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INNOCENT VICTORS:
ATOMIC IDENTITY AT THE AMERICAN MUSEUM OF SCIENCE AND ENERGY
IN OAK RIDGE, TENNESSEE

A Thesis Presented

by

KATHRYN LEANN HARRIS

Submitted to the Office of Graduate Studies,
University of Massachusetts Boston,
in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

December 2018

History Program

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ABSTRACT

INNOCENT VICTORS: ATOMIC IDENTITY AT THE AMERICAN MUSEUM OF SCIENCE AND ENERGY IN OAK RIDGE, TENNESSEE

December 2018

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Directed by Associate Professor Vincent J. Cannato

In 2009, the American Museum of Science and Energy (AMSE) in Oak Ridge, Tennessee debuted an updated history exhibit about the town's role as one of three secret cities in the Manhattan Project. The exhibit presented a celebratory tone in honor of the innocent people who unknowingly and victoriously participated in the construction of the atomic bomb that aided the Allies in their successful end of WWII. The exhibit omitted the larger national, political nuclear discussion that took place over the following sixty-five years, cementing a long-held victory culture identity. In a 2009 world, the AMSE exhibit seemed incomplete, if not obtuse. *Innocent Victors* traces the history of AMAE/AMSE to examine the social, cultural, and political path that resulted in the 2009 and final AMSE exhibits. An analysis of public history commemoration trends, America's twentieth century identity politics, and a chronicle of historical interpretation in Oak Ridge reveal a divergence in understood commemoration practices. Established

public history theory suggests that the official and vernacular voices form a dichotomous relationship when interpreting the historical narrative. This thesis holds significant implications for examining the intersections between community and government perspectives on the historical narrative. This study also unearths specific theoretical and methodological barriers to interpreting the atomic bomb at public spaces in the United States. Moreover, *Innocent Victors* presents a commentary on the ongoing national discussion about the past, present, and future placement of the atomic bomb in American politics, ideology, and society.

Dedication:

To my grandmother, Thelma Jett Hopper, who worked as a calutron girl in Oak Ridge during WWII and paid the ultimate price for her service.

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A diverse network of individuals contributed to this thesis, each offering their own unique perspective and guidance. I would like to offer special recognition to the archival institutions that made this project possible including the National Archives at Atlanta, American Museum of Science and Energy Archive, Oak Ridge Public Library, and United States Department of Energy photographer's collection in Oak Ridge. I would like to extend a sincere thank you to Ray Smith, Ken Mayes, and Lynn Freeny, all of who were instrumental in my research conducted in Oak Ridge. I owe a debt of gratitude to the University of Massachusetts Boston Graduate Studies office and the History department for funding my research and supporting my efforts. Thank you also to my colleagues, who have listened to my work, offered feedback, attended conferences with me, and accompanied me on research trips. Your company, support, and laughter made the processes that much more enjoyable. Most specifically, thank you to Nicole Breault. My graduate experience was more meaningful and complete because of the scholarly and departmental work we fostered together.

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LIST OF ABBREVIATIONS

AEC	Atomic Energy Commission
ACS	American Cancer Society
AMAE	American Museum of Atomic Energy
AMSE	American Museum of Science and Energy
DOE	Department of Energy
ERDA	Energy Research and Development Administration
NRC	Nuclear Regulatory Commission
ORAU	Oak Ridge Associated Universities
ORINS	Oak Ridge Institute of Nuclear Studies
ORNL	Oak Ridge National Lab

CHAPTER 1

INTRODUCTION

“I think what we have tried to do here is tell the story.”
- James R. Comish, AMSE Director 2000 to 2014¹

Context

Nestled in suburban hills near Knoxville, Tennessee lies the American Museum of Science and Energy (AMSE), which harkens to the past like a Pandora’s box of America’s twentieth-century historical landscape.² Oak Ridge, where the federally funded and operated AMSE is located, was one of three secret Manhattan Project towns that the Army Corp of Engineers constructed from 1943-1945 as part of the WWII effort. Central to this government initiative was the design and construction of the first atomic bomb, which was subsequently detonated on August 6, 1945 to hasten the end of the war with Japan. To this end, the federal government constructed the town of Oak Ridge for the express purpose of enriching enough uranium to facilitate a nuclear explosion.³

¹ James R. Comish (Deputy Director 1998-2000, Executive Director 2000-2014, American Museum of Science and Energy), in discussion with the author, September 2, 2015 in Oak Ridge, TN.

² The American Museum of Atomic Energy (AMAE) opened in Oak Ridge in 1949. In 1975 the museum was relocated to a new building in Oak Ridge and the name changed to the American Museum of Science and Energy (AMSE) in 1978.

³ Charles W. Johnson and Charles O. Jackson, *City Behind a Fence: Oak Ridge, Tennessee, 1942-1946* (Knoxville: University of Tennessee Press, 1981), xvii-xxiii.

Before Oak Ridge was a town, it was a small number of communities located in a valley and ridge arrangement of farmland. Black Oak Ridge was the most prominent ridge with Bear Creek Valley, Bethel Valley and East Fork Valley containing small communities. Roughly three thousand people resided on the land that the U.S. government cleared to make way for what was originally named the Manhattan Project Site X, later to be named the town of Oak Ridge. In November, 1942, the government provided the valley's residents short notice that they were to pack their belongings and leave. The families received little compensation or explanation.⁴

Government workers, under the command of General Leslie Groves, soon broke ground on what would become the largest of the three secret cities. Obtaining enough enriched uranium for just one bomb required around-the-clock manpower from an enormous population engaged in a single mission. The Army Corp of Engineers' initial projections estimated a necessary population of roughly 13,000. However, during the Manhattan Project's three-year span, the scope of the project proved to be much larger than originally anticipated. At its height in 1945, Oak Ridge housed roughly 75,000 people. Oak Ridge citizens moved into a brand new town plan that was under construction for almost the entirety of its first three years. The site's population grew so fast that residents watched as construction crews assembled prefabricated homes literally overnight.⁵

The wartime town's population was mix of various classes, predominately white people with a small faction of African Americans. Most of the white men were scientists

⁴ Johnson and Jackson, *City Behind a Fence*, 39-45.

⁵ Ibid, 14-17, 25.

and physicists who hailed from Chicago, Pennsylvania, and New York or local expert machinists. Most of the white women answered local recruiting advertisements and came to Oak Ridge from a nearby town or family farm. As a whole, they were better educated than those living in the communities around them. They met in a brand new town and together worked for three years on the secret government war-ending project.⁶ African Americans were relegated to lower scale living quarters, named hutments, on the edge of town. The communities remained relatively segregated and each developed a societal structure that matched that of most Southern towns in the 1940s. Each racial community established and maintained every faction of social life in the new town.⁷

Oak Ridge employees were thrust into a role that floated between civilian and soldier. Conducting a top-secret government mission meant living under the highest level of security clearance. The government facilities operated twenty-four hours a day. The residents worked in shifts at the operating facilities. As a matter of security, very few Oak Ridge employees were informed of the project's intended outcome. An estimated two hundred people of the eventual 75,000 employees and residents knew the Manhattan Project's stated mission. They operated under strict orders to remain silent about their daily work tasks, even amongst their family members, for the duration of the war. The government littered the town with propaganda signs designed to illicit fear in those who considered breaking the secrecy code or security rules. Alcohol was strictly forbidden, lest loose lips sink ships (although, some discovered creative ways to procure it). They were only allowed to cross town limits via checkpoints designed to guard the safety,

⁶ Lindsey A. Freeman, *Longing for the Bomb: Oak Ridge and Atomic Nostalgia* (Chapel Hill: UNC Press, 2015), 2.

⁷ Johnson and Jackson, *City Behind a Fence*, 22.

intelligence, and production on the other side of an invisible wall with visible barriers to entrance. Only approved visitors could enter and only at approved times.⁸

America's use of the atomic bomb brought a swift end to the war and the disclosure of the three Manhattan Project secret city locations. The people of Oak Ridge first learned of the results of their three-year work via a radio address President Truman delivered in which he explained the construction and use atomic bomb including Oak Ridge's involvement. Residents responded with shock and elation. They poured out into the streets and celebrated their role in ending the long, hard-fought war. With great unity, the town embraced its newfound place in the long-held American patriot victory narrative.⁹

Over the next five years, the government greatly reduced the scope of work in Oak Ridge and eventually ceased government occupation of the town. The town size reduced to roughly 30,000 people. Oak Ridge maintained a population roughly that size throughout the later half of the twentieth and into the early twenty-first centuries. In 1946, the government formed the Atomic Energy Commission (AEC), which became a governing body over the Manhattan Project sites. In 1949, four years after the end of WWII, the AEC officially opened the city of Oak Ridge, Tennessee to the public although it would continue to manage the city until 1959 when it was incorporated and became self-governing. The AEC opened the first atomic science museum, the American

⁸ Ibid, 137-160.

⁹ Ibid, 163-166.

Museum of Atomic Energy (AMAE), in conjunction with the widely attended celebration of the newly open access city.¹⁰

Throughout the later half of the twentieth century and into the twenty-first, Oak Ridge remained an active town with a population comprised mostly of government employees working at Oak Ridge National Lab (ORNL), the Y-12 Plant, and the K-25 Gaseous Diffusion Plant, the names the AEC assigned to the facilities at the east Tennessee Manhattan Project site after the war. The K-25 Gaseous Diffusion Plant remained the nation's primary source for enriching weapons-grade uranium. Thus, scientists and physicists continuously inhabited the town and worked together on government-sponsored projects long after the war.¹¹ The community never lost sight of their WWII-roots or the subsequent identity that grew out of the town's unique inception. AMAE, renamed American Museum of Science and Energy (AMSE) in 1978, stayed in Oak Ridge, as a government-owned and operated institution that interpreted the construction of the atomic bomb.¹²

The museum's Manhattan Project history exhibits evolved over six decades, gradually moving from a solely government-centric promotional tool to more of a community-based historical outlet, yet with a consistent intersection of the two purposes. Ownership of the narrative appeared to change hands, from the federal government to the local community, yet in many ways these two dichotomous positions perpetually

¹⁰ Ibid, 167-191.; The Atomic Energy Commission (AEC) was renamed the Energy Research and Development Administration (ERDA) in 1974 and then the Department of Energy (DOE) in 1977. The American Museum of Atomic Energy (AMAE) was renamed the American Museum of Science and Energy (AMSE) in 1975.

¹¹ Ibid, 167-191.; Johnson, Leland and Daniel Schaffer, *Oak Ridge National Laboratory: The First Fifty Years* (Knoxville: University of Tennessee Press, 1994), viiii.

¹² Freeman, *Longing for the Bomb*, 5-8, 125-127.

overlapped and worked together to determine the interpretive historical message to be displayed at the museum. Both the federal government and the local citizenry continually grappled with the best use of AMAE/AMSE's historical exhibit space in light of the ever-evolving nuclear political trends that often challenged their agendas.

The overarching tone of the museum exhibits supported an ideal American victory narrative, which was central to national identity politics and the newly established local identity in Oak Ridge. As such, the museum's message was strongly embraced by the local population. During the museum's first six decades, America confronted the deconstruction of a long-held identity. As Tom Engelhardt posits in *The End of Victory Culture: Cold War America and the Disillusioning of a Generation*, prior to WWII Americans enjoyed a victory-based identity, which, he argues, started as early as the American Revolution and began to erode at the end of WWII with the use of the atomic bomb.¹³ The eroding of this identity created complex interpretive challenges for the federal government and the town of Oak Ridge, both of which sustained a WWII-era interpretation of the Manhattan Project. After the war, the lab remained the town's leading industry. The lines that separated the government entity, town residents, and the shifting ideals of American identity became quite blurry. ORNL eventually took over management of the museum and engaged with the local community in interpreting a contested subject of national debate central to American identity politics.

Throughout AMAE's first two decades, the government used the museum's authoritative voice to perpetuate a nationalistic agenda for the proliferation of nuclear

¹³ Tom Engelhardt, *The End of Victory Culture: Cold War America and the Disillusioning of a Generation*, 3rd ed.; rev. ed. (Amherst: University of Massachusetts Press, 2007), 3-7.

energy and warfare. When the earliest AMAE exhibits debuted in 1949, the American public was just beginning to learn the potential benefits and risks of nuclear science. The AEC provided this museum and a related traveling exhibits program as educational tools to address the public's concerns and promote the potential of a nuclear society. Strategically, the AEC withheld information by creating exhibits with controlled messages of reassurance.

By the 1960s, the signs of the American victory narrative deconstruction were quite visible while the interpretation at AMAE remained somewhat consistent with the previous decade. The AEC continued its use of AMAE as a mouthpiece for its nuclear agenda through in-house and traveling exhibits. Nationally, the country was embroiled in the Cold War and a nuclear arms race with Russia. Social upheaval and societal deconstruction, which was, in part, initiated by America's ownership and use of the atomic bomb, threatened every corner of the nation. This erosion was reflected in emerging structural changes at the AEC, government contracted facilities, and AMAE.

In the 1970s, shifting American politics coincided with the AEC's efforts to develop a new museum concept that threatened the local Oak Ridge identity. The updated design featured a wide variety of science and energy topics as opposed to an exclusive focus on atomic energy. The AEC renamed the museum the American Museum of Science and Energy (AMSE), virtually eliminating an atomic and nuclear identity that was at the heart of the community. Concerned Oak Ridge citizens voiced fears that the town's long-held place of national import was eroding. Oak Ridge's identity was entrenched in a victory-based narrative embedded in the town's WWII-ending role. AMAE had become the central beacon for projecting that narrative. Town residents

watched as the AEC transformed AMAE from an atomic museum into a science center and removed the word “atomic” from its name. In response, local community leaders sought a solution for perpetuating the town’s historical relevance and lobbied the AEC to include a history exhibit in the new museum. The AEC accepted the town’s request and installed an historical interpretation that focused on the industrial and military perspective of the Manhattan Project with an emphasis on the government facilities’ work. An exhibit of this type remained in AMSE for the following four decades.

In the 1990s, roughly fifty years after Oak Ridge’s beginnings, the surviving community began to collectively search its past in order to enliven the town’s post-Cold War purpose while navigating a highly contested nuclear political landscape. This searching process included a fifty-person committee, aptly named the Committee of Fifty, a grassroots movement, a public monument (named The Oak Ridge International Friendship Bell), and a fiftieth anniversary celebration that ignited an open discussion about the town’s history and future. Oak Ridge’s public debate exposed a wide variety of conflicting perspectives that were lurking under the surface. However, ultimate consensus landed on a particular version of the American patriotic narrative that was particularly unique to Oak Ridge- an *innocent victor* paradigm that projected the local WWII history through the lens of a courageous workforce who unknowingly produced a weapon of mass destruction to end the war.¹⁴

In a post-Cold-War Oak Ridge, AMSE functioned as a central locale for the townspeople to enliven, celebrate, and perpetuate the renewed wartime spirit found in the

¹⁴ The *innocent victor* term is a methodological interpretive concept introduced and defined by the author of this thesis. It is penned in this work for the first time.

town's roots. In reality, the *innocence* of Oak Ridge's *victor* narrative ceased to exist the day the first atomic bomb was used. The town's original purpose and the catastrophic effects of nuclear weaponry were no longer a secret. The subsequent atomic bomb legacy ran directly through Oak Ridge's government facilities, the nation's primary location for enriching uranium throughout the 20th and 21st centuries. However, the long-standing local science museum generated several more renditions of its Oak Ridge history exhibit. In those versions, the museum progressively embraced the *innocent victor* narrative that had become the cornerstone of the town's projected identity. In 2009, AMSE opened a history exhibit entitled *The Oak Ridge Story*. This was the first AMSE history exhibit that included an exploration of the Oak Ridge WWII-era workers' experience rather than only the industrial and militaristic history of the Manhattan Project. As such, the 2009 exhibit was an exemplary portrayal of the complexities of a community's six-decade long struggle to interpret how the construction of the atomic bomb intersected with its east Tennessee town's identity.

A significant portion of the Oak Ridge townspeople sought a way to genuinely honor and commemorate the local identity without acknowledging the multifaceted nuclear legacy that came in the wake of 1945. In order to do this, they would have to tell the story in a time warp vacuum that ended in August 1945, before the country faced a litany of nuclear fear and complexities. In this way, the DOE and AMSE were able to use the *innocent victor* method to promote Oak Ridge's atomic bomb involvement without addressing the problematic nuclear legacy. Additionally, they were able to use this method to honor and exonerate the 75,000 Oak Ridge laborers who unknowingly

participated in unleashing the world's most destructive bomb for the purpose of ending WWII.

Despite glaring omissions, AMSE's 2009 exhibit scriptwriters perpetuated a dissolving national victory culture narrative by vindicating the innocent and omitted counter and additional complex narratives. Predominantly, the exhibit told a story of a secret military complex designed to construct weapons of mass destruction and the story of the workers who came there during the war, innocently and unknowingly built an atomic bomb, and victoriously helped win WWII. Despite a breakdown in America's victory culture and increased widespread knowledge, the DOE, AMSE, and overriding voice of the local community validated and upheld the *innocent victor* narrative through the 2009 AMSE exhibit, *The Oak Ridge Story*.

Theoretical Framework

Public historians, those who interpret history for the public, have long explored the power dynamics around the interpretation of monuments, museums, and historic sites. Public historians do not simply report the historical record; rather they navigate an environment in which history is used to define identity and fulfill personal and/or political agendas. John Bodnar attests that the historical record according to public memory is "never clearly or permanently defined but, rather, continually constructed in a realm where the small-and large-scale structures of society intersect."¹⁵ A mere understanding of historical facts does not adequately equip a public historian with enough

¹⁵ John Bodnar, *Remaking America: Public Memory, Commemoration, and Patriotism in the Twentieth Century* (Princeton: Princeton University Press, 1992), 245.

information or tools to interpret history in public spaces. As David Glassberg explains, this type of work requires a comprehensive study of the constructs and uses of memory and identity at a particular locale. Glassberg writes, “Understanding the various ways in which societies think about the past and use it in the present can help public historians to understand the institutional contexts in which they operate as well as the presuppositions about history with which the public approaches their work.”¹⁶ John Gillis states, “National identities are, like everything historical, constructed and reconstructed; and it is our responsibility to decode them in order to discover the relationships they create and sustain.”¹⁷ In this atmosphere of ever-evolving subjectivity, interpreters face the challenge of presenting content that resonates with the visiting public, remains accurate, and carefully approaches the dissonance between opposing viewpoints. This is particularly true at sites of war at which the historical narrative often connects to ownership of land, power dynamics, industrial objectives, and identity politics, and it is true in Oak Ridge, Tennessee.

The public interpretation in Oak Ridge arrived on the American landscape after nearly two hundred years of evolving national commemoration practices. Gillis explores America’s historical relationship between history, memory, and commemoration. These practices, Gillis explains, began with the country’s genesis, just after the American Revolution, as a way to break with the past and solidify a national identity. In that pivotal moment, the new Americans cultivated remembrance methods designed to cast the

¹⁶ David Glassberg, “Public History and the Study of Memory,” *The Public Historian* 18 no. 2 (Spring 1996): 8.

¹⁷ John Gillis, ed., *Commemorations: The Politics of National Identity* (Princeton: Princeton University Press, 1994), 4.

nation's foundational ideals in bronze and stone, and, later, in the interpretive text found in museums and at historic sites. At the very base of this concept lies the notion that each historical moment of import contains an objective statement to be codified into a national consciousness by firmly placing it in the public eye into perpetuity. However, as Gillis posits, "memories and identities are not fixed things, but representations or constructions of reality, subjective rather than objective phenomena."¹⁸ Acknowledging the awareness of subjectivity becomes quite problematic when attempting to construct or solidify an objectively styled monument, narrative, or exhibit.

By 1994, when Gillis's edited compilation on public memory and commemoration was published, America's long-held belief in a static objective nationalistic identity was dissolving. As Tom Engelhardt explained in *The End of Victory Culture*, prior to WWII Americans enjoyed a victory-based identity, the notion of America as a perpetual morally superior victory culture. Engelhardt argues that this construct was first conceived just after the Revolutionary War and began to erode at the end of WWII with the use of the atomic bomb. He ascertains that "the American war story was especially effective as a builder of national consciousness because it seemed so natural, so innocent, so nearly childlike and was so little contradicted by the realities of invasion or defeat."¹⁹ The construction, use, and ownership of the atomic bomb and the subsequent fallout thrust the United States into an ambiguous international role, previously unimagined in American consciousness. With it came the beginning of the end of a unified and innocently understood American victory narrative.

¹⁸ Gillis, *Commemorations*, 3.

¹⁹ Engelhardt, *The End of Victory Culture*, 5.

Large swaths of Americans began to reject the ideal that theirs was a nation of perpetual and eternal moral victory. However, the shift away from the victory identity ideology, as Engelhardt describes it, evolved gradually throughout the second half of the twentieth century. Much of the country held onto the deconstructing paradigm while others were detaching from it. The federal government continually drove the national identity discussion towards the victory narrative concept. Meanwhile, the country increasingly grappled with the government's agenda and use of the atomic bomb in national and international policy. The nation's long-held identity was eroding. Realistically, America could no longer claim the role of benevolent victor; they became the perpetrator and not always a victorious one.²⁰

In this post-modern world of ever-deconstructing societal norms, objective commemorative methods that cast unified ideals into bronze and stone quite simply became less effective as a means of communicating a complex national narrative. By the start of the twenty-first century, America was trending towards confronting individual and collective subjectivity. The time period between the end of WWII and the end of the Cold War was one of great social unrest. History became a battleground upon which various factions of society inserted their previously unrecognized perspectives and found a ground upon which they could build traction for expressing their unheard voices. As Gillis writes, "Just as memory and identity support one another, they also sustain certain subjective positions, social boundaries, and of course, power."²¹ Within the realm of societal redefinition, proponents of the Civil Rights Movement, Women's Movement,

²⁰ Ibid, 3-15.

²¹ Gillis, *Commemorations*, 4.

and LGBT Movement highlighted American narratives that ran counter to the dominant elite white male narrative that had previously dictated American victory culture ideals and dotted the landscape of public discourse. The notion that Americans were always victorious not only counteracted with the United States' placement in international politics, it also did not resonate as clear truth with all Americans. Observers of the nation's two-hundred-year-old monuments suddenly arrived with an expanded awareness that called into question a simplistic white male-driven societal narrative so often chiseled into the base of statues and placed in halls of honor. Thus, an anti-monuments movement began to take shape during the post-Cold-War era. Foundational American ideals previously cast in bronze and stone no longer reflected the identity of all Americans, if they ever really did. As the unity of American idealism dissolved, so did the relevance of monuments that reflected a singular point of view, cultural subset, or overarching narrative.²²

While the declining stronghold on the American victory culture narrative was seeping into the collective national consciousness, the driving voice of the Oak Ridge community and the DOE became more entrenched in using a victory narrative to reflect the town's history. Oak Ridge was established and grew as a community in the midst of this dissolving American construct. The local population attempted to write a local history through the lens of a common national paradigm that continuously shape-shifted over the same time period. Ultimately, the narrative presented in Oak Ridge reflected the DOE and the town's collective attempt to uphold the American victory culture ideals.

²² Ibid, 3-20.

In his theoretical examination of the methods by which American institutions historically selected identity narratives for public display, John Bodnar posits that most often the voice of the vernacular is overpowered by an authoritative voice unless or until the people insert an unofficial narrative that runs counter to the official power narrative. Bodnar's hypothesis took flight in the latter twentieth century as contested voices of memory began to emerge and challenge the previously accepted grand nationalistic victory narrative. Bodnar summarized his argument by stating: "The essential contest that shapes commemoration and the interpretation of the past and present is waged between the advocates of centralized power and those who were unwilling to completely relinquish the autonomy of their small worlds."²³ He goes on to explain how political leaders have an interest in maintaining a society with a high standard of orderly behavior; therefore, those leaders use history as a way to infuse the notion of a shared past, hoping all citizens will unite under one cause. However, Bodnar argues, smaller cultural groups, or as he calls them, "defenders of the vernacular cultures," are often distrusting of the official interpretation of the past that serves the agenda of the authorities. Thus, their voices produce a discussion that unearths fundamental power and identity issues that permeate society as a whole.²⁴

In his edited volume, Gillis references the early American beginnings of these two camps by naming them the "popular" and "elite" memories. "Elite time," he states, "colonized and helped construct the boundaries of territories that we have come to call

²³ Bodnar, *Remaking America*, 245.

