸³ Ibid., 86. ¹⁸⁴ Ibid., 87.

¹⁸⁵ Ibid., 87.

prove feasible, it would only work within the grand strategy if the population could find a way to avoid the radiation poisoning left behind.

5.4 Anti-nuclear Activists – Jerome Wiesner

The link between civil and missile defenses was not only asserted by nuclear strategists and political elites who supported the programs, but also by those who hoped to impede them. During the heavy debates over McNamara's "thin shield" program for an ABM system, antinuclear activists and arms race opponents sought to tie the two programs together for their own purposes. In 1969, in the midst of the debates over McNamara's "thin shield" program, the *Washington Post* had an advertisement for a book discussing the ABM system. The ad cited the book's author Jerome B. Wiesner as asking, "When did we stop believing we could be safe in fallout shelters? We were all taken in, for an instant anyway. It was a mass delusion, but we wanted to believe we could still do something. Remember? Well, now, what do you think about the ABM?" Wiesner, as did other critics of missile defense, tied its problematic nature to the earlier troubles of civil defense as each sought to convince Americans that "something" could be done, other than full disarmament, to protect them from the possibility of dangers associated with a nuclear holocaust. 187

In hoping to tie their arguments against McNamara's ABM proposals to those of civil defense earlier, anti-nuclear activists were setting up civil defense as a straw man ready to pummel. In looking at the arguments that were made for supporting McNamara's "thin shield" system, the link between it and civil defense must have come very naturally to anti-ABM activists. In many ways, the arguments for civil defense were simply re-used in defense of an ABM program. Both

¹⁸⁶ The Washington Post, June 3, 1969, A11.

¹⁸⁷ This is really quite revealing of Jerome B. Wiesner because he was incredibly involved in civil defense during the 1950s. After publishing this ad and book, he was attacked for his involvement on the Gaither Committee that recommended the most expensive and encompassing civil defense program in the U.S. Critics found it ironic that he was attacking the 'experts' in his ad, when he was one of those experts.

programs essentially argued that they would only provide a limited amount of security and only in specific situations. For civil defense, it would only work if a shelter was far distanced from ground zero. For "thin shield," the system could not possibly defend a serious nuclear attack as it would be overpowered by an abundance of incoming missiles loaded with multiple warheads and possibly even decoys. Both systems also claimed that they were necessary for avoiding "nuclear blackmail" by an enemy. This idea traced back to RAND's studies on the importance of passive and active defenses and the importance of avoiding a "free ride" for enemies to attack. ¹⁸⁸ If you could provide your cities with some form of defense either civil or missile, then an enemy could not make threats about the destruction of these cities in order to gain negotiation power. Insurance was also often used as a metaphor for justifying each of the systems. In this way, both systems hoped to dodge the idea that by building the systems, they were encouraging a war. It is precisely because missile defense used many of the same arguments that ABM opponents sought to re-use their arguments as well. Besides, these were the same arguments that helped to put civil defense in its grave.

5.5 Conclusion

Nuclear strategists, political elites, and anti-nuclear activists each found good reason to view civil and missile defense programs as interconnected. Nonetheless, their reasons for this greatly differed. Nuclear strategists such as Herman Kahn and the RAND Corporation viewed the two programs as working together to keep U.S. cities from being targeted directly and then providing these cities with protection from downwind fallout. Later on, political elites such as Robert McNamara would adopt the research of nuclear strategists and continue to assert the importance of civil defense if missile defense was to work. However, by the time that Robert

¹⁸⁸ Kahn, On Thermonuclear War., 112.

McNamara was trying to reassert this connectedness, civil defense had been largely opposed by the public and legislators alike.

Anti-nuclear activists during the "Great ABM Debate" also sought to reassert the interconnectedness of the two systems in an effort to discredit the rhetoric of proponents of "thin shield." They recognized that missile defense arguments largely mirrored those of civil defense earlier and sought to demonstrate that missile defense was simply the new civil defense. The interconnected nature of civil and missile defense has continued to wield a powerful impact on nuclear strategy and ABM systems. The opponents to civil defense programs in the 1950s left much more impact on nuclear strategy than they may have imagined. Not only shutting down the civil defense programs of the 1950s, their rhetoric was somewhat successfully redeployed against McNamara's ABM program a decade later.