²⁴ Ibid, 13-20, 245-253.

nations,” whereas, “popular time was more local as well as episodic, consolidating.”²⁵

Bodnar suggests that these two positions conflict in that vernacular history grounds itself in a memory based on experience and personal agendas, but not a larger national political agenda. He argues that citizens either genuinely feel their own interpreted connection to a historic event or they buy into the proposed official agenda of the government or selected authorities. This proposed national agenda, in Bodnar’s view, usually takes the form of patriotic rhetoric and nationalistic ideals used to codify a singular identity throughout the country. The vernacular public memory, as he explains it, appeals to the human-interest side of an issue that bonds a community through shared experience outside of a conformed nationalistic view.²⁶

Bodnar’s dichotomous binary pits two extreme positions against one another in a way that runs counter to the evolution of the historical narrative in Oak Ridge, Tennessee. Instead of separate poles in a binary, the Oak Ridge community and the DOE became a synchronistic entity. Instead of two factions that created conflicting narratives, their perspectives and agendas ultimately complemented one another. Thus, the two power factions joined together for the purpose of maintaining and advancing the relevance of the lab and the town. On the surface, the authoritative voice appears to maintain control of the Oak Ridge narrative, as the AEC/DOE owned and operated the museum since its opening. Conversely, a study of the Oak Ridge community reveals moments when the vernacular voice seemingly overtakes the authoritative voice beginning with the community’s pushback to the 1970s museum changes, continuing through the 1980s

²⁵ Gillis, *Commemorations*, 6.

²⁶ Bodnar, *Remaking America*, 13-20.

Committee of Fifty and 1990s Oak Ridge International Friendship Bell, and ending with the 2009 Oak Ridge Story exhibit. Upon further inspection, however, the resulting narrative of these moments overlapped with the DOE's policies and agenda. In reality, AMSE, the DOE, and the community historical organizers predominantly maintained a unified front.

In his book, *The Past is a Foreign Country*, David Lowenthal adds another dimension. His research reveals that when communities look to the past, they often do so through a heritage, as opposed to historically accurate, type lens that resembles nostalgia with selective historical memory loss. "The past," Lowenthal writes, "is always altered for motives that reflect present needs. We reshape our heritage to make it attractive in modern terms; we seek to make it part of ourselves, and ourselves part of it."²⁷ He further expounds that communities then define and use the adopted heritage perspective to explain or justify their present identity construct. He goes on to say, "Rendered grand or homely, magnified or tarnished, history is continually altered in our private interests or on behalf of our community or country."²⁸ This resonates with the historical narrative path taken in Oak Ridge. Not surprisingly, the community continually embraced a certain heritage version of its past that validated a present-day agenda. More interestingly, the government and the community versions of the historical record continued to cyclically reinforce one another. Instead of pitting conflicting narratives opposite one another, the government grew to embrace more of the heritage perspective and combine it with the official narrative. The local Oak Ridge community pulled pieces of the official

²⁷ David Lowenthal, *The Past is a Foreign Country* (Cambridge, UK: Cambridge University Press, 1985), 348.

²⁸ Ibid.

government perspective and viewed them through the heritage lens. It was a marriage of convenience and mutual reinforcement that spun a singular, tight story of American innocence, patriotism, and victory, one that grew stronger the more the more it was regaled.

The process by which these factions created a strong unified force instead of forming two opposing camps can be traced to the intertwined connectivity of Oak Ridge life, in that, the government facilities, AMSE, and the Oak Ridge citizenry can hardly be parsed. The government facilities of the Department of Energy are the primary industries in the small 30,000-person town. Virtually everyone who lived in Oak Ridge either directly or indirectly survived because of the existence of the lab. Further, Oak Ridge's WWII roots permeate the local culture and ongoing tourism in a way that irrevocably and continuously connects the townspeople to the lab's genesis. Most local public interpreters at one time worked for the DOE. Two AMSE employees wrote the 2009 exhibit text while they were also active members of the community. Then draft edits and final approval ran directly through AMSE, the government facilities contractors and DOE.

When the leading Oak Ridge community voices joined forces with authoritative players, the two collectively overpowered factions that introduced complex narratives or negotiated compromise in ways that ultimately upheld the victory culture ideology. The overarching Oak Ridge narrative shifted slightly throughout the twentieth and into the twenty-first centuries. The primary voice remained one-dimensional, eliminating a whole host of complex perspectives. Smaller cultural groups and individuals inserted various conflicting memories and personal experiences, yet the public narrative continued to circle back to the larger nationalistic political agenda associated with atomic bomb

memory. Additional and opposing voices remained, yet found little ground on which to lay claim to their perspectives, as those perspectives would have deeply challenged the established status quo of honoring the Oak Ridge legacy without asking the hard questions about how parts of that legacy affected the world in difficult ways.

By 2009, the singular grand nationalistic narrative in Oak Ridge seemed rigid and disconnected when placed against a more subjective discourse happening nationally. During AMAE/AMSE's first few decades, the official AEC and Oak Ridge narrative reflected of a majority of sustaining factions of the United States public. By 2009, much of America had either witnessed or participated in a progressive evolutionary process of deconstructing the victory culture narrative. Yet, the AMSE 2009 exhibit text did not present the national critical discussion. The community and government stance, as depicted in the museum, defended and protected the *innocent victors* who worked at the on the Manhattan Project in Oak Ridge. While this perspective is understandable and was not entirely inaccurate, it was incomplete and the nuclear legacy omissions loom large.

Literature Review and Methods

The practical and theoretical framework of America's public history and commemorative practices is central to the critical analysis of this thesis. The essays in Barbara Howe and Emory Kemp and James B. Gardner and Peter S. LaPaglia edited compilations provide essential methodological framework for the public history field.²⁹

²⁹ Barbara J. Howe and Emory L. Kemp, eds., *Public History: An Introduction* (Malabar, Florida: Krieger Publishing Company: 1986).; James B. Gardner and Peter S. LaPaglia, eds., *Public History Essays from the Field* (Malabar, Florida: Krieger Publishing Company, 1999 original publication, reprint 2006).

More specifically, a comparative study of John Gillis, Tom Engelhardt, John Bodnar, and Edward Linenthal establishes the theoretical model for this thesis. In his edited compellation, *Commemorations: The Politics of National Identity*, Gillis establishes a framework for the intersection between politics, identity, and the use of commemorative sites as a means of forwarding the agendas of those social forces.³⁰ The book begins with a historical analysis of America's remembrance practices followed by thirteen individual essays that critique the relevancy of identity, heritage, memory, and politics associated with installing or examining monuments, memorials, and historical interpretation. Tom Engelhardt's work, *The End of American Victory Culture: Cold War America and the Disillusioning of a Generation*, explores the rise and fall of America's identity as the perpetual victor. Engelhardt offers a critical analysis of both the shift in American consciousness in a post-WWII society as well as the ways in which this shift affected commemorative efforts around the country.³¹ In *Remaking America: Public Memory, Commemoration, and Patriotism in the Twentieth Century*, John Bodnar explores the power dynamics that often pit the nationalistic authoritative voice against the personal perspective of ordinary citizens. Bodnar's analysis chronicles the history of American public memory through the lens of this dichotomy. His perspective is important for understanding how the evolution of public history in Oak Ridge differed from the trends he explores. Edward Linenthal's exhaustive research positions him as one of the leading American public historians on war commemoration.³² Linenthal's work in *Sacred*

³⁰ Gillis, *Commemorations*.

³¹ Engelhardt, *The End of Victory Culture*.

³² See also: David Chidester and Edward T. Linenthal, *American Sacred Space* (Bloomington: Indiana University Press, 1995).; Edward T. Linenthal, *Preserving Memory: The Struggle to Create America's Holocaust Museum* (New York: Penguin, 1995).

Ground: Americans and Their Battlefields traces the history of America's relationship to memorializing war. He argues that the methods by which a community chooses to publicly interpret its wartime past often reveals previously unspoken emotions. His work suggests that these revelations are particularly evident when the commemoration occurs decades after the end of the war, which is especially relevant to understanding the subtext of the history exhibits at AMSE in Oak Ridge.³³

As a comparative study, I examined several 20th century museums and historic sites that commemorate war and, more specifically, atomic-bomb history. This analysis demonstrates the difficulty of interpreting the atomic bomb as specifically evidenced by the Smithsonian's attempt to interpret the Enola Gay for the fiftieth anniversary of the end of WWII and the Harry S. Truman Presidential Library's (HSTPL) permanent exhibit, which includes a section about Truman's decision to use the atomic bomb at the end of WWII. Research at the HSTPL was conducted on a site visit in 2014, during which I viewed the standing exhibit and interviewed the executive museum staff. In *History Wars: The Enola Gay and Other Battles for the American Past*, Linenthal, along with Engelhardt, applied their analytic perspective to the events surrounding the National Air and Space Museum's attempted interpretation of the Enola Gay, the B-29 bomber that dropped the first nuclear weapon over Hiroshima, Japan.³⁴ This work provides an important comparative to that of the Oak Ridge citizenry and museum. The attempted interpretation of the Enola Gay took place during the 1990s around the same time that

³³ Edward Linenthal, *Sacred Ground: Americans and their Battle Fields* (University of Illinois Press: Urbana- Champaign, 1993).

³⁴ Edward Linenthal and Tom Engelhardt. *History Wars: The Enola Gay and Other Battles for the American Past* (New York: Henry Holt and Company, 1996).

Oak Ridge citizens made a move to more comprehensively embrace and provide new public interpretive perspectives on untold segments of the town's history. The efforts of the staffs at the Smithsonian, Harry S. Truman Presidential Library, and AMSE resulted in three disparate exhibit products.

The historical narrative and analysis of Oak Ridge, Tennessee and the government facilities provide central background to my thesis. Charles Johnson and Charles Jackson produced the first and still leading comprehensive historiography of Oak Ridge's Manhattan Project years in *City Behind a Fence: Oak Ridge Tennessee 1942-1946*.³⁵ The ORNL history is chronicled in Leland Johnson and Daniel Schaffer's work, *Oak Ridge National Laboratory: The First Fifty Years*.³⁶ Sociologist Lindsey A. Freeman deepened my understanding of Oak Ridge's ongoing relationship with nostalgia in her book *Longing for the Bomb: Oak Ridge and Atomic Nostalgia*. Freeman expounds on the victory culture concept Engelhardt describes by stating, "the notion that the United States is a land of freedom and uses force only in response to an attack. Victory culture goes hand in hand with the American culture of innocence, the myth of the benevolent nation stripped of any lust for power."³⁷ Published in 2015, her study explores the notion that Oak Ridge's present-day identity is rooted in the illusion that an atomic utopia served as the town's genesis, a premise that supports my findings and analysis.

Foundational to my entire analysis is an understanding of America's post-WWII political policy and societal relationship to the atomic bomb. Gerald Clarfield and William Wiecek's work, *Nuclear America: Military and Civilian Nuclear Power in the*

³⁵ Johnson and Jackson, *City Behind a Fence: Oak Ridge*.

³⁶ Johnson and Schaffer, *Oak Ridge National Laboratory*.

³⁷ Freeman, *Longing for the Bomb*, 127.

United States in 1940-1980, provides an in-depth analysis of power dynamics of America's nuclear policy during WWII and the Cold War. Allan Winkler's *Life Under A Cloud: American Anxiety About the Bomb* explores the evolution of nuclear fear in a post-WWII America. This study places Oak Ridge in a post-WWII America that is embroiled in a discussion about the dangers of atomic warfare and America's nuclear power dynamics as they pertain to the international landscape.³⁸ The 2009 publication *The Atomic Bomb and American Society: New Perspectives*, edited by Rosemary Mariner and Kurt Piehler, includes seventeen analytical essays that provide a modern perspective on American culture and the atomic bomb throughout the twentieth century. Most notably, this work includes an essay by Edward Lollis, entitled "The Oak Ridge International Friendship Bell," which chronicles the battle to erect a WWII monument in Oak Ridge in the late 1980s and early 1990s.³⁹

I surveyed and studied a variety of original Oak Ridge-based source types for this thesis including: documents, photographs, memoirs, commemorative books, oral histories, exhibit text, educational curriculum booklets, personal papers, brochures, and government-sourced records. I visited all public sites of memory and museums in Oak Ridge, including visits to AMSE in 2005 and a number of times after the 2009 exhibit debuted. I analyzed the photography of the three DOE photographers, Ed Westcott, Frank Hoffman, and Lynn Freeney, which include images of Oak Ridge life during the Manhattan Project as well as exhibit images that cover the duration of AMAE and

³⁸ Allan M. Winkler, *Life Under a Cloud: American Anxiety About the Atom* (Urbana-Champaign: University of Illinois Press, 1999).

³⁹ Rosemary B. Mariner and G. Kurt Piehler, eds., *The Atomic Bomb and American Society: New Perspectives* (University of Tennessee Press: Knoxville, 2009).

AMSE's existence. I also conducted a research-based oral history project, whereby I interviewed twenty-eight public interpreters, city officials, community organizers, and government facility employees who are working or worked in Oak Ridge from the 1970s to the present.

Limitations

Exploring the evolution of Oak Ridge's attempts to interpret its history is adequate for the intention and goal of this project. Exploration of the interpretive histories of the other two secret cities of the Manhattan Project, Hanford, Washington, and Los Alamos, New Mexico, is far too expansive and in fact uniquely disparate from the Oak Ridge narrative in significant ways. Further, the extent of local citizen participation in the Oak Ridge project varies considerably from the other two towns in part because of the difference in the tasks conducted at each wartime site.⁴⁰ The background of the Manhattan Project is used to underscore the larger points but is not the primary subject. Labor history, race/class/gender, and environmental history are laced throughout this thesis but not used as the underlying theoretical model.

The added barrier of secrecy within the Manhattan Project, Oak Ridge community, and later the Oak Ridge National Labs presents an interesting opportunity for critique regarding the methods by which a town shrouded in government secrecy publicly comes to terms with its collective past. I consider the role of secrecy and government affiliation when analyzing private versus public reactions to the museum exhibits as well as the

⁴⁰ The workers at the Oak Ridge, TN site produced weapons grade enriched uranium; those at Los Alamos, NM researched, assembled, and tested the bombs, and those working in Hanford, WA produced weapons grade plutonium.

implications of those reactions. However, my thesis is not a central study of the secrecy that has affected the Oak Ridge landscape since its inception.

Further, this study is not meant to be an exhaustive review of Oak Ridge's entire relationship with public history. The scope of this research is AMAE/AMSE and does not include local monuments erected and displayed in Oak Ridge mostly from 1990-2014, exhibits at government facilities, other museums and historically interpreted sites, or Department of Energy (DOE) tours. In this way, this research does not critically analyze other public history installations in Oak Ridge, of which there are many and included preservation sites, historical associations, documentaries, commemorative plaques, and oral history projects. Nevertheless, I examined this public history evidence, which influenced my research and from which I drew supporting evidence.

Chapter Review

Innocent Victors: Atomic Identity at the American Museum of Science and Energy in Oak Ridge, Tennessee is an analysis of historical interpretation in Oak Ridge, Tennessee, from 1949 to 2009 at AMAE/AMSE. In part, this thesis is a study of the way the United States government utilized the museum as an education tool designed to communicate an official national perspective on atomic energy and warfare. However, at the center of this analysis is the story of the local Oak Ridge community, which consistently attempted to navigate its present and future identity in light of, and at times in the shadow of, a storied past. A study of the history exhibits' evolution at AMAE/AMSE highlights the complex challenges that both the federal government and the local community faced while commemorating Oak Ridge's role in building the

atomic bomb. When viewed through the lens of the broader public history field, these challenges are consistent with those faced by museums throughout the country. To this end, this study further reveals the ways in which the early 2000's exhibit scriptwriters chose to affix to a nostalgia-based interpretation of the town's atomic bomb legacy as a protective antidote to fully grappling with the complexities presented by an exhaustive analysis of the atomic bomb's longstanding impact.

The thesis analysis begins with the process by which the establishment of a unilateral patriotic grand narrative took root in Oak Ridge as soon as WWII ended. The AEC's 1949 AMAE installation greatly affected Oak Ridge's adoption of the single-voiced perspective. The earliest exhibits, the subject of Chapter 2, presented a very simplistic explanation of atomic warfare and energy for the purpose of assuaging the visiting public's fears. In reality, the narrative surrounding the Manhattan Project was never a simple one, despite the story presented to visitors. A foundational understanding of the town's first two decades underscores the ways in which the townspeople's collective identity remained fixed on a utopian view of Oak Ridge life during WWII.

Chapter 3 presents an analysis of the following two decades of major shifts at AMAE and the AEC, in Oak Ridge, and across the nation. The changes precipitated by these shifts highlight the ways in which the Oak Ridge community held onto their local victory culture narrative despite national trends to the contrary. This thesis uses the debut and evolution of the history exhibit at the 1970s and 80s AMSE facility to demonstrate the community's resolve to solidify and nurture an innocent victor identity.

In Chapter 4, I explore how the fiftieth anniversary ignited a conversation about the town's legacy during which time the Oak Ridge community became embedded in

their insular identity. After the anniversary celebration, the town experienced a dramatic increase in public interpretation of a shared past, as evidenced by a rash of displays erected at public commemorative sites. Despite national trends to the contrary, the history exhibits at AMSE remained focused on a single patriotic message.

An in-depth analysis of the historical interpretation in Oak Ridge, Tennessee offers a lens through which to see the world's organic relationship to the atomic bomb. Sites of public remembrance serve as the front lines of historical discourse. They reveal how local, national, and/or international communities approach collective and personal identities. A critique of AMAE/AMSE's history exposes common difficulties that communities face when attempting to honor their past in light of a harsh or complex legacy. More specifically, this study illuminates the ongoing challenges of interpreting an American past that is no longer marked by clear lines and assumed conclusions, in part because of the degree to which the unveiling of the atomic bomb changed the world.

CHAPTER 2
AMERICA'S ATOMIC MUSEUM

1949-1975

*"In the atomic adventure we sight one of those great mountain peaks of History, a towering symbol of one of the faiths that makes man civilized, the Faith in Knowledge."
- David E. Lilienthal⁴¹*

At the dawn of America's participation in WWII, museum educator Theodore Low forecast the museum field's post-war purpose. He stated, "The museum's task lies in preparation for the peace to come. It is then, in a world which we hope will be more ready to understand the problems of others, from nations down to individuals, and which will be searching for ways to make 'peace' a word having real and lasting meaning, that the museum can assume a leadership befitting its position."⁴² Low's idealistic hope for the museum field was not misplaced, but it would not come immediately. Peace came in

⁴¹ Exhibit text as viewed on photograph: Oak Ridge Department of Energy (OR DOE) Photographer, #5274-27009, AMAE 1949 exhibit *Man and The Atom*, c. 1949.; U.S. Department of Energy Photograph Collection; Office of DOE photographer Lynn Freeny; U.S. Department of Energy Offices, Joe L. Evins Federal Building (JLEFB), Oak Ridge, TN. Photo courtesy of U.S. Department of Energy (DOE).; In this document, "ORDOE Photographer" refers to the staff photographer when the photo was taken: Ed Westcott- 1943-1961, Frank Hoffman 1962-1992, Lynn Freeny 1993-present; numbering system provided by Lynn Freeny to the author in 2014.

⁴² Theodore Low, "What is a Museum?," In *Reinventing the Museum: Historical and Contemporary Perspectives on the Paradigm Shift*, ed. Gail Anderson, (New York: Rowan and Littlefield, 2004), 31. Originally published as *The Museum as a Social Instrument* (Metropolitan Museum of Art: New York, 1942).

late 1945. Yet, America, and with it the museum field, was not prepared for the cost of peace and the confusion that would arrive in a post-war world.

When WWII ended with atomic blasts over Hiroshima and Nagasaki, America began to grapple with the validity of its 250-year identity narrative. Prior to WWII, as Tom Engelhardt argues in *The End of Victory Culture*, Americans touted and perpetuated an illusionary ideal that theirs was a country born of and sustained by a never-ending victorious stream of morality, freedom, and, when necessary, defense against their enemies. On August 6th, 1945, the world witnessed the first atomic bomb explosion, which displayed a previously unseen instantaneous horror. In August 1945, the United States exclusively held this atomic power. The country's leaders assured themselves of the exclusive ownership of the bomb by building it through a massive secretive initiative, the Manhattan Project, and by refraining from disclosing to their WWII ally, Russia, that they owned the weapon or planned to use it to end the war.⁴³

America went to war to defend itself, its ideals, and its way of life, part of which included a treasured identity wrapped in moralistic superiority. The shared American victory culture identity rested on the ideals of a unified national construct that represented core moralistic and philosophical values of peaceful benevolence, as the foundation for the nation. The day American forces dropped the atomic bomb, that simple narrative morphed into something much more complex. Almost as soon as WWII ended, the Cold War began and with it came a fight for ownership over the atomic bomb. American foreign policy was no longer based exclusively on defense; America had sole control of the world's most deadly weapon and had already used it twice despite the instant

⁴³ Engelhardt, *The End of Victory Culture*, 3-15.

widespread destruction the bomb caused. The atomic bomb brought a heightened sense of confusion and fear about the possibility of widespread nuclear war. Additionally, America's use and proliferation of the nuclear weapons signaled a significant shift in its international role as the benevolent peacemaker.⁴⁴

A post-WWII America was filled with the renewed energy that followed victory, yet it was coupled with the complexities of living in a post-atomic world. Victory over Japan provided a sense of pride and excitement for the nation. The energy, medicine, and technology fields were booming with discoveries that consistently improved the quality of American life. Yet, the dangers associated with the atomic bomb instilled an undercurrent of fear. In 1949, the Soviet Union successfully tested its first bomb, and America faced the very real possibility of nuclear war waged against their country.⁴⁵

In the midst of nuclear excitement and concern, much of the country grew hungry for information. For the sake of national security, Congress created a barrier to the open exchange of atomic science information when it passed a law stating that anyone found guilty of sharing atomic secrets would be sentenced to death.⁴⁶ The government was asking Americans to shelve their fears and, instead, rest in the security of their national leader's assurances and in the (limited) dissemination of nuclear information.⁴⁷ General Leslie Groves, 1942-1945 military director of the Manhattan Project, reflected on this agenda in 1949, stating, "Much that has been written about atomic energy has inspired fear and confusion.... This is not a healthy state of affairs. Atomic energy must be

⁴⁴ Engelhardt, *The End of Victory Culture*, 3-15.

⁴⁵ Spencer Weart, *The Rise of Nuclear Fear* (Cambridge: Harvard University Press, 2012), 1-21.

⁴⁶ Ibid, 65.

⁴⁷ Gary Willis, *Bomb Power: The Modern Presidency and the National Security State* (New York: The Penguin Press, 2010), 99.

explained.”⁴⁸ America’s concern about the threat of atomic warfare continued to increase as the Cold War gained speed, which prompted the federal government to begin a proactive educational platform focused around nuclear science.

In 1948, the United States government began utilizing the power of public exhibitions as part of a campaign designed to calm ongoing national fears and convey a message of peaceful uses for nuclear physics.⁴⁹ To this end, the Atomic Energy Commission (AEC) established an educational arm in Oak Ridge, Tennessee, the Oak Ridge Institute of Nuclear Studies (ORINS).⁵⁰ ORINS developed a civilian education plan designed to keep the American public informed and encouraged about the ongoing development of nuclear production. This plan included a public exhibits program that was generated and displayed in Oak Ridge. In 1949, the AEC expanded its nuclear public education plan when it installed the American Museum of Atomic Energy (AMAE) in Oak Ridge. The AEC and ORINS used AMAE to display atomic-science exhibits designed to foster America’s understanding of and trust in the continued development of nuclear weapons, energy, and research. For twenty-five years, ORINS experienced wide

⁴⁸ Leslie Groves, quoted in Paul Boyer, *By Bomb’s Early Light: American Thought and Culture at the Dawn of the Atomic Age* (New York: Pantheon Books, 1985), 297.

⁴⁹ Ibid, 296-297.

⁵⁰ Lois Kaufman, “In the Beginning: A Conversation More than Forty Years Ago Launched Oak Ridge Associated Universities,” *The Tennessee Alumnus* (Spring 1987), 43-44.; The Oak Ridge Institute of Nuclear Studies’ (ORINS) primary function was to promote post-secondary education in the field of atomic physics. ORINS partnered with Southern universities to create physics departments and attract top tier students. The Manhattan Project rapidly advanced an entire field of scientific study. Following the war the need for physicists increased dramatically without enough time to educate the next wave of students. This was a particularly large problem in the Southeast, the region in which Oak Ridge resided.

demand for the exhibits it produced for AMAE and national outreach programs, in part due to the overwhelming interest surrounding emerging nuclear science.⁵¹

In the two decades following the war, the people of Oak Ridge experienced a camaraderie centered on the pride of their participation in ending WWII. The Manhattan Project town functioned like an insulated pocket of team spirit during the war.

Throughout the following two decades, the employees of Oak Ridge's government facilities continued to foster a similar sense of connectivity driven by a shared goal.

During the first two decades of its existence, AMAE exhibitions presented a glorified version of the Manhattan Project and nuclear-science developments that reflected the predominant sentiments of the Oak Ridge community. AMAE's exhibits of the 1950s and 60s, which the government used to reinforce the government's nuclear agenda, also reflected the local Oak Ridge collective pride and spirit.

Man and the Atom

In 1948, the AEC implemented the use of public exhibits as a means to communicate its position regarding nuclear science. In partnership with sponsors General Electric and Westinghouse, it toured a traveling exhibit entitled *Man and the Atom*, which drew great popularity throughout the United States. The exhibit highlighted general details about atom splitting and the potential practical uses of nuclear physics. Visitors witnessed a chain reaction of mousetraps, a model of an atomic nucleus, and a radiation detector. Children learned about the sensationalism and peaceful uses of the atom through

⁵¹ William G. Pollard, *ORAU: From the Beginning* (Oak Ridge, Tennessee: Oak Ridge Associated Universities, 1980), 36-37.

an exhibit adapted from the Dagwood comic strip characters. A stop at the Grand Central Palace in New York City attracted the largest crowd of the tour, with over a million spectators.⁵² New York University psychologist Lillian Wald Kay polled two thousand visitors as they entered and exited the exhibit. Forty-two percent of visitors mentioned war upon entrance, compared to only thirty-three percent upon exiting. When asked about medicine, power, and industrial and agricultural uses of the atom, the number increased significantly. In a list of words to describe their feelings, Kay observed, “thirty-four percent of the exit poll subjects selected ‘hope,’ compared to twenty-seven percent in the entrance poll.”⁵³ At first use, this exhibit proved effective in directing the public towards a more positive perception of atomic energy.

The exhibit’s popularity and effectiveness solidified the attraction’s staying power and prompted the AEC to consider moving the traveling exhibit to a permanent location.⁵⁴ The Educational Services Department at ORINS submitted a proposal to open an Exhibits and Materials Department, which included an offer to permanently house and manage the *Man and the Atom* traveling exhibit in Oak Ridge.⁵⁵ The proposal from ORINS, which was promptly accepted and implemented, included a vision for a museum in Oak Ridge, due to the town’s genesis in the Manhattan Project and ongoing connection to nuclear production. Both ORNL and ORINS were located in Oak Ridge. These two

⁵² Allan M. Winkler, *Life Under a Cloud: American Anxiety About the Atom* (Urbana-Champaign: University of Illinois Press, 1999), 139.; Grand Central Palace was New York City’s primary exhibit hall from 1911 to 1953, at which point the palace closed.

⁵³ Paul Boyer, *By Bomb’s Early Light: American Thought and Culture at the Dawn of the Atomic Age* (New York: Pantheon Books, 1985), 301.

⁵⁴ Freeman, *Longing for the Bomb*, 121-122.

⁵⁵ Oak Ridge Institute of Nuclear Studies: Proposed Educational Services Program, undated (estimated late 1948-early 1949); Laboratory and University Division Official Files; Box 44, Accession 68A-1096; Record Group 326 (RG 326); National Archives in Atlanta (NAA).

institutions generated the lion's share of the nation's nuclear research, development, and education.

The new museum was housed in an abandoned WWII cafeteria with the words "The American Museum of Atomic Energy" affixed to the outside. Upon opening, AMAE became the first permanent museum dedicated to atomic science. In order to create a stronger exhibit, the AEC expanded the *Man and the Atom* content, supplemented it with supporting panels, and created a larger educational space designed for widespread visitation.⁵⁶



Fig. 2.1. AMAE 1949 Exhibit and Crowd, *Man and The Atom*: A large crowd gathered inside the WWII cafeteria that housed the first American Museum of Atomic Energy Exhibits (Photograph courtesy of U.S. Department of Energy).⁵⁷

⁵⁶ Pollard, *ORAU: From the Beginning*, 33-34.

⁵⁷ ORDOE Photographer, #no##322, AMAE 1949 exhibit *Man and The Atom*, c. 1949.; JLEFB. Photo courtesy of DOE.

By the time the museum opened, Oak Ridge was well known for its uranium enrichment facilities and was actively leading the nation's nuclear development projects. The factory sites had become something of a tourist attraction. However, while the town's existence was no longer secret, the information housed at the government facilities was a matter of national security. The AEC hoped that the museum would discourage visitors from submitting requests to visit the nearby nuclear facilities.⁵⁸ One section of the exhibit provided a generic overview of the uranium enrichment processes used during WWII as well as some of the scientific advancements developed at Oak Ridge since the war. Large aerial views of each plant facility gave visitors a chance to see the structures without walking through the middle of the ongoing classified activities. Displays explained the process of separating U-235 and U-236 from the uranium element through diffusion separation, electromagnetic separation, and the gaseous diffusion method. This section also included a fairly in-depth analysis of nuclear science, including isotope separation, materials preparation, and radioisotopes.⁵⁹ These scientific processes offered visitors a chance to see cutting-edge technology that underlay national security and, potentially, societal advancement.

Within the following years, ORINS drastically expanded the educational quality of AMAE's exhibits program. They located a more stable permanent space, updated the exhibits, and created an "off-area services" department that developed traveling exhibits with lectures, printed materials, and videos relevant to the topic.⁶⁰ Throughout the 1950s,

⁵⁸ Pollard, *ORAU: From the Beginning*, 34.

⁵⁹ ORDOE Photographer, #5274-10317, #5274-37316, and #5274-29, AMAE 1949 exhibit *Man and The Atom*, c. 1949.; JLEFB. Photos courtesy of DOE.; *Twenty Years of Progress*, 16.

the museum drew respectable and larger audiences each year, starting at 15,000 in 1949 and reaching 88,000 by the last year of the decade.⁶¹



Fig. 2.2. AMAE 1949 Exhibit Section Including Areal Views of the Plants: The AEC displayed large aerial views of the most popular tourist attractions in town, the facilities used during and after WWII (Photograph courtesy of U.S. Department of Energy).⁶²

Many Americans, however, were not easily able to visit the rural east Tennessee community. In order to reach a nationwide audience, the organization needed to garner “wide participation by the public to share new knowledge in this field, which so vitally

⁶⁰ AMAE Correspondence, 1950; Laboratory and University Division Official Files; Box 64, Accession 68A-1096; RG 326; NAA.; AMAE Museum Expansion, 1950; Laboratory and University Division Official Files; Box 64, Accession 68A-1096; RG 326; NAA.; William G. Pollard, ORINS executive director, submitted a request for the traveling exhibit extension program in 1950 and it was approved.

⁶¹ American Museum of Atomic Energy Attendance Record, 1949-1980; Blue Desk Binder; Anne Armstrong Collected Papers; AMSE, Oak Ridge, TN.; Anne Armstrong, Assistant to the Executive Director at AMSE c. 1980s-2017.

⁶² ORDOE Photographer, #5274-37316, AMAE 1949 exhibit *Man and The Atom*, c. 1949, c. 1949; JLEFB. Photo courtesy of DOE.

affects their welfare and their work.”⁶³ This participation included public financial support, including aid from state agencies, universities, schools, and colleges.⁶⁴ With this support, ORINS provided education about emerging nuclear science and peaceful uses of atomic energy in simple, non-technical terms to virtually every part of the United States. The traveling exhibits, according to the Oak Ridge 20th Anniversary committee, “ranged in size from huge demountable units, requiring 5,000 square feet of floor space, to small booth-type exhibits that were available without charge to qualified sponsors throughout the nation.”⁶⁵ ORINS utilized a variety of exhibit types and sizes and created relatively simple exhibit information so that the exhibits would be widely accessible. From July 1949- January 1953, ORINS reached nearly 6,000,000 people at county fairs, museums, and schools of every level around the country.⁶⁶

Throughout the 1950s, the permanent and traveling exhibits circulated around the theme of the earliest traveling exhibit on the topic: man’s relationship to the atom. The exhibits content addressed the ways the atom affected man and the ways man affected the atom. The main purpose of AMAE was to serve as an educational resource regarding ever-emerging nuclear science as opposed to serving as commentary on the use of the atomic bomb to end WWII. However, the exhibit did contain one panel that displayed the

⁶³ “Oak Ridge Institute of Nuclear Studies: Proposed Educational Services Program,” undated (estimated late 1948-early 1949); Laboratory and University Division Official Files; Box 44, Accession 68A-1096; RG 326; NAA.

⁶⁴ Collection of AMAE Correspondence, 1950; Laboratory and University Division Official Files; Box 64, Accession 68A-1096; RG 326; NAA.

⁶⁵ *Twenty Year of Progress*, 17.

⁶⁶ “Oak Ridge Institute of Nuclear Studies Exhibits Division: Location and Attendance of Circulating Exhibits Program July 1, 1949-January 1, 1953”; Office of Public Information Correspondence Files; Box 97, Accession 73A-0898; RG 326; NAA.; “Atomic Energy Rated Top 1949 Exhibit: Dallas, Detroit Annals Reap Publicity Harvest, Attract Throngs, Underscore Their Educational Roles with Displays.” *The Billboard: Cavalcade of Fairs*, November, 26, 1949.

newspaper coverage of the atomic bombs deployed on Japan. In the rest of the museum, ORINS explored several major issues including the science required to build an atomic bomb, atomic energy, international control of the atomic bomb, socially beneficial uses of nuclear science, and potential issues concerning exposure to radiation.⁶⁷

Faith In Knowledge

The first AMAE exhibit opened with a hopeful promise that, as a civilized people, visitors would connect with a sense of faith in knowledge, a promise that ORINS was not entirely allowed to keep. The opening panel welcomed visitors with a quote from David E. Lilienthal: “In the atomic adventure we sight one of those great mountain peaks of History, a towering symbol of one of the faiths that makes man civilized, the Faith in Knowledge.”⁶⁸ This text read like a promissory note, assuring visitors of an opportunity to learn how man’s quest for knowledge intersected with the discovery of fission and led to an exciting adventure, which would ultimately guide the world’s future. Presumably, this educational journey would teach visitors how the knowledge of nuclear science promised to further civilize society, a glorious hope for those who came to drink at the fountain of atomic information. Manhattan Project director General Groves was a nationally trusted voice. He endorsed the exhibit’s educational value for all Americans. The *Journal of Educational Psychology* quoted him: “the average American ... must learn that nuclear energy like fire and electricity, can be a good and useful servant.”⁶⁹

⁶⁷ ORDOE Photographer, #5274- series, AMAE 1949 exhibit *Man and The Atom*, c. 1949.; JLEFB. Photos courtesy of DOE.; Freeman, *Longing for the Bomb*, 121.

⁶⁸ Ibid, #5274-27009.

⁶⁹ Leslie Groves quoted in Winkler, *Life Under a Cloud*, 139.; General Leslie Groves was stationed in Oak Ridge for the entirety of the Manhattan Project from 1942-1945.

Virtually omitted from this glorious promise was the fear generated by the use of the largest bomb the world had ever seen as well as legitimate concerns that the presence of the atomic bomb could drastically affect national safety.⁷⁰

The exhibit included a significant amount of nuclear science information, however the material was carefully curated to shape the visitor's perspective of atomic potential, virtually devoid of information that would lend balance to the positive claims. Sociologist Lindsey Freeman explores this AMAE veneer in *Longing for the Bomb: Oak Ridge and Atomic Nostalgia*. She argues "the true horrors of war and the potential dangers of fissionable materials both at home and abroad were hidden behind the overt utopianism of the displays."⁷¹ George Pollard's vague description of AMAE's purpose, "so that visitors could see and learn something meaningful about atomic energy," echoes Freeman's assessment of the museum's shrouded content.⁷² ORINS delivered some meaningful messages and skillfully managed to mention, at least tangentially, each of the public's major concerns, but used protective language that veiled a more honest, complex, and multi-leveled analysis of the threats posed by nuclear power, research, and weaponry.

As an educational organization, ORINS was certainly qualified to serve as an authority on nuclear science information; however, as a government agency it was limited in regard to the scope of information it could make available to the public. The new museum department at ORINS operated as an extension of its charter mission, which included the charge to "foster and encourage advancement of knowledge concerning

⁷⁰ Freeman, *Longing for the Bomb*, 121-127.

⁷¹ Ibid, 122.

⁷² Pollard, *ORAU: From the Beginning*, 34.

nuclear sciences and technology and related fields.”⁷³ As historians Gerald Clarfield and William Wiecek noted, “beginning with the wartime secrecy that was extended by the 1946 Atomic Energy Act, the process of information flow concerning nuclear power always suffered from a circularity that deliberately excludes those outside the nuclear establishment.”⁷⁴ This paradox placed ORINS in a position of educational compromise and directly affected the information it placed in the museum and the public programming. While it was able to deliver on its promise of faith in knowledge to some extent, as a governmental entity ORINS was bound by secrecy to withhold critical pieces of the emerging atomic bank of information.

This did not mesh well with the public’s expectation of museums as, first and foremost, open educational authorities. Six years prior to AMAE’s opening and three years prior to the use of the first atomic bomb, the Metropolitan Museum of Art educator Theodore Low wrote museum guidelines, taking into account the field’s evolution. He stated: “the only purpose of museums is education in all its varied aspects from the most scholarly research to the simple arousing of curiosity. That education, however, must be active, not passive, and must always be intimately connected with the life of the people.”⁷⁵ The museum format afforded the AEC a chance to capitalize on the average American museumgoer’s belief that exhibits provided the truth.

The country’s trust in the museum as a public educational institution likely influenced the AEC’s decision to utilize the museum space as a conduit to further its

⁷³ Oak Ridge Institute of Nuclear Studies: Proposed Educational Services Program, undated (estimated late 1948-early 1949); Laboratory and University Division Official Files; Box 44, Accession 68A-1096; RG 326; NAA.

⁷⁴ Gerald H. Clarfield and William M. Wiecek, *Nuclear America: Military and Civilian Nuclear Power in the United States 1940-1980* (New York: Harper and Row, 1984), 284.

⁷⁵ Theodore Low, “What Is a Museum?” in Anderson, ed, *Reinventing the Museum*, 36.

message. Science museums were at the forefront of the museum movement, which started in the late 1800s to educate the public on the ever-increasing amount of new scientific knowledge. Over the following seventy-five years, the public maintained a strong sense of trust in the museum's educational authority.⁷⁶ Reflecting on mid-twentieth century museums, public historian Duncan Cameron wrote: "The public generally accepted the idea that if it was in the museum, it was not only real but represented a standard of excellence. If the museum said that this and that was so, then that was a statement of truth."⁷⁷ AMAE succeeded in Low's latter two tasks: active and connected to the life of the people. But due to security laws, ORINS was required to establish and maintain an educational site that fell short of a promise to educate fully as a trustworthy authority. This compromised the call to deliver a comprehensive faith in knowledge to an unsuspecting visiting public who, by and large, trusted what they read on museum walls.

All of the methods the government used were part and parcel to the process of crafting an official narrative of nuclear science and the atomic bomb. Constructing official national narratives, as Bodnar explains, "originates in the concerns of cultural leaders or authorities at all levels of society."⁷⁸ In Oak Ridge, official narrative construction was happening on virtually every level, from the top down and from the bottom up. The message was a continuation of the decades-long victory narrative, which America had come to embrace. The message was well received, as it matched the identity politics of the public, most notably those living in Oak Ridge.

⁷⁶ Steven Conn, *Museums and American Intellectual Life, 1876-1926* (Chicago: University of Chicago Press), 1998, 3-9

⁷⁷ Duncan F. Cameron, "The Museum, A Temple or the Forum" in *Reinventing the Museum*, ed. Gail Anderson, (New York: Rowan and Littlefield, 2004), 66. Originally published in *Curator: The Museum Journal* (1971) and in UNESCO's *Journal of World History* (1972).

⁷⁸ Bodnar, *Remaking America*, 13.

Do Not Fear

The 1950s AMAE exhibits delivered a controlled message of reassurance to a concerned public. With the Cold War in full swing, the threat of nuclear war was ever-present. Capitalizing on Eisenhower's Atoms for Peace initiative, the AEC directed the focus of their exhibit messages towards the more peaceful uses of the atom.⁷⁹ However, they could not escape the fact that nuclear energy held both the power to create and the power to destroy. In fact, as Spencer Weart attests, "Public anxiety about nuclear weapons was so strong that Atoms for Peace productions could not hope to outweigh it except with the most wondrous visions."⁸⁰ The AEC, and by extension ORINS, had no real option but to address the public's fears; however, they did choose the content and how it was conveyed.

As a primary means to reinforce a message of hope and diminish fear, the AEC illustrated and promoted the potential for creating a utopian atomic society. The assumption, as historian Allan Winkler explains, was that "nuclear power might counter the destructive possibilities of ever more powerful nuclear weapons and provide an opportunity to remake the world. They dreamed of nuclear utopia, with electricity generated at virtually no cost, cars, planes, and ships fueled by an inexhaustible energy source, and isotopes readily available for industrial and medical use."⁸¹ Consistent with a promotional pattern the government used in the Atoms for Peace movement, the AEC

⁷⁹ "Atoms For Peace" was an initiative started by President Dwight Eisenhower. In this initiative the government utilized public spaces and places to project messages that underscored the peaceful uses of the atom. This initiative was designed to garner the American public's support to continue widespread nuclear research and development.

⁸⁰ Weart, *The Rise of Nuclear Fear*, 88.

⁸¹ Winkler, "The Chimera of Nuclear Power," in Maddock, *Problems in American Civilization*, 141.

inundated the 1950s museum visitor with positive images that validated a concerned public's nuclear hopes and dreams for the utopian society. One panel after another showed the grandiose potential of nuclear industry, including the power of churning energy, conducting research, and protecting the nation with munitions.⁸²

Medical radiation was among the most popular nuclear themes throughout the nation and became a prominently placed topic in AMAE 1950s exhibits. Americans were not only seeking information, they were also buying treatments at a rapid pace. As Weart states: "Medical radiation was so popular that U.S. officials had to issue a warning against 'atomic' potions peddled by quacks."⁸³ The AEC tapped into this enthusiasm and used the AMAE platform to highlight positive medical uses of the atom through medical isotopes, which were accessible to the public. The American Cancer Society (ACS) sponsored a prominent panel, which addressed the benefits of radiation, and included the assertion: "theoretically, all cancer could be cured if sufficient amounts of x-rays or radium rays could be applied."⁸⁴ On the exhibit panels, the ACS with ORINS highlighted the potential benefits that radium and x-ray therapy could provide. The listed benefits of radiation therapy were not unfounded; however, they were idealistic and overstated. The text omitted the potential cancerous side effects that could result from too much radiation exposure during treatment. As a caveat, panel text stated that all cancers would not likely be cured through this method, as not all cancers were susceptible to radiation therapy.⁸⁵

⁸² ORDOE Photographer, #5274- series, AMAE 1949 exhibit *Man and The Atom*, c. 1949.; JLEFB. Photos courtesy of DOE.

⁸³ Weart, *The Rise of Nuclear Fear*, 89.

⁸⁴ ORDOE Photographer, #5274-22, AMAE 1949 exhibit *Man and The Atom*, c. 1949.; JLEFB. Photo courtesy of DOE.

⁸⁵ ORDOE Photographer, #5274-22 and #5274-23, AMAE 1949 exhibit *Man and The Atom*; JLEFB. Photos courtesy of DOE.



Fig. 2.3. AMAE 1949 Exhibit Section, “Radiation Therapy in Cancer”: The American Cancer Society sponsored an exhibit at the American Museum of Atomic Energy (Photograph courtesy of U.S. Department of Energy).⁸⁶

The AEC also outlined advancements in hereditary science including genetic mutation and the possible development of new pharmaceuticals. In fact, it exclaimed that penicillin production rates might increase by using radiation to mutate the medicine. This was extremely hopeful information for a public in need of penicillin. An increase in penicillin production meant a dramatic decrease in the consumer price.⁸⁷

The innocent glow of atomic hope was most strongly evident in the way AMAE related to children, which reflected an innocent veneer laced throughout the exhibit spaces. Similar to the first edition of *Man and the Atom*, the exhibit installation in Oak Ridge also included an oversized floor to ceiling panel of the comic book *Dagwood Splits the Atom!*, sponsored by General Electric.⁸⁸ An official edition of the comic was published for general circulation the next year and included bonus “scientific advice”

⁸⁶ Ibid.

⁸⁷ Ibid, #5274-26.

⁸⁸ Ibid, #5274- series.; Michael Scheibach, *Atomic Narratives and American Youth: Coming of Age with the Atom 1945-1955* (Jefferson, NC: McFarland & Co, 2003), 46.

from General Groves.⁸⁹ The specially designed narrative explained the principles of atomic energy in a light-hearted fashion aimed at children. By utilizing a well-known comic strip, the AEC could establish trust with its youngest visitors. The exhibit connected the brightest hopes of an atomic society to the Dagwood character that most children would recognize from the daily newspaper.⁹⁰

The 1950s AMAE sought to defuse fears about catastrophic destruction and the health risks posed by the presence of nuclear research and development. In the decade following the destruction at Hiroshima and Nagasaki, Americans grew more concerned about the ways in which nearby nuclear research and development could cause radiation exposure. In fact, their concerns were well founded. Nuclear tests sprayed radioactive material into the air that then fell to the ground and into the earth's surface, in a process that became known as fallout. Cancer-causing chemicals were incorporated into the earth's elements and, ultimately, into the human food chain. The more this information became accessible to the American public, the more they feared the nuclear research and development process.⁹¹ The AEC used the AMAE exhibit space to counteract fears of health risks by directly addressing the concerns and presenting plausible scientific explanations to reassure the concerned visiting public. The museum installations warned visitors about radiation found in soil, air, buildings, and even the human body. They warned against inhaling radiation, showed protective clothing measures, discussed safe daily exposure limitations, and relayed contamination control requirements. But these worrisome topics were balanced with proof that the AEC was controlling radiation in the

⁸⁹ Joe Musial, *Learn How Dagwood Splits the Atom!* (New York: King Features Syndicate, 1948).

⁹⁰ Ibid.