Without civil defense, missile defense found itself more difficult to justify as it would possibly endanger nearby residents with radioactive fallout, even if it could work. In destroying civil defense, opponents also crippled missile defense. Although missile defense has persisted since the 1960s, these programs have found themselves circumscribed by a lack of civil defense programs. For example, McNamara's "thin shield" program was canceled within a year of becoming operational. This cancellation was based over concern about its viability as well as the ramifications of having nuclear tipped warheads. There was concern over the effects of these warheads on radar systems and "unnerved populations on the ground." 190 Once again, civil defense was the hoped for answer to psychologically hardening and physically protecting the population from radioactive fallout. Indeed, the impacts of opposition against civil defense have

 ¹⁸⁹ Frank J. Johnson, "ABM: The Great Debate," *The National Review*, July 29, 1969, 756.
 ¹⁹⁰ Bradley Graham, *Hit to Kill: The New Battle Over Shielding America From Missile Attack*, 1st ed. (New York: Public Affairs, 2001), 12.

lasted from the failure of "thin shield" to President Ronald Reagan's Strategic Defense Initiative (SDI) and even into the present.

Having to work around the long-term effects of civil defense opposition in the 1950s, missile defense programs have moved toward kinetic energy or laser type defenses. This is most clearly manifested in Reagan's laser based "Star Wars" system and the more recent move to a "hit to kill" ABM system that would leave no radioactive fallout. In 1982, the Army showcased this technology in its Homing Overlay Experiment, the first in a continuing line of kinetic energy rooted programs seeking to demonstrate the viability of "hit to kill" technology. 191 This technology seeks to collide directly with an incoming missile, smash it, and render the nuclear device incapable of detonation. These technologies have proven very difficult (many argue impossible) to achieve. Had civil defense programs been able to convince Americans of the viability of fallout shelters, the archaic missile defense systems such as "thin shield" would have speculatively been easier to achieve, since the prevention of fallout would be less important. Through marches, "die-ins," and print-media, opponents to civil defense were able to eventually discredit the programs. By doing so, they circumscribed the possibilities for missile defense in the future. Their opposition confirmed to leaders that most Americans were not willing to support nuclear defense within their homes. Demonstrating the importance of popular opinion against these programs and ideas, anti-nuclear activists throughout the post-war period dramatically circumscribed the parameters of nuclear strategy. By doing so, this restricted nuclear strategy and directly impacted the path of research for anti-ballistic missile systems and other technologies of war. The legacy of anti civil defense successes were not only manifest through the restraint of nuclear policies during the Cold War period, but have clearly extended those restraints into the present.

¹⁹¹ Ibid., 12.

REFERENCES

Secondary Sources

Books

- Barshay, Robert. *Philip Wylie, The Man and His Work*. Washington D.C.: University Press of America, 1979.
- Bendau, Clifford P. *Still Worlds Collide: Philip Wylie and the End of the American Dream*. Borgo Press, 2007.
- Boyer, Paul. By the Bomb's Early Light. The University of North Carolina Press, 1994.
- Brians, Paul. *Nuclear Holocausts: Atomic War in Fiction, 1895-1984*. Kent State University Press, 1987.
- Campbell, Duncan. War Plan UK: The Truth about Civil Defence in Britain. Burnett Books, 1982.
- Davis, Tracy. Stages of Emergency: Cold War Nuclear Civil Defense. Duke University Press, 2007.
- Garrison, Dee. *Bracing for Armageddon: Why Civil Defense Never Worked*. Oxford University Press, USA, 2006.
- Graham, Bradley. *Hit to Kill: The New Battle Over Shielding America From Missile Attack*. 1st ed. New York: Public Affairs, 2001.
- Grant, Matthew. *After the Bomb: Civil Defence and Nuclear War in Britain, 1945-68.* New York: Palgrave Macmillan, 2010.
- Glasstone, Samuel and Philip Dolan. *The Effects of Nuclear Weapons*. 3rd ed. Washington: U.S. Department of Defense, 1977.
- Grossman, Andrew D. Neither Dead Nor Red: Civil Defense and American Political Development During the Early Cold War. New York: Routledge, 2001.
- Keefer, Truman. *Philip Wylie*. Boston: Twayne Publishers, 1977.
- Krugler, David F. *This Is Only a Test: How Washington D.C. Prepared for Nuclear War.* Palgrave Macmillan, 2006.
- Kuznick, Patrick J. Rethinking Cold War Culture. Smithsonian, 2001.