⁹¹ Weart, *The Rise of Nuclear Fear*, 88-122.

environment to safe and approved limits. One of the radiological safety-themed sections included a large display of detection devices. Additionally, visitors could interact with mechanical arms that simulated the protective measures taken by employees in radiation labs such as those at Y-12 and ORNL. Visitors played with this attraction as if it were a game. They stood in line hoping for their chance to grab objects from a far distance with metal mechanical tongs. The objects represented radioactive materials.⁹²



Fig. 2.4. AMAE 1949 Exhibit Feature, Mechanical Arms: Children use mechanical arms at AMAE to play checkers, which simulate radioactive material (Photograph courtesy of U.S. Department of Energy).⁹³

⁹² ORDOE Photographer, #5274-30001, #5274-25, #5274-21, #5274-8, AMAE 1949 exhibit *Man and The Atom*, c. 1949.; JLEFB. Photos courtesy of DOE.

⁹³ Ibid, #56-0817.

Outbreak of worldwide nuclear war was a legitimate concern among 1950s Americans, one that the AEC addressed by designing exhibits that portrayed the United States' efforts to maintain international control of the atomic bomb and energy. The AEC validated the public's fears. In a section entitled "International Control of Atomic Energy," the AEC described the feasibility that every major country could obtain an atomic bomb within twenty-five years, leading to the catastrophic potential of atomic warfare. The admission of this possible worst-case scenario was followed by an assurance that war could be eliminated if the United States could establish atomic energy control. Under a large central subtitle that read "Atomic Energy Requires International Control," illustrated text boxes relayed five key points of concern and one that concluded: "Establishment of effective atomic energy control is a necessary step towards complete international cooperation to eliminate war."⁹⁴ The AEC's exhibit text told visitors that peacetime atomic energy resources would be diverted to munitions should the threat of atomic war increase. In conjunction with the AEC's larger public policy, the museum showed Russia as a minority player and reinforced the United States' partnership with the United Nations. The AEC's language in the early AMAE exhibits validated the public's fears and reinforced a reassuring message that the government was ready and able to handle looming threats.⁹⁵

The 1950s AMAE exhibits lacked the in-depth analysis needed to inform sufficiently a concerned public, a reflection of larger government trends. Leading government officials consistently relied on Americans' belief that theirs was a nation

⁹⁴ Ibid, #5274-36320.

⁹⁵ Ibid.

driven by the benevolent peacemaker agenda in order to justify a movement towards becoming more aggressive. This mythical veneer of the nation's war story was sustainable in a world in which America's native soil scarcely saw the horrors of foreign

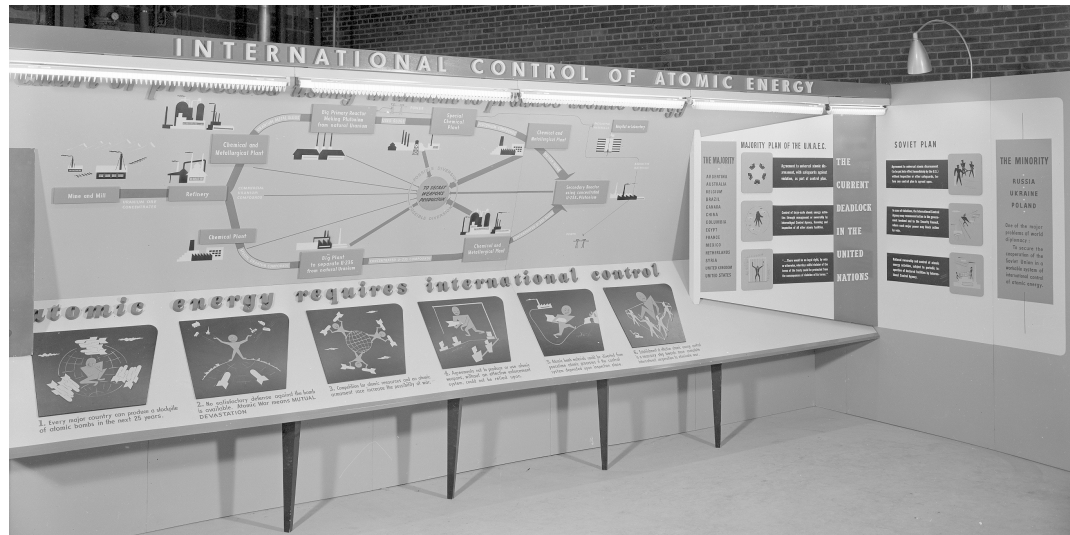


Fig. 2.5. AMAE 1949 Exhibit Section, “International Control of Atomic Energy”: The AEC described the importance of America maintaining international control of atomic energy in a 1949 AMAE exhibit (Photograph courtesy of U.S. Department of Energy).⁹⁶

invasion and defeat.⁹⁷ When the atomic bombs exploded over Japan, Engelhardt argues, “[they] also blasted openings into a netherworld of consciousness where victory and defeat, enemy and self, threatened to merge. Shadowed by the bomb, victory became conceivable only under the most limited conditions.”⁹⁸ Assurances from Washington, which filtered to the AMAE museum space, suggested that advancing nuclear proliferation was the path to adequate protection and ultimate victory. A converse argument, as Engelhardt explains, was that “there was no way Americans could be protected from their country’s greatest weapons except by an unpalatable program of

⁹⁶ Ibid, #5274-36320.

⁹⁷ Engelhardt, *The End of Victory Culture*, 5.

⁹⁸ Ibid, 6.

disarmament.”⁹⁹ Conflicting and confusing national discourse about nuclear policy and public protection appeared more simplistic in AMAE exhibits.

The AEC consistently used these types of omissions methods in forums other than the museum when responding to public inquiry about risks of nuclear exposure. The AEC established a consistent response to nuclear protesters or overtly skeptical factions in which they “dismissed the objection as unfounded and poured on a public relations rebuttal.”¹⁰⁰ Underlying the government’s defensive push back was the AEC’s attempt to justify ongoing nuclear research and bomb testing and ask for the public’s support. In due time, the nation would learn that the protestors were correct in their assessment. Clarfield and Wiecek explain, “the protests continued to mount; and eventually the AEC gave way, implicitly admitting the validity of the protesters’ views by lowering dosage ceilings.”¹⁰¹ In the meantime, the government’s insistent rebuttal was unrelenting. The AEC consistently stated their case through a variety of modalities including media outlets, federal hearings, and public interpretation at AMAE.¹⁰²

Oak Ridge Living Utopia

If Americans were hoping for a more ideal society, Oak Ridgers believed they were living it. The social structure of the Manhattan Project, which finds its roots in the industrial town plan, became an inspiration for the ideal society. Those who ascribed to the ideal society concept envisioned a collection of hard-working Americans who existed

⁹⁹ Ibid, 157.

¹⁰⁰ Clarfield and Wiecek, *Nuclear America*, 205.

¹⁰¹ Ibid, 205.

¹⁰² Ibid, 216-217.

with an intense community spirit driven by a larger shared goal. In the years after WWII, the town embraced the mentality of living somewhat isolated from the rest of the world and enjoying the benefits of a town plan that was established by the government during the war. Those benefits included quality childhood education, an exciting work environment, access to the latest technology, and a social structure connected to a sense of community spirit and a shared mission.¹⁰³

The theory of a utopian nuclear society, especially in Oak Ridge, glossed over issues of secrecy, government control, and fears generated by the threat of exposure and nuclear world war. Lifton and Mitchell argue that, in an attempt to justify the devastation caused by the atomic bomb in Japan, “Americans assigned themselves the task of finding virtue in the first use of the most murderous device ever created.”¹⁰⁴ Ascribing morality to work in Oak Ridge was paramount, especially for those whose identity was attached to the construction of the bomb. Many local citizens recognized the potential dangers of nuclear exposure and war; however, most Oak Ridgers maintained hope that, similar to trends around the nation, the benefits would outweigh the downsides. Any nationwide hopes of an ideal society were amplified in Oak Ridge as the town was physically, emotionally, mentally, and financially interconnected with the continuation of atomic research and nuclear science.¹⁰⁵

A utopian nuclear society was a fantasy that began with the Oak Ridge ideology and extended into ORINS’s exhibits. Throughout the 1950s, the AMAE museum and

¹⁰³ Freeman, *Longing for the Bomb*, 93-119.

¹⁰⁴ Robert Jay Lifton and Greg Mitchell, “America’s Attempt to Justify the Morality of the Bomb,” in *Problems in American Civilization: The Nuclear Age*, ed. Shane J. Maddock, (Houghton Mifflin Company: New York, 2001), 83.

¹⁰⁵ Freeman, *Longing for the Bomb*, 171-172.

traveling exhibits were well received by visitors looking to counter-balance their looming fears of nuclear war and radioactive exposure with hope and reassurance.¹⁰⁶ ORINS, along with the AEC, crafted exhibit text that addressed permeating public fears while also capitalizing on the dreams of a nuclear-powered utopia. The beginnings of this fantasy were modeled, in part, in Oak Ridge itself, where citizens could enjoy a unique way of life driven by a sense of camaraderie and community cohesion. This way of life was underscored and underwritten by the government's presence, as well as by nuclear advancements conducted at ORNL, Y-12, or K-25. Oak Ridge was populated with a highly intelligent people who were intimately involved with the progression of nuclear science. After WWII, this previous Manhattan Project site became the primary location for production of enriched uranium at the K-25 Gaseous Diffusion Plant, nuclear weapons production at the Y-12 Plant, and nuclear research at the ORNL. Further, the majority of 1950s Oak Ridge citizens were present during the war and were able to bask in the nation's victory in which they had participated.¹⁰⁷

AMAE became a shining beacon of Oak Ridge's international success by providing a prominent and visual showcase of local pride in which the high ideals of nuclear industrial work life was perpetuated. The first day the museum opened, the town was on display. AMAE's debut coincided with the opening of the city gates, marking the end of the town as a government-controlled site. More than eight hundred visitors,

¹⁰⁶ Exhibit reviews; Research and Technical Division Correspondence Files; Box 13, Accession 84A-0003; RG 326; NAA.

¹⁰⁷ Freeman, *Longing for the Bomb*, 93-119. Johnson and Jackson, *City Behind a Fence*, 51-58.

including Hollywood celebrities, arrived for a weekend long celebration of the newly opened city and museum, which generated a large national media buzz.¹⁰⁸ Over the



Fig. 2.6. “Atomic City” Postcard: Oak Ridge advertised as the “Atomic City” with AMAE the featured attraction (Photography and design by Robert E. Calonge, postcard owned by the author).

following decade, American and international citizens traveled from far distances to visit this museum in a tiny Tennessee town. The lure of nuclear industry turned Oak Ridge into a topic of great interest, and the museum perpetuated the hype. AMAE not only engaged in topical national and international nuclear discussions, but also exhibited information about ORNL. The government facilities, the central workplaces of the town itself, were on display for the world to see. Local employees could take their children, relatives, friends, and neighbors to exhibits that showed their personal jobs and their national impact.¹⁰⁹

¹⁰⁸ Pollard, *ORAU: From the Beginning*, 34.

¹⁰⁹ Freeman, *Longing for the Bomb*, 122-127.

Your Stake in the Atom

America's wholesale hopes of a nuclear utopia began to fade in the 1960s and were replaced with a more critical analysis of the government's nuclear policy. A stockpile of nuclear weapons became the impetus for global policy. "In other words," Engelhardt states, "the United States was officially committing itself to turn conflicts with the enemy, large or small, anywhere in the world, into one-sided nuclear wars."¹¹⁰ Several historians produced scholastic works in which they sought to uncover the government's undisclosed nuclear agendas and critically analyze America's relationship with atomic power and weapons. In 1965, atomic bomb critic Gar Alperovitz released his first major work, *Atomic Diplomacy*, in which he questioned the unilateral victory narrative surrounding Truman's decision to use the atomic bomb.¹¹¹ Anti-nuclear advocacy groups, such as SANE, increasingly exposed the dangers associated with the government's nuclear testing program. Bomb shelters popped up all over the United States as a means of protection from the threat of a nuclear blast or the effects of fallout. The country saw the looming threat of nuclear war while facing the Cuban Missile Crisis. America entered the Vietnam War with hopes of defeating the spread communism. Collectively, these concerns fueled national and worldwide anti-nuclear organizations who asked world leaders to eliminate nuclear weapons. Strong voices emerged and inserted themselves into America's consciousness in a way that ran counter to and threatened the established victory narrative.¹¹²

¹¹⁰ Engelhardt, *The End of Victory Culture*, 158.

¹¹¹ Gar Alperovitz, *Atomic Diplomacy: Hiroshima and Potsdam* (New York: Vintage Books, 1965).

¹¹² Weart, *The Rise of Nuclear Fear*, 181-189.

Although unilateral national faith in the utopian promise of nuclear science was eroding, the appeal of atomic energy and the hope of a brighter future maintained a stronghold in much of the American consciousness throughout the 1960s, which the AEC exploited and sought to inflate with the AMAE exhibits. The AEC redirected the conversation by using the AMAE exhibit text to highlight the 1950s' nuclear advancements. Prospective atomic projects from the 1950s appeared in the 1960's museum exhibits as completed tasks; hopes, and dreams realized. "Atomic Man released the vast energy of the atomic nucleus... controlled nuclear energy to increase his energy supply several hundred times... used nuclear energy to feed an expanding population to explore the planets..."



Fig. 2.7. AMAE Mid-1960s Museum Exhibit Section About Atomic Dreams: The text at the top of the exhibit told visitors that 1950s atomic dreams had been realized (Photograph courtesy of U. S. Department of Energy).¹¹³

¹¹³ ORDOE Photographer, #69-C-927-1180, c. mid 1960s AMAE museum exhibit; JLEFB. Photo courtesy of DOE.

explore the planets,” a mid-1960s exhibit proclaimed.¹¹⁴ Further, the tone of the exhibits encouraged public buy-in by urging visitors to take personal responsibility for positively incorporating the atom into their ever-evolving life spaces. Nuclear science was no longer held at a distance, the AEC argued, but was a matter of personal ownership.¹¹⁵

A prominent traveling exhibit released in the early 1960s, *Your Stake in the Atom*, highlighted the ways in which the atom could improve almost every facet of American life.¹¹⁶ This was similar to the 1950s exhibits and remained consistent with AMAE’s 1960s message. The decade’s exhibits often depicted a nuclear future that would lead humanity into the vast, exciting unknown, such as exploring below the earth’s surface or voyaging into outer space.¹¹⁷ Clarfield and Wiecek explain, “at a time when men dreamed of nuclear rocket and aircraft propulsion, the glamour of the industry provided its devotees an unusually intense stake in its success.”¹¹⁸ In an opening statement of *Your Stake In the Atom*, AEC Chairman Glenn T. Seaborg charged the American people to take responsibility for understanding their stake in the atom, “Atomic energy is playing a vital role in the life of every man, woman, and child in the United States today. It is essential that all Americans have some understanding of this vital force if they are to discharge thoughtfully their responsibilities as citizens.” The exhibit guided visitors to this end, as Seaborg went on to say: “the U. S. Atomic Energy Commission presents this

¹¹⁴ ORDOE Photographer, #69-C-927-1180, AMAE museum exhibit, c. mid 1960s; JLEFB. Photo courtesy of DOE.

¹¹⁵ ORDOE Photographer, 1960s series, AMAE museum exhibits, 1960-1969; JLEFB. Photo courtesy of DOE.

¹¹⁶ ORDOE Photographer, #61-0928-5172, #66-562-3289, and #E-235-7291, AMAE museum exhibit *Your Stake In the Atom*, c. early 1960s; JLEFB. Photos courtesy of DOE.

¹¹⁷ ORDOE Photographer, 1960s series, AMAE museum exhibits, 1960-1969.; JLEFB. Photos courtesy of DOE.

¹¹⁸ Clarfield and Wiecek, *Nuclear America*, 279.

exhibit to help you achieve such understanding of atomic energy and the contributions it is making to our national welfare and society.”¹¹⁹ The AEC was continuing its quest to use AMAE exhibits as a tool that would draw support for the government’s atomic agenda while also encouraging citizens to claim an invested interest in supporting the government’s work.

Despite expanded exhibit size, the 1960s exhibit scripts were written with a vague and simplistic tone glazed with idealism, as evidenced in one of the larger exhibits of the decade, *Radiation in Perspective*. While the museum addressed the topic of radiation, it downplayed the risks. The exhibit normalized the new exposure risks, stating “man has always been exposed to radiation from outer space and from naturally occurring radioactive materials in the earth’s crust.”¹²⁰ The text then juxtaposed the amount of exposure risk to the proximity at which man stood from the radioactive rays, merely showing that humans would be affected over a long period of time if they stood too close to radioactive material. Despite legislation and research to the contrary, these types of exhibit text and illustration trends were consistent with the AEC’s overall message of the decade: downplay the risk of fallout.¹²¹

AMAE’s 1960s exhibit scripts contained an incomplete message, one that reflected government information withholding in a way that teetered on the edge of deception. Fallout presented such a dangerous risk that President Kennedy signed the

¹¹⁹ ORDOE Photographer, #E-235-7291, AMAE museum exhibit *Your Stake In the Atom*, c. early 1960s; JLEFB. Photo courtesy of DOE.

¹²⁰ ORDOE Photographer, #C-285-6223, AMAE museum exhibit *Radiation In Perspective*, c. mid 1960s; JLEFB. Photo courtesy of DOE.

¹²¹ ORDOE Photographer, 1960s series, AMAE museum exhibits; 1960-1969; JLEFB. Photos courtesy of DOE.

Partial Test Ban Treaty in 1963. This treaty banned atmospheric testing and effectively served as the government's admission of severe dangers associated with nuclear testing.

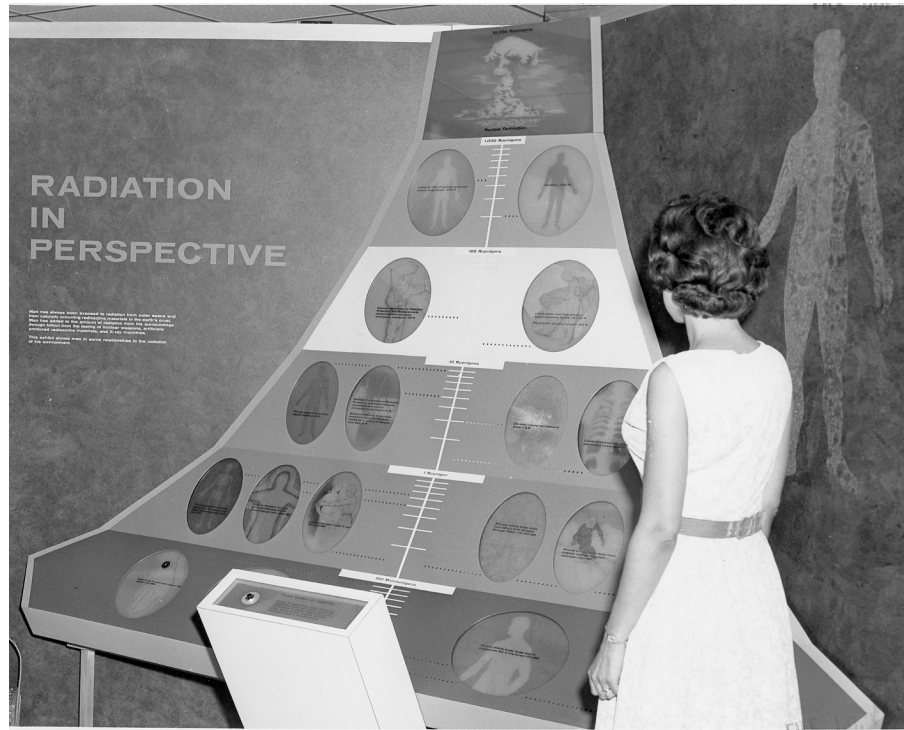


Fig. 2.8. AMAE Mid-1960s Museum Exhibit Section “Radiation In Perspective”: An AMAE panel illustrated safe and harmful distances of radiation exposure (Photograph courtesy of U.S. Department of Energy).¹²²

However, underground tests continued and caused eruptions of fallout material to seep through the ground's surface and eventually make its way into crops, grasses, and cow's milk.¹²³ The treaty mostly appeased the public's concerns. Although, as Clarfield and Wiecek explain, “problems of fallout lingered to further discredit the AEC and becloud the future of nonmilitary applications of nuclear power.”¹²⁴ AMAE's message assured visitors that radiation exposure was not new to humans and was unlikely to cause

¹²² ORDOE Photographer, #C-285-6223, AMAE museum exhibit *Radiation In Perspective*, c. mid 1960s; JLEFB. Photo courtesy of DOE.

¹²³ Clarfield and Wiecek, *Nuclear America*, 229.

¹²⁴ *Ibid*, 229.

immediate or lasting harm to the general public through their method of controlled release. As such, the government's use of AMAE in the 1960s was fairly consistent with the propaganda-like uses of the museum in the 1950s.¹²⁵

In conjunction with the government's use of propaganda, the 1960s exhibits directed visitors towards the opportunities of nuclear energy and away from the atomic bomb's destruction. The opening panel of the *Your Stake In the Atom* exhibit included two images, the first nuclear energy pile in Chicago in 1942 and the first atomic bomb

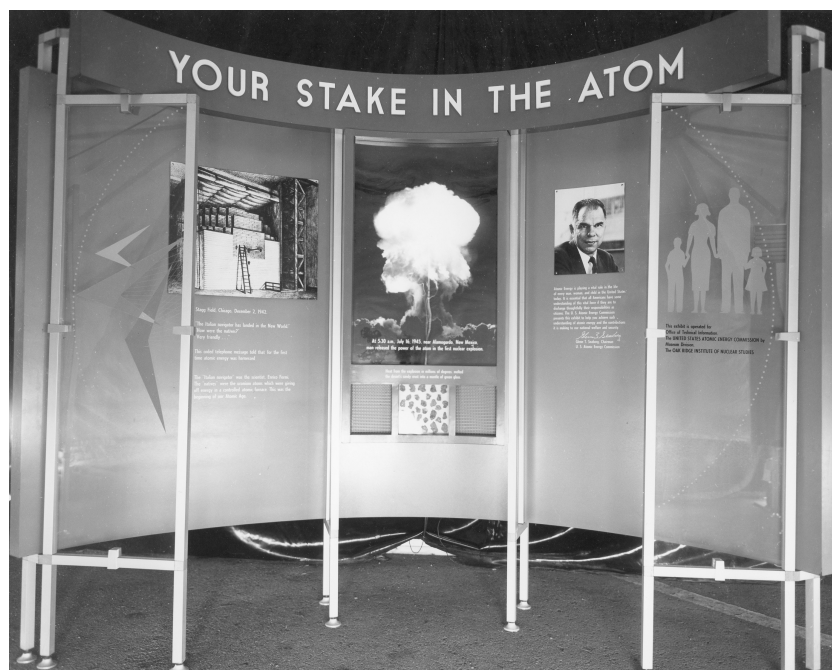


Fig. 2.9. AMAE Early-1960s Exhibit *Your Stake In the Atom*: The entry panel to the exhibit illustrated a call for Americans to claim ownership of the atom (Photograph courtesy of U.S. Department of Energy).¹²⁶

¹²⁵ ORDOE Photographer, 1960s series, AMAE museum exhibits, 1960-1969; JLEFB. Photo courtesy of DOE.; The museum also created a booklet entitled "Local Fallout from Nuclear Bombing: What it is and What it Does" in order to provide additional information: Delbert F. Sunberg to Los Alamos Scientific Laboratory Department Head Office of Public Relations, July 22, 1968; Office of Public Information Correspondence; Box 215, Accession 73A 0898; RG 326; NAA.

¹²⁶ ORDOE Photographer, #E-235-7291, AMAE museum exhibit *Your Stake In the Atom*, c. early 1960s; JLEFB. Photos courtesy of DOE

test in New Mexico in 1945. The message between these photos addressed the way the bomb represented the power contained in the atom, not necessarily the potential for worldwide nuclear war.¹²⁷ That power, the exhibit text explained, was used to aide the defense program in ways other than the development of atomic bombs. The exhibit text defended the use of nuclear-powered submarines, ballistic missiles, and a nuclear warhead designed for the infantry as necessary tactical weapons used for a limited spaced target.¹²⁸ As the decade progressed, so did America's concern about nuclear war and the government's motives for using the two atomic bombs at the end of WWII. However, AMAE further glorified the atomic bomb's existence and use. In 1967, Y-12 created a commemorative model of the first uranium 235 bomb, Little Boy, and displayed the monument in the museum.¹²⁹

Innocent Atomic Minds

Keeping with its commitment to attract future atomic supporters and inspire the next generation of nuclear scientists, the updated AMAE exhibits and traveling exhibits of the 1960s included sections and activities for children. Those who were willing to sacrifice a dime could go home with an irradiated dime souvenir encased in plastic. The irradiator would take a standard issue silver dime and convert it from nickel-109 to radioactive silver-110, a playful feature that AMAE had offered since its earliest exhibit in 1949. Kids who visited the 1960s exhibits were also invited to participate in a myriad

¹²⁷ Ibid.

¹²⁸ ORDOE Photographer, #61-0928-5172 and #E-235-7291, AMAE museum exhibit *Your Stake In the Atom*, c. early 1960s; JLEFB. Photos courtesy of DOE.

¹²⁹ "Little Boy Model Made in Y-12 Goes to Museum," *Oak Ridger* (Oak Ridge, TN), June 7, 1967.

of hands-on demonstrations like the sensationalized static electricity ball that sent 250,000 volts of energy through the human body, causing hair to stand up on one's head, an attraction the museum offered during the following six decades.¹³⁰

A sizable children's exhibit entitled *Atomsville USA* offered a lighthearted approach to atomic science. The museum aimed to expose these "junior scientists," as the magazine *Progress* named them, to the multi-faceted nuclear technology of the future. Children could run through the space playing games that encouraged them to contemplate the structure of an atom. Educational games kept the space fun, including a drawing project that taught the nature of a half-life and a scale used to determine how many atoms corresponded with the weight of a human body. A life-sized map of the world challenged young visitors to find uranium deposits based on lighted clues. One section showed the ways nuclear power could influence everyday life, while another hailed the identity of "Atomic Pioneers." Other sections of these exhibits included content that lightly addressed the darker side of nuclear science. Children were challenged to consider the proper way to handle radioactive material and the nuclear chain reaction that created an atomic explosion.¹³¹

¹³⁰ Oak Ridge Associated Universities, accessed on March 20, 2015, <http://www.oraui.org/ptp/collection/medalsmementoes/dimes.htm>; *Irradiated Dimes- (1950s, 1960s)*, "Junior Scientists Flock to Atomsville," *Progress*, March-April 1966; Blue Desk Binder; Anne Armstrong Collected Papers; AMSE, Oak Ridge, TN.; *Radioactive Silver Brochure*, 1969; Drawer FC 3 2.30; AMSE Archive, Oak Ridge, TN.

¹³¹ ORDOE Photographer, #64-0094A201, #64-0320-10A161, #64-0320-15A165, #64-320-1164, #64-0593-11205, #65-0275217, #C-345-1163, AMAE museum exhibit *Atomsville USA*, c. 1964; JLEFB. Photos courtesy of DOE.



Fig. 2.10. AMAE Early-to-Mid-1960s Exhibit Entrance, *Atomsville USA*: Children wait for their turn to explore the atoms-related exhibit (Photograph courtesy of U.S. Department of Energy).¹³²



Fig 2.11. AMAE Early-to-Mid-1960s Exhibit Rendering, *Atomsville USA*: A rendering of the exhibit where children could play and explore a land of atomic glee (Photograph courtesy U.S. Department of Energy).¹³³

¹³² ORDOE Photographer, #68-C859-2169, AMAE exhibit *Atomsville USA*, c. early to mid-1960s; JLEFB. Photo courtesy of DOE.

In the interest of improving atomic-science education among school children and adults, ORINS increased the number of nationwide and international traveling exhibits, many of which were targeted for school children.¹³⁴ The traveling exhibits ultimately became a much larger portion of the ORINS exhibits program than the Oak Ridge based museum itself. In a letter to ORNL director Alvin Weinberg, an ORINS employee referenced the traveling exhibits when stating, “the museum is like an iceberg - the largest part is invisible.”¹³⁵ ORINS prepared an army of matching vans that spread out across the country, delivering exhibits to big cities and small towns alike.¹³⁶

A primary traveling exhibit of the decade named *This Atomic World* was specifically designed to “provide an appreciation of the peaceful uses of nuclear energy to high school students throughout the United States.” ORAU considered *This Atomic World* to be the “heart and care” of the exhibits division.¹³⁷ Museum reviews reveal that the traveling exhibits were highly popular and generally well received.¹³⁸ Roughly twelve million students saw *This Atomic World* each year from its inception in 1955 through the

¹³³ DOE Photograph Collection, #64-0096203, AMAE exhibit *Atomsville USA*, c. early to mid-1960s; JLEFB. Photo courtesy of DOE.

¹³⁴ Exhibits Budget Info correspondence, 1965; Office of Public Information Correspondence; Box 191, Accession 73A-0898; RG 326; NAA.; Foreign Exhibits correspondence, 1968; Office of Public Information Correspondence; Box 224, Accession 73A-0898; RG 326; NAA.; Frederick Napp, “This Atomic World” paper, 1968; Office of Public Information Correspondence; Box 223, Accession 73A-0898; RG 326; NAA.

¹³⁵ To A. M. Weinberg on Exhibits at ORNL and in Oak Ridge, April 3, 1968; Office of Public Information Correspondence; Box 224, Accession 73A-0898; RG 326; NAA.

¹³⁶ ORDOE Photographer, #68-C859-2169, AMAE traveling exhibit vans, c. late-1960s; JLEFB. Photo courtesy of DOE.

¹³⁷ Frederick Napp, “This Atomic World,” paper, 1968; Office of Public Information Correspondence; Box 223, Accession 73A-0898; RG 326; NAA.

¹³⁸ “Popularity Leads to Atomsville Extension,” newspaper article, (publication unknown), July-August 1966; Green Desk Binder; Anne Armstrong Collected Papers; AMSE, Oak Ridge, TN.

end of the 1960s. In the 1967- 1968 alone, over two million school children saw the exhibit either through the traveling program or at AMAE.¹³⁹



Fig. 2:12. AMAE Army of Matching Vans c. Mid-1960: An army of matching vans traveled AMAE exhibits around the country (Photograph courtesy of U.S. Department of Energy).¹⁴⁰

Oak Ridge in the 1960s

As the voice of the Oak Ridge vernacular emerged in the 1960s, it sounded much more like the official government narrative than that of the challenging voices of dissent heard around the country. Bodnar suggests that, “Defenders of [vernacular] cultures are numerous and intent on protecting values and restating views of reality derived from firsthand experience in small-scale communities rather than the ‘imagined’ communities of a larger nation.”¹⁴¹ Yet, the small Oak Ridge community was seemingly doing the

¹³⁹ Frederick Napp, “This Atomic World,” paper, 1968; Office of Public Information Correspondence; Box 223, Accession 73A-0898; RG 326; NAA.

¹⁴⁰ ORDOE Photographer, #68C859-2169, AMAE 1949 Army of Matching Vans, c. 1968.; JLEFB. Photo courtesy of DOE

¹⁴¹ Bodnar, *Remaking America*, 14.

opposite. While many Americans increasingly questioning the use of the atomic bomb and ongoing risks of atomic production, Oak Ridge was further solidifying a collective identity cloaked in the WWII victory narrative and subsequent positive developments at the government facilities in Oak Ridge.¹⁴² Bodnar continues: “normally vernacular expressions convey what society in reality feels like, rather than what it should be like.”¹⁴³ If this is true, perhaps it explains what was happening in the Oak Ridge community. Those who lived and worked in such close proximity to the ORNL, Y-12, and K-25 before, during, or after the war held a very personal stake in the atom. Most Oak Ridgers worked at the very sites that were causing concern in their fellow citizens. They were still heavily invested in the maintenance and success of production at the government facilities, which constituted the only local industry. Further, the town still functioned much like the insulated bubble it was during the war. Perhaps their societal reality was reflective of the official narrative as the government was portraying it.

Local commemorative events and AMAE exhibits reflected the town’s identity in a very powerful and public way. AMAE did not directly discuss the community, their daily lives, or their lives during the war; however, the fruit of the daily labor at the government facilities was ever-present in the exhibits.¹⁴⁴ Local newspapers consistently printed stories about AMAE activities and cited the museum’s international visitors, special children’s groups, and high attendance records.¹⁴⁵ Community events such as the twentieth and twenty-fifth anniversaries of the town’s inception, in 1962 and 1967

¹⁴² Freeman, *Longing for the Bomb*, 96-109.

¹⁴³ Bodnar, *Remaking America*, 14.

¹⁴⁴ Freeman, *Longing for the Bomb*, 120-127.

¹⁴⁵ Newspaper Clippings Collection; AMSE Archive, Oak Ridge, TN.

respectively, provided an opportunity to celebrate this identity.¹⁴⁶ The twenty-fifth anniversary celebration included the only public showing of a locally written play entitled *A Thousand Suns*, which celebrated the Manhattan Project and the first twenty-five years of the town's existence.¹⁴⁷

On the Cusp of Change

The fabric of America's victory culture began to rip the moment the first atomic bomb was detonated over Japan. In the 1950s and 60s, the fight to defeat Communism led to an aggressive nuclear armament program that found its roots in Oak Ridge. As a means to perpetuate this agenda, the federal government used various means to gloss over the ill affects of nuclear science and weaponry. Government agencies created a mythical nuclear narrative that long glorified the American war story and communicated that tale to the country via museum exhibits. Faced with a barrage of conflicting messages, the American public began to see through the façade and started a counter discussion to offset the government's official perspective. Neither the federal government nor the small nuclear town of Oak Ridge did much to alter their version of the nuclear agenda.

During its first two decades, the AEC utilized AMAE museum exhibits to depict emerging nuclear science and address nationwide and international atomic energy discussions. In the beginning of the decade, AMAE exhibits reflected overall national trends. Most Americans maintained more hope than fear about nuclear science. As public

¹⁴⁶ *Twenty Years of Progress*.

¹⁴⁷ Esther Kitze and Helen Knox, *A Thousand Suns: A Musical Story of Oak Ridge's First Twenty Five Years*, original play script. (Musical lyrics and composition by Betty Clayton Osborn. Oak Ridge: Oak Ridge Festival, Inc, 1967).

concern rose in the mid-to-late 1960s, AMAE somewhat adjusted its exhibits to reflect national shifts. Yet, by the end of the 1960s those changes were still slight in nature.

The application of Theodore Low's futuristic peace-generated museum concept proves more complex than his simple idealistic statement could communicate. While America could technically maintain its victory-culture narrative after winning WWII, the nation's treasured identity was thrust into a world of confusion and bewilderment that filtered into the museum field. In his post-war predictions, Low was correct in assuming that the next role for museums was to help foster peace. The change he predicted did not come to fruition for several decades.

Throughout the 1960s, the AEC consistently stopped short of providing comprehensive content that could have invited the American public into an anti-Cold War discussion. The museum space was consistently devoid of controversial and challenging topics. Unbeknownst to a trusting public, the AEC exploited a widespread faith in the museum field's authority to convince visitors that they had received a complete atomic education at AMAE. In many ways, AMAE succeeded in living out Low's museum vision throughout the 1960s. The AEC also used the space to promote the perpetuation of nuclear production that was feeding the Cold War.

AMAE was poised for change as the national political landscape, the museum field, and local interests evolved in the late 1960s and into the early 1970s. Politically, the country grew more suspicious of the government's secrecy and motives, as information about the government's lack of honesty about the Vietnam War became known. Widespread changes at both ORINS and the AEC subsequently affected the structure of AMAE. The institutional concept of science museums was on the verge of major changes,

as the adaptation of child-friendly science centers emerged in the coming decade. Locally, the Oak Ridge community became more involved in the operation of the museum while at the same time increasing its commitment to its past and present identity. The confluence of these factors led to key adjustments in Oak Ridge, which sent AMAE in a drastically different direction than the previous two decades.

CHAPTER 3
IN DEFENSE OF FREEDOM

1976-1989

“Oak Ridge was almost like Mecca for us because this is where the basic work was done that, first of all, contributed to the freedom of the world and ended the war and, secondly, shifted very rapidly to peaceful use of nuclear power.”
- President Jimmy Carter¹⁴⁸

Two decades of success at the American Museum of Atomic Energy (AMAE) paved the way for the significant growth and change that came in the 1970s. A new national trend emerged in the museum field, the science center, which combined science education with a hands-on learning model. Concurrently, the Atomic Energy Commission (AEC) started a campaign to build a brand-new museum in Oak Ridge. Their goal was to provide a science center for the surrounding region. This represented a fundamental change to the museum’s focus. Instead of exclusively discussing nuclear energy and development, the new science center would explore all forms of energy. A few years after the new museum opened, the federal government requested that the word “atomic” be

¹⁴⁸ Johnson and Schaffer, *Oak Ridge National Laboratory*, 175-176.

removed from the museum name, and the museum was renamed the American Museum of Science and Energy (AMSE).

The AEC instituted these museum changes amid evolving national political trends, organizational restructuring, and dramatic changes at Oak Ridge National Lab (ORNL). Protest groups throughout the country were challenging the country's established victory narrative and exposing the federal government's shady nuclear policies and subsequent dangerous behavior. Environmentalist groups continued to expose the dangers of nuclear waste, which fueled distrust of the AEC's well-crafted messages of assurance. In reaction, Congress dissolved the AEC and replaced it with two organizations: the Energy Research and Development Administration (ERDA) and the Nuclear Regulatory Commission (NRC). The ERDA took jurisdiction of ORNL and diversified the lab's mission with various forms of energy research. Before the decade ended, the ERDA underwent another transformation and became the Department of Energy (DOE).¹⁴⁹ The country's trust in the all-encompassing American victory narrative was eroding. Increasingly, Americans were questioning the idea that the government's use and proliferation of nuclear energy and weapons was in service to the benevolent peacemaker ideals the nation had come to accept. As such, government agencies, including the AEC, adjusted their message to a more palatable one: that America would become victorious by becoming a leader in energy production.

In Oak Ridge, however, the community intensified its commitment to the town's atomic history. Increasingly, as AMSE communicated a more broad perspective on energy, the local community leaders trended towards a more narrow historical

¹⁴⁹ Johnson and Schaffer, *Oak Ridge National Laboratory*, 128-156, 171-172.

perspective. In reaction to threats to a well-defined “Atomic City” paradigm, members of the Oak Ridge community initiated a grassroots effort. As a result of this effort, the AEC agreed to install a history exhibit in the new AMSE. This space was dedicated to the town’s Manhattan Project roots. That exhibit remained in a permanent first-floor space throughout the following three decades and functioned as the largest public display of the community’s core identity.

Throughout the 1980s, Oak Ridge community leaders explored a process, alongside their US Senators, through which they sought to solidify and promote an official local identity message. Politicians and business leaders joined forces to form an organization named The Committee of Fifty. This committee researched commemorative initiatives to celebrate the town’s fiftieth anniversary and erect a WWII monument. The committee emerged with a slogan that was designed to guide the community’s interpretive efforts in the following decades, “Born of War, Living Through Peace, Growing through Science.”¹⁵⁰ The slogan was a promising move towards developing a community-wide multifaceted interpretive plan.

Shifting American political discussions unearthed a shifting American identity. The government continued to use its nuclear weapon and energy agenda to perpetuate the American victory narrative. Yet, this construct became less tenable in the 1970s and 80s to an increasingly skeptical American public. Protest groups exposed ideological gaps in the argument that supported the government’s nuclear policies as a necessary force for the greater good. In reaction, the government made adjustments to both policy and

¹⁵⁰ Charles C. Coutant (Distinguished Research Ecologist 1970- 2005, Oak Ridge National Lab, Committee of Fifty member), in discussion with the author, July 22, 2015, Oak Ridge, TN.

presentation, if simply to garner more public support. The Oak Ridge community pushed back against the change in national perspective. While many factions of the country were moving away from a grand nationalistic understanding of America's identity and use of nuclear science, the Oak Ridge community further solidified a singularly victorious perspective on the town's WWII atomic connections, initiated and reflected through changes at AMSE throughout the 1970s and '80s.

The Times, They Are A Changin'

Lingering American dreams of a peaceful nuclear utopia were declining in the 1970s and within the following decade almost completely faded. The exciting new frontier of the atomic age turned to projections of a future world demolished by great scientific discoveries. While many Americans tried to maintain their confidence in the government's nuclear research and development assurances, dangers associated with the atomic bomb became all too evident. Anti-nuclear groups lobbied to eliminate the active threat of nuclear war, reduce the dangers associated with nuclear energy production, and stop the manufacturing and transportation of nuclear munitions. Environmental groups uncovered a range of accidents that threatened the population through radiation leaks or exposure. Scientists, physicists, and chemists criticized the AEC from almost all sides. Philosophers and academics advanced the discussion through a rapid onslaught of critical analysis.¹⁵¹ The pushback was successful. Americans became increasingly more fearful

¹⁵¹ Sheldon Novak, *The Careless Atom* (Boston: Houghton Mifflin, 1969).; Nuel Pharr Davis, *Lawrence and Oppenheimer* (New York: Simon and Schuster, 1969).; Robert Jungk, *Brighter Than a Thousand Suns: A Personal History of Atomic Scientists* (New York: Harcourt, 1970).; Norman Moss, *Men Who Play God: The Story of the H Bomb and How the World Came to Live With It* (New York: Harper Collins, 1968).; Richard Curtis and Elizabeth Hogan, *Perils of the*

of the threats that nuclear development posed to their wellbeing and their national identity. Consequently, the federal government evaluated and adjusted nuclear policies and programs in order to maintain the public's trust.¹⁵²

Outside insistence on reducing nuclear risks conflicted with the AEC's agenda, resulting in an ongoing struggle that further eroded America's trust. Starting in 1970, Congress began requiring federal agencies to preemptively disclose environmental risks associated with government projects. Congress mandated this monitoring process under the National Environmental Policy Act (NEPA). While the legislation restored some of America's waning trust in the government's nuclear policies, the AEC eroded much of that progress by staging a resistance to the law. Historians Clarfield and Wiecek claim that "the AEC adopted a reluctant, grudging, and hostile posture toward NEPA, issuing rules that required as narrow a compliance as possible with its provisions."¹⁵³ A power struggle emerged between environmental protection groups and the AEC, resulting in a series of high profile court cases against the AEC's lack of compliance with environmental standards and disclosure methods. This public battle highlighted the hidden underbelly of the government's nuclear practices.¹⁵⁴

Upon becoming AEC chairman in 1971, James Schlesinger attempted to temper growing public opposition to the AEC. According to ORNL historians Leland Johnson and Daniel Schaeffer, Schlesinger sought to change the organization's mission from one that "unabashedly promoted nuclear power to one that served as an unbiased 'referee'"

Peaceful Atom: The Myth of Safe Nuclear Power Plants (New York: Doubleday, 1969). For a more comprehensive listing see: Clarfield and Wiecek, *Nuclear America*, 363.

¹⁵² Clarfield and Wiecek, *Nuclear America*, 344-389.; Weart, *The Rise of Nuclear Fear*, 228-238.

¹⁵³ Clarfield and Wiecek, *Nuclear America*, 358.

¹⁵⁴ For a comprehensive review of court cases involving the AEC and nuclear waste see: Clarfield and Wiecek, *Nuclear America*, 344-389.

for the benefit of the American public.¹⁵⁵ Under his direction, the AEC transitioned to an organization focused on energy research and development, a transition that continued until the mid-1970s. However, his initiatives did not sufficiently gain the public's trust. In the face of mounting criticism, Congress dissolved the AEC under the Energy Reorganization Act of 1974. The agency's responsibilities were instead split into two new organizations: the Energy Research and Development Administration (ERDA) and the Nuclear Regulatory Commission (NRC).¹⁵⁶

For the rest of the decade, America was plagued by an energy crisis caused by the Arab oil embargo in 1973, which resulted in a redistribution of government energy departments. President Carter established "the 'moral equivalent of war' on energy problems."¹⁵⁷ His focus was less on advancing nuclear energy and more on the research and development of renewable energy in order to ease America's reliance on Middle Eastern oil. Carter proposed a new agency, the Department of Energy (DOE), which he designed to facilitate an efficient and rapid growth of energy programs. Congress approved his DOE initiative in 1977 and consolidated several major agencies, including the ERDA, the Federal Energy Administration, and the Federal Power Commission, as well as smaller federal programs.¹⁵⁸

The evolving atmosphere of nuclear production placed the government facilities in an intricately vulnerable position and threatened the economic stability of Oak Ridge. With the establishment of the ERDA, Congress debated Oak Ridge's relevance and

¹⁵⁵ Johnson and Schaffer, *Oak Ridge National Laboratory*, 148.

¹⁵⁶ Ibid, 128-156.

¹⁵⁷ Ibid, 172.

¹⁵⁸ Ibid, 172.

sustainability. The lab survived the transition but underwent a transformation from an exclusively nuclear facility to one that developed all forms of energy. ORNL management changed hands again in 1977 when Congress established the DOE. By this time, the government facilities contractors were operating five major programs, working with eleven other government agencies, and subcontracting six times the amount of outside work it supported in 1974. The DOE utilized the lab's expertise to support ongoing nuclear and energy production. Oak Ridge survived these transitions, however the diversification of ORNL's mission detracted from the previously straightforward nuclear purpose, thus challenging the community's ability to maintain a singular identity.¹⁵⁹

Oak Ridge Institute of Nuclear Studies (ORINS) also experienced structural and mission adjustments, which subsequently affected their role at AMAE. In 1966, ORINS changed its name to Oak Ridge Associated Universities (ORAU). The new name represented the organization's focus on connecting higher education academic and research institutions with ORNL's specialized resources and education. In 1973, the AEC replaced ORAU's Information and Exhibits Division with the Energy Education Office (EEO) and established a Museum Division within that office. ORAU's Museum Division produced content for AMAE, a traveling exhibit program, and other internal and external educational programs.¹⁶⁰

¹⁵⁹ Ibid, 156, 160, 171-182.

¹⁶⁰ Pollard, *ORAU: From the Beginning*, 42, 103-108.; "Energy: American Museum of Science and Energy," brochure (Oak Ridge, TN: American Museum of Science and Energy, c. 1979); Blue Desk Binder; Anne Armstrong collected papers; AMSE, Oak Ridge, TN.

As the American public's opposition to nuclear development increased, the AEC asked ORINS to better utilize AMAE as an outlet for promoting the government's agenda, however ORAU balked at the proposed changes, citing their commitment to a strong educational platform. Dr. William G. Pollard, Executive Director of ORAU, expressed his hesitation, stating: "Atomic energy education, which avoids controversial issues of broader public policy, is clearly appropriate for an organization such as ORAU. In contrast, the proposed exhibits program, even if not intended as such, can be interpreted by some of the public as propaganda for the AEC."¹⁶¹ He went on to say that the organization's sponsoring institutions would likely not respond favorably to ORAU serving as the public spokesman for the AEC's interests. Ultimately, the AEC and ORAU reached a compromise to cover various types of energy, which coincided nicely with the changes happening at AMAE and ORNL.¹⁶²

AMAE Becomes a Science Center

Amid the national and local changes, AMAE also entered a phase of dramatic transformation in the 1970s. In 1968, Edward J. Brunenkant, the AEC's Director of the Department of Technical Information (DTI) in Washington, proposed a new municipal complex that would include an updated office building for Oak Ridge's DTI Extension (DTIE), a convention center, and a new museum building. Under this proposal, Brunenkant suggested the museum expand to include an interactive science center in

¹⁶¹ Statement of the ORAU Executive Director For Discussion with OIS, January 10 1973; Research and Technical Division Correspondence Files; Box 15, Accession 84A-0005; RG 326; NAA.