- May, Elaine Tyler. *Homeward Bound: American Families in the Cold War Era*. 20th ed. Basic Books, 2008.
- McEnaney, Laura. Civil Defense Begins at Home. Princeton University Press, 2000.
- Meyerowitz, Joanne. *Not June Cleaver: Women and Gender in Postwar America, 1945-1960.* Temple University Press, 1994.
- O'Mara, Margaret Pugh. Cities of Knowledge: Cold War Science and the Search for the Next Silicon Valley. Princeton University Press, 2004.
- Oakes, Guy. *The Imaginary War: Civil Defense and American Cold War Culture*. Oxford University Press, USA, 1995.
- Petigny, Alan. *The Permissive Society: America, 1941-1965.* 1st ed. Cambridge University Press, 2009.
- Rose, Kenneth. *One Nation Underground: The Fallout Shelter in American Culture*. NYU Press, 2004.
- Schwartz, Stephen. *Atomic Audit: The Costs and Consequences of U.S. Nuclear Weapons Since* 1940. Washington D.C.: Brookings Institution Press, 1998.
- Vale, Lawrence J. The Limits of Civil Defence in the USA, Switzerland, Britain and the Soviet Union: The Evolution of Policies Since 1945. Palgrave Macmillan, 1987.
- Vanderbilt, Tom. Survival City: Adventures among the Ruins of Atomic America. University Of Chicago Press, 2010.
- Weart, Spencer R. Nuclear Fear: A History of Images. Harvard University Press, 1989.
- Westad, Odd Arne. *The Global Cold War: Third World Interventions and the Making of Our Times*. Cambridge; New York: Cambridge University Press, 2005 4.
- Whitfield, Stephen J. The Culture of the Cold War. The Johns Hopkins University Press, 1996.
- Wittner, Lawrence. Confronting the Bomb: A Short History of the World Nuclear Disarmament Movement. Stanford University Press, 2009.
- Wittner, Lawrence. The Struggle Against the Bomb: Volume One, One World or None: A History of the World Nuclear Disarmament Movement Through 1953. 1st ed. Stanford University Press, 1993.
- ——. The Struggle Against the Bomb: Volume Two, Resisting the Bomb: A History of the World Nuclear Disarmament Movement, 1954-1970. 1st ed. Stanford University Press, 1997.

- . The Struggle Against the Bomb: Volume Three, Toward Nuclear Abolition: A History of the World Nuclear Disarmament Movement, 1971-Present. 1st ed. Stanford University Press, 2003.
- Yanarella, Ernest J. *The Missile Defense Controversy: Technology in Search of a Mission*. Re vised and Updated. The University Press of Kentucky, 2002.
- Zeman, Scott C., and Michael A. Amundson. *Atomic Culture: How We Learned to Stop Worrying and Love the Bomb*. Illustrated edition. University Press of Colorado, 2004.

Articles

- Barker-Devine, Jenny. "'Mightier than Missiles': The Rhetoric of Civil Defense for Rural American Families, 1950-1970." *Agricultural History* 80, no. 4 (Autumn 2006): 415-435.
- Brown, JoAnne. "A Is for Atom, B Is for Bomb': Civil Defense in American Public Education, 1948-1963." *The Journal of American History* 75, no. 1 (June 1988): 68-90.
- Grossman, Andrew D. "Segregationist Liberalism: The NAACP and Resistance to Civil-Defense Planning in the Early Cold War, 1951-1953." *International Journal of Politics, Culture, and Society* 13, no. 3 (April 1, 2000): 477-497.
- Hostetter, David. "House Guest of the AEC: Dorothy Hutchinson, The 1958 Fast at the Atomic Energy Commission, and the Domestication of Protest." *Peace and Change* 34, no. 2 (April 2009): 133-147.
- Kargon, Robert, and Arthur Molella. "The City as Communications Net: Norbert Wiener, the Atomic Bomb, and Urban Dispersal." *Technology and Culture* 45, no. 4 (October 1, 2004): 764-777.
- Kinchy, Abby J. "African Americans in the Atomic Age: Postwar Perspectives on Race and the Bomb, 1945–1967." *Technology and Culture* 50, no. 2 (2009): 291-315.
- Yarrow, Andrew L. "Selling a New Vision of America to the World: Changing Messages in Early U.S. Cold War Print Propaganda." *Journal of Cold War Studies* 11.4 (2009): 3-45.
- Yaszek, Lisa. "Stories 'That Only a Mother' Could Write: Midcentury Peace Activism, Maternalist Politics, and Judith Merril's Early Fiction." *NWSA Journal* 16, no. 2 (Summer 2004): 70-97.
- Zarlengo, Kristina. "Civilian Threat, The Suburban Citadel, and Atomic Age American Women." Signs 24, no. 4 (July 1, 1999): 925-958.