¹⁶² Ibid.

addition to the existing atomic energy exhibits. Brunenkant garnered the support of Oak Ridge's Mayor Alvin K. Bissell, who initiated a Science Museum Development Committee (SMDC) comprised of twelve Oak Ridge citizens, including those with backgrounds in science, business, industry, and education. According to a minutes review from the committee's first meeting, the municipal group was established in order to "explore a wide variety of matters related to the community impact of the present AMAE and the potential for local and state-wide support for a broadened science education program, including, but not necessarily limited to museum activities."¹⁶³ Brunenkant and the SMDC generated ample support for a regional science center including the political backing of United States Congressman Joe L. Evins and United States Senator Al Gore, Sr..¹⁶⁴

Proponents of the new museum had reason to believe that providing a large regional science center would draw an influx of daily visitors to the small town of Oak Ridge. Science museums throughout the country were transitioning to a participatory science center model and experiencing great results. These centers partnered with local and regional educational systems to create science programs that used experiential learning techniques. Nationally, the science center model attracted large attendance

¹⁶³ Science Museum Development Committee News Release, March 7 1968; Office of Public Information Correspondence; Box 224, Accession 73A-0898; RG 326; NAA.

¹⁶⁴ Science Museum Development correspondence, 1968; Office of Public Information Correspondence; Box 224, Accession 73A-0898; RG 326; NAA.; Science Museum Development Committee News Release, March 7 1968; Office of Public Information Correspondence; Box 224, Accession 73A-0898; RG 326; NAA.; To A. M. Weinberg on Exhibits at ORNL and in Oak Ridge, April 3 1968; Office of Public Information Correspondence; Box 224, Accession 73A-0898; RG 326; NAA.; "Museum Initiator's First Visit to New Facility," *Oak Ridger* (Oak Ridge, TN), August 22, 1975.

numbers with a consistent flow of school groups.¹⁶⁵ In addition to offering more enticing programs, the building plans for AMAE included a much larger floor plan, allowing space for almost double the number of school groups as well as a much higher percentage of daily attendance in comparison to the AMAE wartime cafeteria location.¹⁶⁶

The AEC accepted the regional science center proposal, approved the building contract in January 1973, and built the first museum specifically designed to house AMAE. Opening on February 17, 1975 at 300 South Tulane Avenue, the \$3.5 million-dollar museum contained 55,000 total square feet on 17.4 acres of land centrally located in the heart of Oak Ridge's municipal and retail district.¹⁶⁷ The new building served a range of purposes that benefited both the local community and the AEC operations in Oak Ridge, including an educational center for East Tennessee vacationers, a visitor center for the AEC facilities in Oak Ridge, a science center for school groups within the greater Southern Appalachian region, and a prototype for developing traveling exhibits and demonstrations as part of the ORINS outreach program.¹⁶⁸ AMAE successfully attracted a much larger audience in its new facility. During the final year of the 1960s,

¹⁶⁵ Karen A. Rader and Victoria E. M. Cain, *Life on Display: Revolutionizing U.S. Museums of Science and Natural History in the Twentieth Century* (Chicago: University of Chicago Press, 2014), 208-210.

¹⁶⁶ A.M. Kinney Inc. Consulting Engineers, "Title I Report: American Museum of Atomic Energy, US Atomic Energy Commission, Oak Ridge, Tennessee, Contract No. AT-(40-1)-4326," June 19 1972; Drawer FC 3 2; AMSE Archive, Oak Ridge, TN.

¹⁶⁷ Oak Ridge Operations United States Atomic Energy Commission, "News Release: AEC Awards Contract for New Museum," January 25, 1973; Postcards Drawer FC 3 2; AMSE Archive, Oak Ridge, TN.; A.M. Kinney Inc. Consulting Engineers, "Title I Report: American Museum of Atomic Energy, US Atomic Energy Commission, Oak Ridge, Tennessee, Contract No. AT-(40-1)-4326," June 19 1972; Drawer FC 3 2; AMSE Archive, Oak Ridge, TN. "American Museum of Atomic Energy Dedication April 5, 1975," program brochure, Drawer FC 3 2; AMSE, Oak Ridge, TN.

¹⁶⁸ A.M. Kinney Inc. Consulting Engineers, "Title I Report: American Museum of Atomic Energy, US Atomic Energy Commission, Oak Ridge, Tennessee, Contract No. AT-(40-1)-4326," June 19 1972; Drawer FC 3 2; AMSE Archive, Oak Ridge, TN.

AMAE welcomed just over 159,000 visitors. By 1979, the museum received over 222,000 visitors annually.¹⁶⁹



Fig. 3.1. Aerial View of AMSE c. Late-1970s: An aerial view of the American Museum of Science and Energy soon after it opened (Photograph courtesy of U.S. Department of Energy).¹⁷⁰

Combining Energy Content with An Agenda

In contrast to the previous AMAE model, the new museum exhibits explored a variety of energy topics, which better reflected ORNL'S evolving mission.¹⁷¹ In the late - 1970s permanent exhibit, six of the four sections were exclusively energy related:

¹⁶⁹ American Museum of Atomic Energy Attendance Record, 1949-1980; Blue Desk Binder; Anne Armstrong Collected Papers; AMSE, Oak Ridge, TN.

¹⁷⁰ ORDOE Photographer, #781745-back397; JLEFB. Photo courtesy of DOE.

¹⁷¹ *Celebrate Oak Ridge: A Chronology of the Atomic City 1942-1945*. Oak Ridge: Oak Ridger, 1999.

“Energy for Today’s Power,” “Energy for Tomorrow’s Power,” “Energy for Better Health,” and “Energy on Special Assignment.” These exhibits were housed on the second floor of the museum, the predominantly experiential science center section. The exhibit entitled “Energy for Today’s Power” featured a general history of the evolution of energy, specifically in relation to electricity, nuclear energy, reactor safety, and environmental research. The “Energy for Tomorrow’s Power” exhibit outlined the limits of fossil fuels nuclear energy and proposed energy source alternatives, including solar and geothermal energy. In the section entitled “Energy for Better Health,” the museum featured ways in which various types of energy benefited medical research such as: radiation detection methods, harnessing radiation for medical advances, producing disease resistant food, and using atomic batteries for heart pacemakers. The “Energy on Special Assignment” section text explored the relationship between energy and investigative forensics, automobile manufacturing, powering satellites, and harnessing natural resources.¹⁷²

Despite ORAU’s strong institutional stance to the contrary, the government’s agenda to promote its energy policies was still evident in the new museum content. Similar to the previous AMAE exhibits, points of scientific data only lightly addressed growing national concerns about public health and nuclear waste hazards. AMAE’s 1970s exhibits offered only short, vague answers to complex questions. As such, visitors were left without a balanced understanding of energy research and development.¹⁷³ One

¹⁷² “Welcome to the American Museum of Science and Energy,” c. late 1970s; Blue Desk Binder; Anne Armstrong Collected Papers; AMSE, Oak Ridge, TN.

¹⁷³ ORDOE Photographer, 1970s-series, AMSE museum exhibits, 1970-1979; JLEFB. Photos courtesy of DOE.

panel, for example, included the question, “What About Radioactive Waste?”¹⁷⁴ This short three-sentence panel approached the complex and convoluted process of nuclear



Fig. 3.2. AMSE 1978 Exhibit Section, “What About Radioactive Waste”: An AMSE visitor reads a short panel about radioactive waste (Photograph courtesy of U.S. Department of Energy).¹⁷⁵

waste disposal with scant verbiage. The explanation stated that, upon disposal, irradiated fuel elements were stored at federal facilities and encapsulated in geological formations that kept the radioactive waste away “from the biosphere for times long enough for radioactive decay to render it harmless.”¹⁷⁶ Another exhibit clearly addressed the way energy development affects the environment; however, that admission was countered by a very brief assurance that public safety was given high priority and a video playfully

¹⁷⁴ Ibid.

¹⁷⁵ ORDOE Photographer, #77-297, AMSE museum exhibit, c. 1978; JLEFB. Photo courtesy of DOE.

¹⁷⁶ Ibid.

labeled “You Can’t Flirt With the Energy Crisis.”¹⁷⁷ So, while the AEC complied with ORAU’s request to not overly tout the government’s agenda, the simplistic answers presented in AMAE were so incomplete in comparison to the depth of public concern that the exhibits almost functioned as propaganda for the government’s energy initiatives.

Change Becomes the Impetus for Exploration

When the AEC proposed a new museum plan that did not include Oak Ridge’s Manhattan Project history, a vocal faction of the community fought to keep its atomic roots on public display. The only museum that touted the wonders of Oak Ridge, the “Atomic City,” was transitioning to a space that interpreted all forms of energy. Throughout the planning process, the AEC and the SMDC requested input from the local community. Community members asked the AEC to add to the museum plans a section dedicated to the Manhattan Project. The local newspaper, *The Oak Ridger*, endorsed the town’s movement in a report following a July 26, 1973 Oak Ridge Chamber of Commerce meeting at which concerned community members lobbied the AEC for a Manhattan Project themed exhibit space. “This would be a serious omission,” the paper exclaimed, “and the AEC officials should give careful consideration to adding such a display.”¹⁷⁸ Adding a history exhibit about Oak Ridge’s unique past, locals protested, would not only appeal to the surrounding communities but would continue to attract tourists from all over the nation.¹⁷⁹

¹⁷⁷ ORDOE Photographer, #75-317-5, AMSE museum exhibit, c. 1975; JLEFB. Photo courtesy of DOE.

¹⁷⁸ “Museum and Energy, Chance for Joint Emphasis,” *Oak Ridger* (Oak Ridge, TN), July 26, 1973; Accession: Lissa Clark; AMSE Archive, Oak Ridge, TN.

¹⁷⁹ Ibid.

The AEC approved the history exhibit request and together with ORAU decided to place it prominently on the museum's first floor. ORAU hired three local citizens as research and writing consultants, each of whom had participated in the Manhattan Project. These three consultants argued that the history exhibit should be placed near the front of the museum to serve as a historical backdrop to the nuclear science exhibits on the second floor. In a November 15, 1973 letter to Joseph A. Lenhard, Director of the AEC Research and Technical Support Division, Dr. William G. Pollard, Executive Director of ORAU, supported the consultants' suggestion and expanded the concept. Pollard stated, "nowhere else does there appear a history of the scientific discoveries that led up to atomic energy.... Since the weapon's need, development, and use came first the idea may have merit."¹⁸⁰ Pollard furthered the consultant's argument by suggesting the history exhibit could be used to thoroughly explain all manner of scientific discoveries that paved a way for atomic energy. The AEC accepted the request to prominently place the Manhattan Project exhibit on the first floor. However, they rejected Pollard's idea of expanding the content beyond the Manhattan Project history. A collection of Oak Ridge citizens successfully procured a permanent and visible exhibit space dedicated to the town's central identity and history.¹⁸¹

Soon after the museum opened, the ERDA (previously the AEC) proposed a new name, the American Museum of Science and Energy (AMSE), which resulted in another

¹⁸⁰ William G. Pollard to Joseph A. Lenhard, "Development Energy In Defense of Freedom New Museum- Our Letter, October 25, 1973;" Research and Technical Division Correspondence Files; Box 15, Accession 84A-0005; RG 326; NAA.

¹⁸¹ Ibid.

local battle.¹⁸² Deputy Director of the ERDA's Washington Office of Public Affairs Edwin Stokely told *The Oak Ridger* that the name change would better reflect all of the research conducted at ORNL as well as the variety of material in the museum. However, later he acknowledged the possibility that the local community might not support the idea: "We don't want to force the name change on the community. It seems to us the logical thing to do. We would like to see the name changed, but we don't want to stir up controversy."¹⁸³ The ERDA allowed the community to decide. The mayor of Oak Ridge, Alvin K. Bissell, appointed a four-person museum committee following the dissolution of the SMDC. The committee approved the name change, which took effect in 1978. The committee chairman, Tom Hill, defended the committee's 3-to-1 decision claiming he believed that the community understood the need for the name change. Further, he noted, the more broadly defined name still applied to Oak Ridge, which had recently dubbed itself the "Energy Capital of the World."¹⁸⁴

J. Tom Harvey, the lone dissenter on the committee, presented an argument that many Oak Ridge community members supported. He argued that tourists would be more attracted to the town's unique appeal if the ERDA retained the word "atomic" in the museum's name. To make his point, he said that AMAE would lose its unique appeal if it did not maintain a strong atomic focus, citing several already existing energy museums throughout the country as evidence that adding another one would merely be repetitive instead of distinctive. His concern was not confined to the museum. Considering the

¹⁸² American Museum of Science and Energy website, accessed March 2016, <http://amse.org/about-amse/history/>.

¹⁸³ "Museum Name Meet on Tuesday," *Oak Ridger* (Oak Ridge, TN), March 24, 1975; Accession: Lissa Clark; AMSE Archive, Oak Ridge, TN.

¹⁸⁴ Ibid.

evolving national perspectives on nuclear energy, Harvey noted, “I think maybe the ERDA, or the AEC to begin with, is fearful of what people are saying about atomic energy. They want to take some of the edge off it.”¹⁸⁵ Harvey represented a concerned group of Oak Ridgers who were fearful that the reduced focus on nuclear energy would render ORNL, and thereby Oak Ridge, irrelevant and obsolete. He said, “I think Oak Ridge itself is known as the atomic town. It just worries me that we are getting so many changes, I am afraid we will lose our identity.”¹⁸⁶ Harvey’s concerns were not misguided. As both ORNL and the museum diversified their energy platforms, the history exhibit at AMSE remained the last main outlet on which Oak Ridgers could see their atomic identity clearly reflected.

Bodnar suggests that official and vernacular voices run counter to each other and that the vernacular reveals the complex and various viewpoints of a collection of people. “There is certainly patriotism in much of what [‘ordinary people’] honor, but they do not hesitate to privilege the personal or vernacular dimension of patriotism over the public one.”¹⁸⁷ Yet, in Oak Ridge, the community perspective better reflected the official narrative. If anything, the vernacular voice overshot the official narrative as the government was attempting to adjust the official narrative to be more palatable to the changing politics of the nation. Meanwhile, the Oak Ridge community reveled in its atomic heritage identity and wanted to maintain their connection to the narrative to which they affixed that identity.

¹⁸⁵ Ibid.

¹⁸⁶ Ibid.

¹⁸⁷ Bodnar, *Remaking America*, 16.

History at the Science Center

Content in the first AMSE history exhibit demonstrated the AEC and the Oak Ridge community's attempt to clarify a nuclear memory in the midst of increasing chaos. Gillis reflects on the sea change of memory practices that came in the post WWII era. He writes: "The Cold War contributed in its own way to shifts in the forms and location of memory." Gillis elaborates on the state of memory making during the Cold War stating: "The blurring of the old distinction between war and peace meant that it was very difficult to define the beginnings or endings that had previously been the focus of memory."¹⁸⁸ The Cold War and all of the complexities that came with it were marching right through ORNL. Yet, the atomic bomb historical interpretation in Oak Ridge harkened to something fixed: something with a clear beginning, clear ending, and a clear message.

In order to convey this seemingly clear message in the first AMAE history exhibit, the AEC utilized a number of different exhibit tactics, including physical placement, thematic tone, and methodological adjustments. This exhibit was unlike any previous exhibits produced for the museum. Whereas the AMAE exhibits of the 1950s and 60s intermingled America's nuclear past with ongoing discoveries, the new museum clearly separated energy science from Manhattan Project history. Upon entering the museum, visitors confronted two large and isolated history spaces on the right side of the first floor. These rooms sat at a great distance from the primary emerging science exhibits located on the entirety of the second floor. The physical separation of the history exhibits and the

¹⁸⁸ Gillis, *Commemorations*, 13.

science center underscores the disparate subject matter of the two spaces. The Manhattan Project content was placed in a historical context as opposed to intermixing its relevance with present-day scientific advancements. Methodologically, this adjustment was appropriate given the thirty-year time gap between the end of WWII and the opening of the new museum building. However, it also provided the AEC with an opportunity to change the interpretive model and push a nationalistic point of view. The new history section lacked the real-time discussion of nuclear fear. Instead, the AEC highlighted the historical militaristic, labor, and national victory aspects of the Manhattan Project. Combined with the nostalgic undertone, the atomic fear omission opened the door for a one-sided and glorified victory narrative to emerge. This left the interpretive space devoid of deeper nuance, consistent with ongoing political conversation in the public sphere.¹⁸⁹

From its inception, the AMAE/AMSE history exhibit design reflected the government's patriotic version of the Manhattan Project narrative and celebrated Oak Ridge's involvement. Joseph Lenhard, in a letter to William G. Pollard, instructed the ORAU director to design the content around the "development of World War II nuclear weapons with [an] emphasis on [the] Oak Ridge contribution."¹⁹⁰ ORAU's exhibits staff expanded this simple description by organizing the space into four time frames: prior to 1938, 1938-1942, 1942-1945, and post-1945.¹⁹¹ The primary history exhibit space was

¹⁸⁹ "A Report on ORAU's Assignment of Collecting Material For the 'Energy in Defense of Freedom' Exhibit Area," November 15, 1973; Research and Technical Division Correspondence Files; Box 15 Accession 84-005; RG 326; NAA.

¹⁹⁰ Joseph Lenhard to William G. Pollard, letter, October 13, 1973; Research and Technical Division Correspondence Files; Box 15 Accession 84A-0005; RG 326; NAA.

¹⁹¹ Ibid.

named the “In Defense of Freedom” room. The AEC’s placement of this name underscored the AEC’s internal perspective on the exhibit’s theme: the atomic bombs’ express purpose was to defend freedom.¹⁹²

The larger of the two first-floor exhibits, *Energy for Defense*, included the story of how the United States used atomic energy to develop a weapon to defend the nation.¹⁹³ The first two sections of the *Energy for Defense* exhibit explained the key developments and events that made the atomic bomb possible and necessary, including a thorough history of nuclear science, both prior to and including the discovery of fission in 1938. The next section included an explanation of the WWII events that motivated the United States government to initiate the Manhattan Project and provided the military justification for the development and use of the atomic bomb.¹⁹⁴ Oak Ridge’s involvement first appeared in the third section of the exhibit, which chronicled the development of the Manhattan Project and included an overview of all three secret sites. Ed Westcott’s photographs were used to portray the Oak Ridge industrial narrative and the processes by which the government protected the secret work that took place at the plants.¹⁹⁵

¹⁹² “A Report on ORAU’s Assignment of Collecting Material For the ‘Energy in Defense of Freedom’ Exhibit Area,” November 15, 1973; Research and Technical Division Correspondence Files; Box 15 Accession 84-005; RG 326; NAA.

¹⁹³ “Welcome Energy: American Museum of Science and Energy,” brochure, c. late 1970s; Blue Desk Binder; Assistant Anne Armstrong Collected Papers; AMSE, Oak Ridge, TN.

¹⁹⁴ Joseph Lenhard to William G. Pollard, letter, October 13, 1973; Research and Technical Division Correspondence Files; Box 15 Accession 84A- 0005; RG 326; NAA.

¹⁹⁵ “Welcome Energy: American Museum of Science and Energy,” brochure, c. late 1970s; Blue Desk Binder; Anne Armstrong Collected Papers; AMSE, Oak Ridge, TN.; Ed Westcott, the only government-approved wartime photographer, captured almost every aspect of life behind the fence, including detailed depictions of the three major facilities, Y-12, K-25, and X-10, as well as daily life amongst the town’s 75,000 citizens.

In the final section, the museum exhibited national nuclear and militaristic accomplishments and developments. Visitors could learn about important nuclear-related moments of the post-WWII era. Key topics included the formation of the AEC, the USSR's first nuclear weapons testing, discussion of post-WWII nuclear weapon types and testing procedures, and the SALT talks, which addressed the hope of nuclear arms reduction throughout the world. These exhibit materials bolstered a patriotic celebration of active and recent American militaristic efforts. The United States was barely out of the Vietnam War and still actively engaged in the Cold War (which lasted from 1945 to 1989).¹⁹⁶

Consistent with the overall tone of the exhibit, the Manhattan Project section was capped with a triumphant depiction of the two moments that the United States dropped the atomic bombs on Japan at the end of WWII. Just a few years earlier ORAU director William Pollard requested that scriptwriters avoid interpreting controversial topics. However, in reference to the exhibit's atomic bomb content, ORAU's exhibit staff instructed the contract writers that "décor and treatment should be ... headlines, movies, sound effects, [and] pictures of rejoicing, e.g. from Life, August 20, 1945, p. 38."¹⁹⁷ Perhaps ORAU did not view the decision to use the atomic bomb as a controversial topic similar to issues of radiation exposure or environmental safety.

¹⁹⁶ "A Report on ORAU's Assignment of Collecting Material For the 'Energy in Defense of Freedom' Exhibit Area," November 15, 1973; Research and Technical Division Correspondence Files; Box 15, Accession 84-0005; RG 326; NAA.

¹⁹⁷ Ibid.



Fig. 3.3. AMSE c.1978s exhibit, *Energy for Defense*: The *Energy for Defense* exhibit featured Manhattan Project history at the American Museum of Science and Energy (Photograph courtesy of U. S. Department of Energy).¹⁹⁸

In a separate side section within the history exhibit, the AEC included traditional folk legend surrounding a presumed prophet's prediction of Oak Ridge's role in the Manhattan Project.¹⁹⁹ The text in the "The Oak Ridge Prophecy Room" underscored the "In Defense of Freedom" victory narrative and added a flare of fate to the story.²⁰⁰ The exhibit room name referred to John Hendrix, a resident of east Tennessee in the early 1900s. Legend suggests that while walking in the woods he saw a vision that predicted the Manhattan Project and its placement on the land that would become the town of Oak

¹⁹⁸ ORDOE Photographer, #75-32-8, AMSE *Energy for Defense* exhibit, c. 1978; JLEFB. Photo courtesy of DOE.

¹⁹⁹ Ibid.

²⁰⁰ "Welcome Energy: American Museum of Science and Energy," brochure, c. late 1970s; Blue Desk Binder; Anne Armstrong Collected Papers; AMSE, Oak Ridge, TN.

Ridge. Generations of Hendrix's family repeated his stated vision in which he claimed he foresaw the farmland in and around Oak Ridge transformed to an industrial town, complete with large buildings and machinery that would help win a great war.²⁰¹ The prophecy read like a message from a higher power, ordaining that the East Tennessee people and the United States would win WWII with an atomic bomb.²⁰² If the prophecy was true as folklore suggested then perhaps the United States was even spiritually ordained to construct and use the bombs in WWII.

Overall, the exhibit drew a clear conclusion: the discovery of fission led to Oak Ridge's involvement in the development of the atomic bomb, which provided the United States with the means to defend their freedom. While this narrative was not altogether incorrect, it was incomplete, lacking an exploration of nationally evolving and complex nuclear weapons discourse. However, that overarching victory narrative was arguably the only acceptable option in the Oak Ridge despite the fact that the first word in the museum's name implied the inclusion of a national perspective.

The Committee of 50 Continues the Local Identity Quest

When the 1982 Knoxville World's Fair designated Oak Ridge as a satellite location, AMSE used the opportunity to increase the local history presence in the museum space.²⁰³ Oak Ridge, a short drive from Knoxville, was a natural selection to represent the fair's theme, "Energy Turns the World." The city utilized AMSE as the

²⁰¹ Freeman, *Longing for the Bomb*, 30-33.

²⁰² "Welcome Energy: American Museum of Science and Energy," brochure, c. late 1970s; Blue Desk Binder; Anne Armstrong Collected Papers; AMSE, Oak Ridge, TN.

²⁰³ 1982 Worlds Fair papers; Drawer FC 3 1; AMSE Archive, Oak Ridge, TN.

prime attraction and touted the museum's energy exhibitions as the largest in the world, with over two hundred interactive displays.²⁰⁴ Additionally, ORNL drew considerable and prominent attention to the Manhattan Project history exhibits. In preparation for the World's Fair, they installed a life-sized guard stand in the museum lobby and encased it in fencing with the words "Oak Ridge Story." This stand, positioned at the entrance of the *Energy for Defense* exhibit, was highly visible to visitors as they entered the front of the museum. The large sign underscored the town's ongoing quest to encapsulate their local identity in the Manhattan Project narrative.²⁰⁵

The Oak Ridge Convention and Visitor's Bureau (ORCVB) had high hopes that participation in the World's Fair would permanently increase local tourism and initiate town growth; however, the results were disappointing. After the excitement of the World's Fair, Oak Ridge's travel and real-estate patterns were consistent with their pre-Fair totals. In hopes of increasing visibility, Senator Marilyn Lloyd instigated a "Growth and Development Conference" in Oak Ridge. This summit resulted in a fifty-person committee charged with generating town growth, a task at which the committee failed. However, in 1988, the Committee of Fifty initiated two lasting propositions: a fiftieth anniversary town celebration and a monument to accompany the event, both of which would be produced in the early 1990s.²⁰⁶

²⁰⁴ 1982 Worlds Fair museum announcement, on back of: OR DOE Photographer, Image 82-403; Frank Hoffman Photography Collection; Office of Lynn Freeny; U.S. Department of Energy Offices, Joe L. Evins Federal Building, Oak Ridge, TN (Courtesy of the Department of Energy).

²⁰⁵ ORDOE Photographer, Image #81-810, #81-844 and #82-88; Frank Hoffman Photography Collection; Office of Lynn Freeny; U.S. Department of Energy Offices, Joe L. Evins Federal Building, Oak Ridge, TN. Photos courtesy of the Department of Energy.

²⁰⁶ Mariner and Piehler, eds., *The Atomic Bomb and American Society*, 348-354.

During their commemorative process, the Committee of Fifty crafted the first Oak Ridge community-led effort to establish a unified town slogan: “Born of War, Living For Peace, Growing Through Science.” This slogan provided a framework for the three very distinct eras that shaped the town’s identity: the Manhattan Project, Cold War, and post-Cold War. Despite what appeared to be a singular grand victorious narrative in the AMSE exhibit, the full story was no longer limited to three years during WWII. ORNL’s production sat at the center of the Cold War, and the four-decades long nuclear standoff with Russia came at quite a price. The conflict resulted in multiple nuclear accidents, radioactive and aluminum exposure in numerous US cities (of which Oak Ridge was one), and the nation’s longest military campaign, the Vietnam War.²⁰⁷

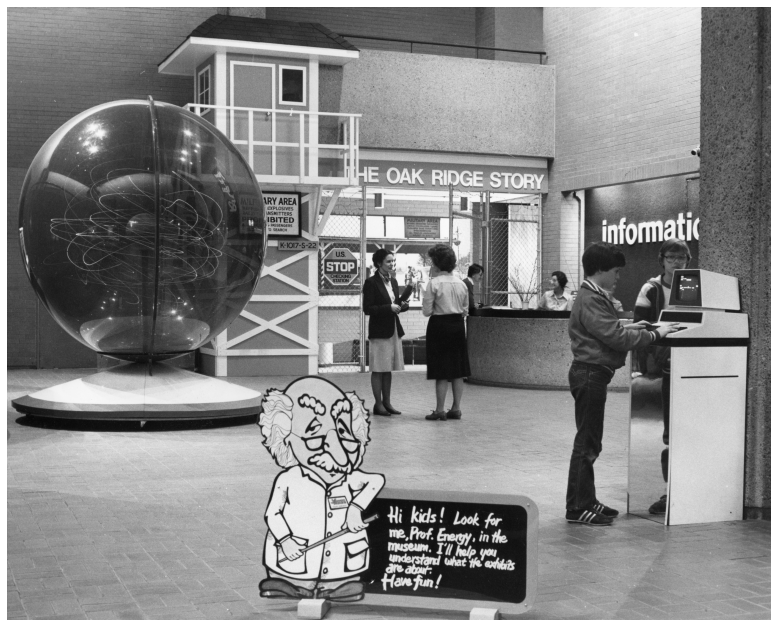


Fig. 3.4. AMSE 1982 Lobby, *Oak Ridge Story* Checkpoint Installed: In preparation for the 1982 Knoxville World’s Fair, AMSE installed a life sized guard stand and the words *The Oak Ridge Story* at the history exhibit entrance (Photograph courtesy of U.S. Department of Energy).²⁰⁸

²⁰⁷ Mariner and Piehler, eds., *The Atomic Bomb and American Society*, 348-354.; Johnson and Schaffer, *Oak Ridge National Laboratory*, 106-127.

²⁰⁸ ORDOE Photographer, #82-88, AMSE museum lobby, c. 1982; JLEFB. Photo courtesy of DOE.

The discussions that emerged from the Committee of Fifty were representative of the evolutionary process of the vernacular voice that Bodnar describes; however, the result ran counter to his binary. Oak Ridge citizens had long been debating how their community would grapple with the town's early and ongoing role in the atomic bomb. As early as 1946, Oak Ridge citizen from 1943-2015 Coleen Black recalled, many in Oak Ridge wondered: "The atomic bomb and Oak Ridge had helped win the war, but: Could they help win peace? Should Oak Ridge continue to produce uranium for more bombs? Should the US share its bomb secrets with other nations? Who should control the atomic project- military or civilian forces?"²⁰⁹ In the late 1980s, many Oak Ridgers were still asking these questions and trying to decide how to best honor their legacy in light of the complexity. Bodnar's hypothesis suggests that "Vernacular culture represents an array of specialized interests that are grounded in parts of the whole."²¹⁰ In some ways, the new slogan seemingly reflected a variety of perspectives. However, the slogan actually juxtaposed Oak Ridge's WWII war years with the Cold War as though no post-WWII wars happened at all, only peace. In this way, the Committee of Fifty defined Oak Ridge's post-WWII history through the lens of striving for peace and growing through science, virtually ignoring the very difficult ills of the Cold War. This definition mirrored the official patriotic narrative. Still, in the late 1980s, no large collection from the Oak Ridge vernacular was demanding the insertion of new perspectives. Instead, the leading local voice continued to define the town's history and identity with the long-held authoritative version mixed with a local nostalgic heritage story.

²⁰⁹ *Celebrate Oak Ridge*, 10.

²¹⁰ Bodnar, *Remaking America*, 14.

In reality, ORNL's post-WWII production exposed the region and nation to some harmful effects, causing critics and protestors to emerge from inside and near Oak Ridge. In 1987, an anti-nuclear group formed in east Tennessee, the Oak Ridge Environmental Peace Alliance (OREPA). The OREPA located in Knoxville, TN but chose to include Oak Ridge in their name to highlight the dangers of radioactive and aluminum exposure that had plagued the town since the 1950s. The group held local meetings, staged demonstrations in front of ORNL and Y-12, and wrote articles to the local and national media. One of their largest acts of defiance included waiting for enriched uranium-filled trucks to leave the government facilities, tracking them across the nation to their final destination, and calling law enforcement in each town along the truck's route to warn them that enriched uranium was being carted through their community. While the organization did not reflect the sentiments of the majority of the Oak Ridge community, it gave local and nearby naysayers an outlet to voice their concerns and created a public platform to display the ongoing national debate.²¹¹

Charging Ahead with a Mission

By the end of the 1980s, AMSE was a significantly different type of museum than it was in 1949. In the 1950s and 60s, Oak Ridge was touted as the "Atomic City" and known throughout the country as the premier exhibit and educational resource for nuclear science. In the 1970s, the government removed the word "atomic" from the museum

²¹¹ Ralph Hutchison, (Coordinator 1991-present, Oak Ridge Environmental Peace Alliance), in discussion with the author, September 2, 2015, Oak Ridge, TN.; Stephen Clements (Co-Founder, 1988, Oak Ridge Environmental Peace Alliance), in discussion with the author, September 8, 2015, Oak Ridge, TN.

name as well as its governing organization. Both were replaced with the word “energy,” which was further reflected in the exhibit space. AMSE’s new science center model, which replaced the previous atomic science display museum, was consistent with national science museum trends, but focused less on local scientific discoveries than the AMAE of the 1950s and 60s. ORNL was still leading the industry in nuclear research and development; however, the lab’s groundbreaking accomplishments and discoveries did not receive primary placement on the museum floor.

Oak Ridge’s fight for a local and historical presence in the science center museum became a defining moment for the community. Key community members fought for a Manhattan Project history exhibit at the new science center in the mid 1970s. That exhibit sent a clear message that, collectively, Oak Ridge residents were proud of their role in creating the atomic bomb. During the 1982 World’s Fair, they further endorsed their local connection to the larger national story as the museum prominently labeled the history exhibit *The Oak Ridge Story*. Throughout the remainder of the decade, the community-based Committee of Fifty crafted a strategy to celebrate and define the town’s identity. Yet, in a time when the nation was inundated with various and complex viewpoints about nuclear science, the Oak Ridge committee produced a simplistic narrative that underscored the government’s less nuanced and agenda-based perspective.

Heading into the next two decades, as both national and local voices of dissent grew louder, the leaders in the Oak Ridge community remained committed to forging ahead with a positive spin on the construction, use, and proliferation of the atomic bomb. They rallied behind a glorified victory narrative during their fiftieth anniversary celebration, which inspired the emergence of commemorative history organizations,

events, and public displays that all communicated the same message. Throughout all of this celebration, the predominant voice in Oak Ridge continued to reflect a nostalgic victory-based narrative despite the fact that the atomic bomb proved to be one of the most controversial topics of the late twentieth and early twenty-first centuries.

CHAPTER 4
IN DEFENSE OF IDENTITY

1990- 2009

“Every identity implies and at the same time masks a particular relationship.”
- John Gillis²¹²

America faced an intense opportunity for reflection and commemoration when two pivotal moments of atomic bomb import collided: the end of the Cold War and WWII’s fiftieth anniversary. The four-decade nuclear standoff between the United States and Russia ended with the fall of the Berlin Wall in 1989. At the same time, government organizations throughout the country were preparing for a moment of national celebration that lay six years in the future, the fiftieth anniversary of the end of WWII. The intersection of these two events ignited both a heightened sense of victory and an ongoing debate, both centered on the ownership and use of nuclear weapons.

Some of the national attempts to interpret the atomic bomb proved quite difficult. The Smithsonian’s National Air and Space Museum tried, and failed, to create an extensive interpretive exhibition of the Enola Gay, igniting a national debate. The administrators of the Harry S. Truman Presidential Library (HSTPL) were poised to

²¹² Gillis, *Commemorations*, 4.

update their entire exhibit space while watching the Enola Gay interpretive debacle. Unlike the Smithsonian, the HSTPL successfully updated their atomic bomb exhibit. However, in an effort to avoid experiencing public controversy, its staff chose a fairly balanced interpretive approach that proved successful for their museum. Meanwhile, in the Oak Ridge interpretive spaces, complex debate about the atomic bomb was missing.

Oak Ridge was preparing to celebrate the town's fiftieth anniversary just as the Cold War ended and utilized the space at American Museum of Science and Energy (AMSE). In Oak Ridge, the fiftieth anniversary celebration began in 1993, two years earlier than the anniversary for the end of the war. The Manhattan Project broke ground in 1943, marking the town's inception as one of three secret cities built to manufacture the world's first atomic bomb. By the end of the Cold War, Oak Ridge's Committee of Fifty was already discussing its plan to utilize the impending anniversary celebration to ignite town growth, tourism, and local unity encircled in historical memory and identity. The committee crafted a plan to commemorate the town's history, including the birth of Oak Ridge in 1943, the construction of the atomic bomb, and the use of that weapon to assist in the 1945 completion of WWII. The committee's plan involved public commemorative events, updated exhibits located at AMSE, and a monument dedicated to Oak Ridge's role in ending WWII. Oak Ridge's fiftieth anniversary celebration generated a wave of local commemorative activity that continued for two decades and largely revolved around AMSE.

Oak Ridge's process of reflecting on the town's shared history exposed gaps in the publicly displayed narrative, namely the voices of those who labored at the government facilities during and after the war. As those voices united, they gathered at

AMSE and ultimately worked with the DOE to insert the people's narrative into an exhibit that had previously omitted their voices in exchange for what was an overarching, government centric historical account. This collective narrative ultimately formed around a celebratory, instead of critiquing, tone for those who unknowingly manufactured parts for what would become one of the most celebrated and contested objects of all time, the atomic bomb. Throughout the 1990s and early 2000s, political and public history trends moved towards a more open recognition and critical discussion of controversial topics. Meanwhile, AMSE continued to omit social and political complexities of the atomic bomb and instead opted to portray an *innocent victor* narrative in homage of the people who worked in Oak Ridge from 1943-1945.

National Reflections During the 50th Anniversary

The Smithsonian Air and Space Museum and the Harry S. Truman Presidential Library were among many public sites that attempted to interpret the atomic bomb amidst a swirl of conflicting perspectives throughout the nation. With the fiftieth anniversary of WWII's end pending, many American public sites of memory searched for the most effective methods of interpreting the atomic bomb. However, museum professionals consistently found the subject matter almost too complex and controversial to discuss. The nuclear weapons the U.S. used to end the war with Japan also caused previously unseen levels of destruction. Following a victorious end to the war, America's ownership and proliferation of atomic bombs led to a four-decade Cold War with Russia, an expensive arms program, dangerous levels of nuclear waste, and an ongoing fear of nuclear war. "For fifty years," Edward Linenthal and Tom Englehardt explain, "these two

stories- of a weapon that brought peace and victory, and of a weapon that brought destruction and fear to the world- rested uneasily in American consciousness.”²¹³ The victory culture began to erode after WWII and a more complex outlook took root. Curating an exhibit about the bombs was consistently an exercise in mitigating large swaths of competing voices, both official and vernacular.²¹⁴

Curators at the Smithsonian Air and Space Museum planned to unveil an exhibit featuring the Enola Gay, the airplane that dropped the first atomic bomb on Hiroshima, in conjunction with the fiftieth anniversary of the plane’s mission. They aimed to create an exhibit that bridged the two polarizing perspectives on of the atomic bomb: a tool used to gain unilateral victory versus an overly destructive weapon fraught with fear and continual disaster. Their exhibit plan included sections that explored the creation of the atomic bomb, the debate regarding the decision to use it against Japan, and the evolving legacy of the most destructive weapon known to man. However, they confronted serious resistance when they attempted to deconstruct the traditional patriotic account of the end of WWII. Veterans groups, and the politicians who represented them, carried the banner of national pride and heavily resisted the Smithsonian’s attempts to balance the official narrative with the dissent of a myriad of vernacular voices. Ultimately, the Smithsonian’s attempt to curate an exhibit about the Enola Gay ended with a battle that pitted government officials and WWII veterans against political activists. The plane was placed in the museum with little more than a simple identification label.²¹⁵

²¹³ Linenthal and Engelhardt, *History Wars*, 2.

²¹⁴ Engelhardt, *The End of Victory Culture*, 3-15.

²¹⁵ Engelhardt and Linenthal, *History Wars*, 1-7.

A few years later, the curatorial staff at the HSTPL confronted similar interpretive questions when they redesigned the museum's permanent exhibit space. They installed an exhibit named *Harry S. Truman: The Presidential Years*, which included an early section that explored President Truman's decision to use the atomic bomb. The museum opened in 1957, yet did not mention the atomic bomb until the late-1990s renovation. In an effort to avoid the same controversy faced by the Smithsonian, the HSTPL took a more neutral middle road that did not dig too deeply into either side of the argument.²¹⁶

Methodologically, the HSTPL curatorial staff organized the museum so as to explain the presidency through the lens of the difficult decisions President Truman faced. Visitors were presented with four major difficult decisions that came across the desk of President Truman: using the atomic bomb, equal treatment of African Americans in the military, sanctioning the state of Israel, and allowing the use of espionage to find alleged communist sympathizers among the American public. Each section provided multiple viewpoints on Truman's decisions as well as interactive opportunities for visitors to voice their personal opinions. The use of this method is significant because visitors the HSTPL presented visitors with the opportunity to question the decisions of the museum's subject, in this case President Truman. This runs counter to the methods employed by most sites of commemoration where opposing points of view are rarely displayed. The "difficult decisions" method proved strategically important for navigating a controversial topic such as the atomic bomb. Within this framework, the HSTPL curators could write content

²¹⁶ Clay R. Bauske (Curator 1983-present, Harry S. Truman Presidential Library), in discussion with the author, May 5, 2014, Independence, MO.; Harry S. Truman Presidential Library. *Harry S. Truman: The Presidential Years*, exhibit, Independence, MO, 2001-present.

that clearly stated President Truman's unwavering justification of his decision to use the atomic bomb without stating a clear ideological allegiance to either side of the ongoing debate.²¹⁷

The HSTPL curatorial staff designed the "Decision to Use the Atomic Bomb" exhibit section with a tight interpretive plan. The space was physically tight with only enough space for a limited amount of information. A few televisions showed news reports of the bombings with footage that showed some, but not a lot, of the damage in Japan. The scope of the content was narrowly focused. Consistent with the macro theme of the expansive permanent exhibit, visitors were asked to contemplate the difficult decisions of the presidency. Through exhibit text and documented evidence, visitors could explore President Truman's decision-making process. The curatorial staff exhibited the documents he received from advisors and physicists prior to making his decision. This evidence highlighted the conflicting viewpoints and disparate perspectives with which the President grappled. The museum staff challenged visitors to consider the choice they would have made if they had been presented with the same information.²¹⁸

The staff learned from observing the Enola Gay debacle and thus did not experience the same type of resistance or critique as the Smithsonian. The "Decision to Use the Atomic Bomb" section was devoid of the post-WWII atomic bomb legacy or the post-war national debate regarding Truman's decision. Instead, it explored one man's experience while facing the tough decision of using a very destructive weapon in hopes of ending a world war. Truman's personal experience was presented in such a way that

²¹⁷ Ibid.

²¹⁸ Harry S. Truman Presidential Library. *Harry S. Truman: The Presidential Years*, exhibit, Independence, MO, 2001-present.

was difficult to refute. Further, the atomic bomb exhibit included a response book in which visitors could write their opinion. Methodologically, the book provided a slight buffer from open critical review of the exhibit. Simply by placing the book and asking for responses, the curatorial staff validated the existence of multiple viewpoints and gave the visitor space to voice their opinion, even if they chose to pass judgment on Truman's decision.²¹⁹

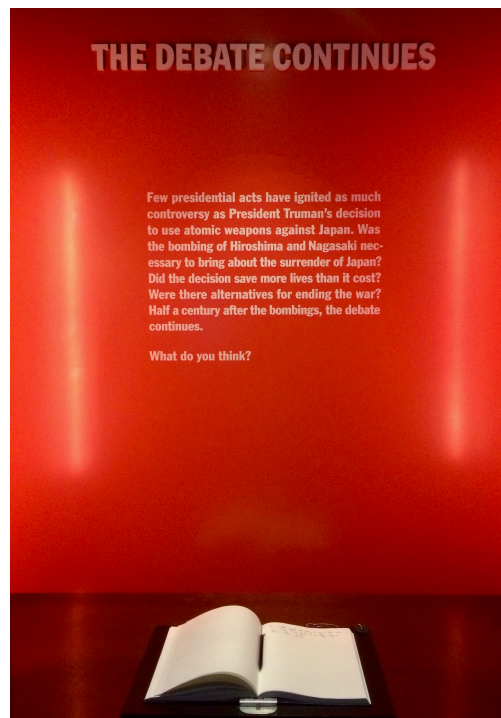


Fig. 4.1. Harry S. Truman Presidential Library, Exhibit Feature “The Debate Continues”: Visitors were asked to add their perspective in a response book in the “Decision to Use the Atomic Bomb” section at the Harry S. Truman Presidential Library (Photograph taken by the author).

²¹⁹ Clay R. Bauske (Curator 1983-present, Harry S. Truman Presidential Library), in discussion with the author, May 5, 2014, Independence, MO.; Harry S. Truman Presidential Library. *Harry S. Truman: The Presidential Years*, exhibit, Independence, MO, 2001-present.

Energizing Wartime Roots in Oak Ridge

As the Cold War ended, Oak Ridge community leaders were searching for a way to establish relevance. Oak Ridge was a national household name in the 1950s, but that popularity waned later in the 20th century. Los Alamos became the most famous Manhattan Project site, even though Oak Ridge was the largest. Oak Ridge National Lab (ORNL), Y-12, and K-25 continued to participate in the nuclear arms and energy programs, yet the employees were not in a position to discuss much of government facilities' history or accomplishments due to Cold War classification standards. When AMAE became a science center in the mid-1970s, the museum stopped the traveling exhibits program and thus the national outreach. Its science-center model was more appealing to the local region than the previous atomic exhibits had been to the entire country. The 1982 Knoxville World's Fair offered an opportunity for increased local visibility and tourism, but ultimately did not deliver.

The Committee of Fifty hoped the 50th anniversary event would increase visibility, unite the local community, and attract outside tourists to come learn about their Manhattan Project roots. Coutant stated: "One of the things that we were very conscious of then, and even more so then, was historical tourism. And many of us felt at the time that the unique WWII history of Oak Ridge should be a tourism draw."²²⁰ Since the anniversary celebration coincided with a significant level of declassification, a grassroots movement developed amongst local Oak Ridgers. As Katy Brown, the Oak Ridge Convention and Visitor's Bureau (CVB) director from 2004-2014, noted: "After the Cold

²²⁰ Charles C. Coutant (Distinguished Research Ecologist 1970- 2005, Oak Ridge National Lab, Committee of Fifty member), in discussion with the author, July 22, 2015, Oak Ridge, TN.

War, lots of things had become declassified, things were changing with nuclear weapons. People were beginning to open up about it then.”²²¹ The local community widely supported the anniversary events and embraced the opportunity to learn about and celebrate the victory over Japan, and, more specifically, the Americans who arrived in east Tennessee to help their nation win a war.

Combined with the anniversary celebration, the Committee of Fifty sought to install a monument that would create a lasting legacy. The committee received a wide variety of suggestions, and, in an act of solidarity, settled on a Japanese style bell. Ram Uppuluri, originally from India, and his wife Shigeko from Japan, submitted a “Proposal to Enhance Tourism in Tennessee.”²²² Their proposal was aimed at sending a positive reconciliation message to the Japanese tourists and investors who had been moving to the state since the late 1980s. Coutant reflected on the committee’s economic and commemorative motivations for choosing the Uppuluris proposal, stating that “we thought, in a very pragmatic sense, why not encourage the Japanese to come tour here. That was part of the reason; the other was just to commemorate that here is a city that was built in order to build a bomb that was going to be used to end the war with Japan.” The proposal suggested Oak Ridge erect a Japanese peace bell similar to others that had been erected in New York in 1954, San Diego in 1958, and Hiroshima in 1964.²²³

The Committee of Fifty’s selection of the bell initiated a community-wide debate that led Oak Ridge right through the heart of identity politics. Early in the planning

²²¹ Katy Brown, (Director 2006-2014, Oak Ridge Convention and Visitors Bureau), in discussion with the author, June 16, 2014, Oak Ridge, TN.

²²² Edward W. Lollis, “The Oak Ridge International Friendship Bell,” in *The Atomic Bomb and American Society: New Perspectives*, ed. Mariner, Rosemary B. and G. Kurt Piehler (Knoxville: University of Tennessee Press, 2009), 347.