Electronic

Woolley, John T., and Gerhard Peters. "The American Presidency Project [online]." Santa Barbara, CA. Available from World Wide Web: http://www.presidency.ucsb.edu. Last accessed November 11, 2011.

Primary Sources

Archives

- "Operational Survival Plans." Secretary of the Interior; Departmental Defense Liaison Office; Civil Defense Materials; Record Group 48, National Archives and Records Administration Southeast Region (Atlanta).
- "Subject Files." Defense Civil Preparedness Agency; Record Group 397; National Archives and Records Administration Southeast Region (Atlanta).
- "Subject Files." Office of Civil and Defense Mobilization; Georgia Department of Education; Division of Negro Education; Director of Negro Education; Record Group 12-6-71, Georgia Archives.
- "Subject Files, 1952-1957." Centers for Disease Control and Prevention; Record Group 442; National Archives and Records Administration Southeast Region (Atlanta).
- "Subject Files, 1958-1968." Secretary of the Interior; Departmental Defense Liaison Office; Civil Defense Materials; Record Group 48, National Archives and Records Administration Southeast Region (Atlanta).
- "Subject Files, 1959." Centers for Disease Control and Prevention; Record Group 442; National Archives and Records Administration Southeast Region (Atlanta).
- "Subject Files, 1960." Centers for Disease Control and Prevention; Record Group 442; National Archives and Records Administration Southeast Region (Atlanta).
- "Subject Files, 1961." Centers for Disease Control and Prevention; Record Group 442; National Archives and Records Administration Southeast Region (Atlanta).
- "Still Photographs Negatives, 1950-1965." Georgia Department of Defense; State Information Office; Record Group 22-7-46, Georgia Archives.

Books

Frank, Pat. Alas, Babylon. 1st Perennial Classics ed. Harper Perennial, 1999.

Kahn, Herman. On Thermonuclear War. Transaction Publishers, 2007.

Roshwald, Mordecai. *Level 7*. Edited by David Seed, 1st ed. University of Wisconsin Press, 2004.

Rand Corporation. *The Rand Corporation: The First Fifteen Years*. Santa Monica, CA: The Corporation, 1963.

Shute, Nevil. On the Beach. Ballantine Books, 1983.

Wylie, Philip. Tomorrow! Bison Books, 2009.

-----. Triumph (Bison Books, 2007)

Government Publications

- U.S. Department of Defense. *Fallout Protection: What to Know and Do About Nuclear Attack.* Washington, D.C.: Government Printing Office, 1961.
- U.S. Department of Defense. *Student Manual: Medical Self Help Training Course Part 1*. Washington, D.C.: Government Printing Office, 1961.
- U.S. Department of Defense. *The Family Fallout Shelter*. Washington, D.C.: Government Printing Office, 1959.

Magazines

Analog Science Fact Science Fiction
Colliers
Galaxy Science Fiction
LIFE Magazine
Newsweek
Popular Science
The Magazine of Fantasy and Science Fiction
The Rotarian
The Saturday Evening Post
The Science News-Letter
The National Review
Time Magazine

Newspapers

The Chicago Daily News The Berkshire Eagle The Long Island Newsday The Marion Star (Ohio) The Milwaukee Journal
The Nashville Tennessean
The New York Daily News
The New York Post
The New York Times
The Washington Evening Star
The Washington Post

Video

Archives Project; Docurama; New Video Group, *The Atomic Cafe* (New York): Docurama: Distributed by New Video, 2002.

APPENDIX: ACRONYMS

ABM – Anti Ballistic Missile

CONELRAD - Control of Electromagnetic Radiation

EMP – Electromagnetic Pulse

FCDA – Federal Civil Defense Agency

ICBM – Intercontinental Ballistic Missile

NORAD - North American Air Defense Command

OCD – Office of Civil Defense

OCDM – Office of Civil and Defense Mobilization

OPAL – Operation Alert

RAND – Research and Development

SAC – Strategic Air Command

SDI – Strategic Defense Initiative

WSP – Women Strike for Peace