²²³ Ibid, 348.

process the committee referred to the monument as a “peace bell,” a name that elicited a barrage of negative feedback.²²⁴ Many local WWII-era Oak Ridgers expressed concern that offering peace was comparable to offering an apology. Radford M. Carroll, in his letter to the *Oak Ridger* editor, wrote that the “project is an implied insult to the thousands of Oak Ridge workers who have a justified pride in their role in forcing and early end to a bloody war.”²²⁵ Coutant explained: “The people who were the dissenters really felt that this was an apology. No matter how things were at that time, they were still mentally fighting the war and the Japanese were not our friends, we shouldn’t be calling them our friends, we shouldn’t be apologizing to them.”²²⁶ The bell wars, as they became known in Oak Ridge, lasted for approximately five years and grew into a highly contested public matter. Despite the struggle, the committee appeased enough opposing voices and resolved the power struggle by changing the bell’s name to The Oak Ridge International Friendship Bell. The bell’s reimagined context came at the suggestion of Bill Wilcox, a chemist who moved to Oak Ridge during the war and stayed for the remainder of his life.²²⁷ The committee forged ahead, hoping the new name would promote global goodwill and cooperation. The Oak Ridge International Friendship Bell was dedicated in May 1996 in honor of an enduring peaceful relationship with Japan and the hope that Oak Ridge would continue to be a place that fostered peace in the world.²²⁸

²²⁴ Ibid, 345-365.

²²⁵ Letter to the editor, *Oak Ridger* (Oak Ridge, TN), Oct. 16, 1991.

²²⁶ Charles C. Coutant (Distinguished Research Ecologist, 1970- 2005, Oak Ridge National Lab, Committee of Fifty member), in discussion with the author, July 22, 2015, Oak Ridge, TN.

²²⁷ D. Ray Smith, *2008 Historically Speaking: International Friendship Bell* (Lulu Press, 2012).

²²⁸ For a full description of the Oak Ridge “bell wars” see Lollis, “The Oak Ridge International Friendship Bell,” in *The Atomic Bomb and American Society*, eds. Mariner and Piehler, 344-380.

Ultimately, the battle surrounding the monument revealed an underlying and unforeseen struggle to agree upon a local shared identity in the face of ever changing bomb politics. “Monuments,” as historian Edward Lollis states, “can be seen as the attempts of certain groups to project their interpretation of past time into the future.”²²⁹ The Oak Ridge “bell wars,” as they came to be known, ignited a debate about how the community wanted to remember the Manhattan Project and whether or not they would apologize for their role in building the atomic bombs. While the Manhattan Project was relegated to history, complex atomic bomb politics were very present. The process of determining a single narrative to define Oak Ridge’s past or future generated an undercurrent of conflicting agendas, which was only partially resolved by renaming the bell.²³⁰

Similar to museums around the country, in 1995, the AMSE Manhattan Project exhibit was updated as part of the fiftieth anniversary celebration and ongoing local identity discussions. While the previous history exhibits almost exclusively emphasized the scientific developments of the Manhattan Project, the 1995 exhibit was designed to “capture the birth of a community through the Oak Ridge story,” a local recreation and tourism magazine explained.²³¹ The content updates were slight yet impactful. The same general structure of the previous exhibit remained. For the first time, however, the exhibit also included some community member voices and images of wartime townspeople.²³²

²²⁹ Lollis, “The Oak Ridge International Friendship Bell,” in *The Atomic Bomb and American Society*, eds. Mariner and Piehler, 345.

²³⁰ Ibid, 345-365.

²³¹ “Recreation and Tourism”, article, (publication unknown), 1999; Newspaper Clippings Collection; FC 2 4.14; AMSE Archive, Oak Ridge, TN.

²³² ORDOE photographer, #92-284, #92-292, #92-297-5, AMSE *Inside Y-12* exhibit, c. 1992; JLEFB; Photo courtesy of DOE.



Fig. 4.2. AMSE 1990s Exhibit, *Oak Ridge Story*: A section of mid-1990s update history exhibit started with the bombing of Pearl Harbor (Photograph courtesy of U.S. Department of Energy).²³³

AMSE installed a large exhibit about the history of Y-12. This exhibit was a more polished corporate history display, which sat physically apart from the rest of the science center and, most notably, from the Manhattan Project history exhibit. A significant portion of the exhibit reviewed Y-12's role in the Manhattan Project. The remainder discussed a few of the significant scientific contributions produced by the lab during the Cold War and its ongoing post-Cold War mission.²³⁴ In the mid-1990s, the DOE expanded the facilities tour program, which allowed visitors to take a guided bus tour

²³³ ORDOE photographer, #91-635-13, AMSE museum exhibit, c. 1995; JLEFB. Photo courtesy of DOE.

²³⁴ Robert W. Presley, "The Y-12 Story," exhibit text, February 11, 1992; Y-12 Desk Binder; Anne Armstrong Collected Papers; AMSE Archive, Oak Ridge, TN.; "Cost Estimate for New Museum Display," March 29, 1991; Y-12 Desk Binder; Anne Armstrong Collected Papers; AMSE Archive, Oak Ridge, TN.; "DOE Announces Opening of Y-12 Museum Exhibit," news release, March 4, 1992; Y-12 Binder; Anne Armstrong Collected Papers; AMSE Archive, Oak Ridge, TN.

from the museum to each of the three DOE sites, Y-12, X-10, and K-25 in order to learn about the government facilities' history.²³⁵ Similar to the first-floor history exhibit, both the Y-12 exhibit and the DOE's tour communicated with more of a celebratory tone, touting the government's work, rather than deeply and critically exploring dangers or pitfalls of nuclear research and development.²³⁶

AMSE also updated the science center portion of the museum in the late 1980s and early 1990s, but the content was significantly less cutting-edge than that of the 1950s and 1960s. The exhibits supported a child-focused science center theme. AMSE was no longer embraced as the nation's leading educational source for emerging nuclear science. Energy exhibits of the 1980s received a 1990s-style facelift with some slight content changes to reflect evolving environmental and energy science. Evidenced by a section entitled, "Radioactive Waste Management," the DOE continued its decades-long commitment to assuring visitors of environmental safety by creating museum exhibits that supported that claim. A prominent, neon-lit section named "Atomic Pioneers" explored the physicists who discovered fission and advanced nuclear science throughout the 20th century.²³⁷

²³⁵ "Tour of Oak Ridge National Laboratory," brochure, c. 1990s; AMSE Archive, Oak Ridge, TN.

²³⁶ Robert W. Presley, "The Y-12 Story," exhibit text, February 11, 1992; Y-12 Desk Binder; Anne Armstrong Collected Papers; AMSE Archive, Oak Ridge, TN.; "Cost Estimate for New Museum Display," March 29, 1991; Y-12 Desk Binder; Anne Armstrong Collected Papers; AMSE Archive, Oak Ridge, TN.; "DOE Announces Opening of Y-12 Museum Exhibit," news release, March 4, 1992; Y-12 Binder; Anne Armstrong Collected Papers; AMSE Archive, Oak Ridge, TN.

²³⁷ ORDOE photographer, #91-180, #91-181, #91-183, #91-186, #91-187, #91-188, #92-696, #92-701, #92-868, AMSE energy exhibit, c. 1991-1992; JLEFB; Photos courtesy of DOE.



Fig 4.3. AMSE c.1991 exhibit, 90's Science Facelift: The science exhibits received a '90s-style facelift (Photograph courtesy of U.S. Department of Energy).²³⁸



Fig. 4.4. AMSE 1990s Exhibit, "Atomic Pioneers": Since the 1960s, AMSE contained a section named "Atomic Pioneers" in the exhibit space. This is the version showcased throughout the 1990s and early 2000s (Photograph courtesy of U.S. Department of Energy).²³⁹

²³⁸ ORDOE photographer, #91-183, AMSE museum exhibit, c. 1991; JLEFB. Photo courtesy of DOE.

²³⁹ ORDOE photographer, #89-1337, AMSE "Atomic Pioneers" exhibit section, c. 1989; JLEFB; Photos courtesy of DOE.

By the turn of the century, portions of Oak Ridge's commemorative efforts reflected all three parts of the town slogan, "Born of War, Living in Peace, Growing through Science," yet the overriding sentiment was a strong and growing emphasis on the community's birth. The three segments of Oak Ridge's new slogan functioned in disparate ways throughout the town. AMSE's historical exhibits included the town's Manhattan Project beginnings as well as the ongoing scientific growth at ORNL, Y-12 and K-25. However, they sat in very separate places in the museum. The WWII narrative did not interpretively flow into the Cold War narrative. The Oak Ridge International Friendship Bell was designed to communicate a living statement of peace with Japan, but it sat in a park, completely removed from the museum. Despite the presence of the bell, most of the historical interpretation in and around Oak Ridge referenced only the three war years. Moreover, the places that interpreted the war years specifically omitted the complex and controversial atomic bomb legacy.

Solidifying a Secret Identity

Over the following decade, individual WWII-era workers and heritage organizations poured energy into expanding and enriching previously missing perspectives on the local and personal Manhattan Project narrative. The Oak Ridge Heritage and Preservation Association (ORHPA) grew rapidly and accepted ownership of the Midtown Community Center into which the Oak Ridge Convention and Visitor's Bureau (ORCVB) moved their offices. Members of the Friends of ORNL and ORHPA volunteered to run the daily tours from AMSE to the three DOE sites, while explaining Oak Ridge's WWII significance. Oak Ridgers, such as Y-12 physicist Bill Wilcox and

WWII-era high school student Jay Searcy, wrote personal memoirs and inspired their contemporaries to do the same. The Y-12 National Security Complex asked long-time lab employee Ray Smith to open the Y-12 History Center. Smith brought the local community into the story by identifying specific individuals in WWII-era photographs, writing weekly articles (many of which explored the workers' perspective), and leading an oral history project. The Y-12 oral history project coincided with the Center for Oak Ridge Oral History (COROH) project, initiated by the Oak Ridge Library. COROH workers collected valuable oral histories of WWII survivors, many of who were nearing the end of their lives.²⁴⁰

The Oak Ridge Convention and Visitor's Bureau used the newfound historical enthusiasm to enhance tourism. They adapted the slogan written for the fiftieth anniversary by adding the new town name, "Secret City: Born of War, Living for Peace, Growing Through Science." While some Oak Ridgers wanted to adopt "Science City" as the town motto, Joe Valentino, then director of the ORCVB, believed that embracing the "Secret City" brand would draw more local interest as well as increase tourism. While not all community leaders approved the use of the term "secret," as the town's purpose was no longer hidden, the name provided a sense of direction and ultimately instilled unity. In the 1950s, Oak Ridge was known as the "Atomic City." In the later twentieth century, the growth of ORNL designated Oak Ridge as a science city. Nonetheless, the

²⁴⁰ Charles C. Coutant (Distinguished Research Ecologist, 1970- 2005, Oak Ridge National Lab, Committee of Fifty member), in discussion with the author, July 22, 2015, Oak Ridge, TN.; Ken Mayes (Deputy Director 2007-2018, American Museum of Science and Energy), in discussion with the author, June 12, 2014, Oak Ridge, TN.; David Ray Smith (Electrician and Associate Director of the Facilities Management Organization 1970-2004, Y-12 National Security Complex; historian 2005-2017, Y-12 History Center, 2015-present Oak Ridge Historian), in discussion with the author, June 16, 2014 and July 21, 2015, Oak Ridge, TN.

town's historical roots were ever-present. After the Cold War, the City of Oak Ridge and the community officially embraced the town's secretive Manhattan Project past to inform the present and, perhaps, even future identity.²⁴¹

In 2005, the city of Oak Ridge dedicated the Secret City Commemorative Walk, a monument specifically and exclusively dedicated to the Manhattan Project workers. In doing so, they developed a new model to commemorate Oak Ridge's history, designated here as the *innocent victors* interpretive method. This monument was placed in Bissell Park adjacent to The Oak Ridge International Friendship Bell. The juxtaposition of these two monuments highlighted the complex revelations that rose from the efforts to install the peace bell. The "bell wars" exposed a growing local desire to publicly recognize those who labored to produce the atomic bomb. The Secret City Commemorative Walk did just that. It focused exclusively on the people who came to Oak Ridge during the war to unknowingly construct a bomb that ultimately ended WWII, the *innocent victors*. Packaged within this concept is the idea that the Oak Ridge workers did not start the problem, rather they unsuspectingly played a significant role in solving it; therefore, the spoils of victory were and remained theirs.²⁴²

Innocent Victors on Display

Soon after the instillation of the Secret City Commemorative Walk, AMSE began conceptualizing a new history exhibit laced with the same *innocent victor* concept as the monument. AMSE asked two of their in-house graphic designers, Martin Hennessey and

²⁴¹ Joseph Valentino (Director 1999-2006, Oak Ridge Convention and Visitors Bureau), in discussion with the author, April 11, 2015, Oak Ridge, TN.

²⁴² Secret City Commemorative Walk. Installed 2005, A. K. Bissell Park, Oak Ridge, TN.

Cecil King, to research, and write, and design the exhibit. Unlike previous AMSE history exhibits the writers chose the people who lived in Oak Ridge during the Manhattan Project as the central focus. Using the same exhibit title that was adopted during the 1982 World's Fair, *The Oak Ridge Story*, the newly couched depiction included both the grand narrative of the Manhattan Project and the wartime experience of the Oak Ridge laborers.²⁴³

Juxtaposing opening and closing sections framed the *innocent victor* message. Introductory panel text described Hitler and Japan as the problems, scientific advancement as the savior, and Oak Ridge as the conduit that, unknowingly, enabled the victory of good over evil. The central sections of the exhibit explained the Manhattan Project and regaled the experience of the 1942-1945 Oak Ridge citizens, the *innocent victors*. The closing sections depicted the bombing of Hiroshima and the end of the war. The most prominent and lasting image at the end of the exhibit showed Oak Ridgers celebrating in Jackson Square in August 1945 while holding newspapers that read "Japan Surrenders."²⁴⁴

Sandwiched between the opening and closing framework was the exhibit's main subject: Oak Ridge, the Secret City. In the center portion of the exhibit, King and Hennessey relayed the people's experience of working in Oak Ridge during the Manhattan Project: 75,000 people came together in an entirely new community to accomplish a massive, secretive, and significant feat in a very short period of time. The

²⁴³ Martin Stone Hennessey (Graphic and Exhibit Designer, 2005-2012, AMSE), July 22, 2015, Oak Ridge, TN.

²⁴⁴ Exhibit, *The Oak Ridge Story*, American Museum of Science and Energy, Oak Ridge, TN, 2009- 2018.

scriptwriters displayed the birth of the community, including quickly constructed efficiency homes, entirely new social groups, and daily tasks conducted in a secret city. This section was laced with tales of working under top-secret surveillance and images that showed the propaganda tactics the government used to maintain silence amongst the workers. Then, in a full wall of panels, the writers outlined the industrial history and scientific processes that led to the world's first wide-scale production of enriched uranium. Unlike previous exhibits, this section included pictures of the people who conducted the work, most notably, women.²⁴⁵



Fig. 4.5. AMSE 2009 *Oak Ridge Story* Exhibit Section, Manhattan Project: Manhattan Project history was combined with stories of laborers (Photograph taken by the author).²⁴⁶

The exhibit writers further invoked the *innocent victor* concept by ending the exhibit with a greater focus on the Oak Ridge victory experience and less attention to the intense complexity, nuance, or legacy associated with the atomic bomb. The writers only

²⁴⁵ Exhibit, *The Oak Ridge Story*, American Museum of Science and Energy, Oak Ridge, TN, 2009- 2018.

²⁴⁶ Ibid.

referenced the multifarious legacy of the atomic bomb in one space and without much attention, considering the magnitude of the subject. The final section had a few images of the damage in Hiroshima and Nagasaki and a short newsreel video. Hennessey lobbied for this the addition of the newsreel, expressly because it included footage of the bombs' devastation and played in the exhibit space continually.²⁴⁷ Just under the video screen, an exchange between physicists Edward Teller and Leo Szilard stated Teller's warning that unleashing the atomic bomb to the world could lead to possible future wars. The exhibit ended with the deployment of the first atomic bomb on August 6, 1945, except for two additional dates. The final panel showed celebrations in the Oak Ridge streets the day Japan surrendered and the day Oak Ridge city gates opened to the public in 1949.²⁴⁸

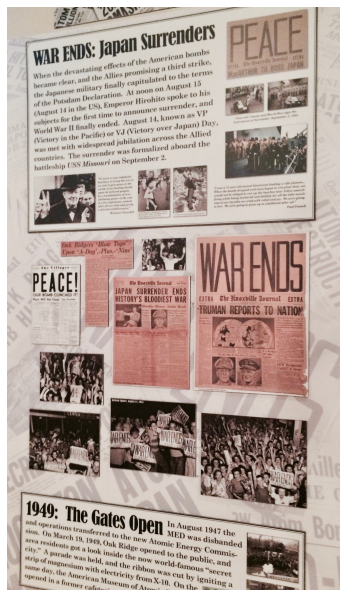


Fig. 4.6. AMSE 2009 *Oak Ridge Story* Exhibit Section, “Victory Over Japan”: The final panel of the exhibit showed celebrations of victory over Japan (Photograph taken by the author).²⁴⁹

²⁴⁷ Martin Stone Hennessey (Graphic and Exhibit Designer 2005-2012, American Museums of Science and Energy), July 22, 2015, Oak Ridge, TN.

²⁴⁸ Exhibit, *The Oak Ridge Story*, American Museum of Science and Energy, Oak Ridge, TN, 2009- 2018.

²⁴⁸ Ibid.

²⁴⁹ Ibid.

Fear Is Missing

Methodologically, *The Oak Ridge Story* exhibit designers directed visitors towards a singular interpretive conclusion by implementing a methodological omission process. They employed this method by depicting an idyllic society, eliminating content about the harmful consequences of the bomb building process, and narrowing the subject's scope to 1942-1945. In doing so, they left gaps in the interpretation. Juxtaposed with the known legacy of the atomic bomb, the barrage of smiling Oak Ridge faces posted throughout the space eerily removed the visitor from sobering realities. When asked to describe exactly what was missing, exhibit scriptwriter Martin Hennessey exclaimed, "Fear. Its the fear, the fear is missing."²⁵⁰ He was referencing nuclear fear, which made its global debut on August 6, 1945. When the 2009 AMSE exhibit opened sixty-four years later, the worldwide tension associated with the atomic bomb had only increased. Because the Manhattan Project pre-dated post-war nuclear concerns, the writers, along with AMSE and the DOE, could frame the exhibit so that the fear was missing. In doing this, the AMSE history exhibit featured a pleasant narrative that is noticeably contrary to the weight and complexity of the subject matter.

The scriptwriter's nostalgic presentation of WWII-era Oak Ridge offered both an interesting and unsettling glimpse into a seemingly idyllic community atmosphere functioning in the midst of a bomb-building government-funded project. To portray daily life, the writers relied heavily on far more of Ed Westcott's wartime community-based images than previous AMSE history exhibits. Westcott photographed Oak Ridge workers

²⁵⁰ Martin Stone Hennessey, (Graphic and Exhibit Designer 2005-2012, American Museums of Science and Energy), July 22, 2015, Oak Ridge, TN.

pleasantly conducting daily tasks and building a new community.²⁵¹ The images King and Hennessey selected for the exhibit showed Oak Ridgers playing games, swimming and sunbathing, singing songs, and going to church. This helpful illustration showed museum visitors the type of life Manhattan Project workers were able to live in the government-run town site. At the same time, couched within the context of the work they were conducting, the images lacked the seriousness of war. While the depiction of Oak Ridge appeared pleasant, it was also one-dimensional.²⁵²

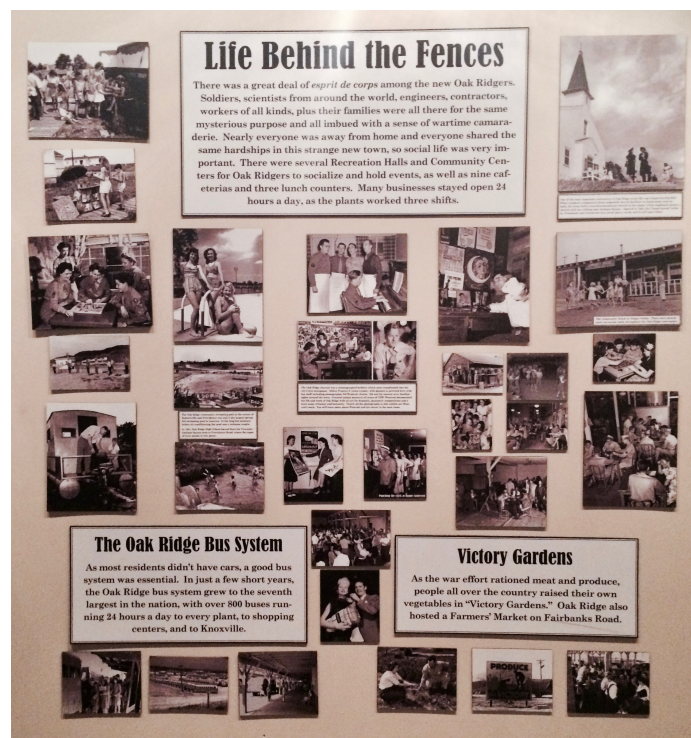


Fig. 4.7. AMSE 2009 *Oak Ridge Story* Exhibit Section, “Life Behind the Fence”: Life behind the Manhattan Project fence, shown in the 2009 *Oak Ridge Story* exhibit at the American Museum of Science and Energy (Photograph taken by the author).²⁵³

²⁵¹ U.S. Department of Energy Photograph Collection. Oak Ridge Public Library, Oak Ridge, TN.

²⁵² Exhibit, *The Oak Ridge Story*, American Museum of Science and Energy, Oak Ridge, TN, 2009- 2018.

²⁵³ Ibid.

Creating an exhibit devoid of wartime nuclear fear was, on many levels, also a practice in presenting a fairly factual representation of the historical record. Fear of an atomic bomb was, in fact, missing from the lives of wartime Oak Ridge workers. The world had never seen a weapon of mass destruction or its devastating effects. While it is commonly known that Westcott posed his subjects for many of his pictures, it is also likely that many of them would have been smiling. In many ways, WWII-era Oak Ridgers were simply a collection of people in a new town valiantly working for the war effort. Westcott's photographs show them living their daily lives while appearing unaware they were constructing a bomb precisely because, with the exception of a few hundred of their fellow workers, they did not know.²⁵⁴ Only a small number of workers were educated in physics. Most did not have any context to properly guess what they were building. In all likelihood, Oak Ridge wartime residents would have lived with a number of fears including concern that the Allies could lose the war, fear of being imprisoned for releasing government secrets, punishment for expressing protest against the Manhattan Project, or exposure to harmful substances. Yet, they could not have possibly foreseen the nuclear concerns that present-day visitors would associate with the atomic bomb.²⁵⁵

Essentially omitted from the exhibit text was the certain threat and potential fear of exposure to harmful substances. During the war, lab workers were asked to take measured precautions to avoid ingesting, inhaling, or touching harmful substances. Many Oak Ridgers suffered from long-term illness or premature death due to nuclear

²⁵⁴ U.S. Department of Energy Photograph Collection. Oak Ridge Public Library, Oak Ridge, TN.

²⁵⁵ Freeman, *Longing for the Bomb*, 80-92. Johnson and Jackson, *City Behind a Fence*, 137-166.

exposure.²⁵⁶ However, the exhibit contained scant mention of exposure or fear of exposure. Only one image in the lifestyle section of the exhibit showed a few employees applying protective suits before work. This image stood alone, without any supporting images or much descriptive text.²⁵⁷ This omission is surprising in light of the number of Oak Ridgers who suffered from debilitating diseases as a result of chemical and nuclear exposure to beryllium, asbestos, or radiation.²⁵⁸

When examined through the lens of typical commemoration practices, the omission of those who suffered due to exposure is not only glaring, it is contradictory. These workers served their country in a fight to defeat an enemy, constructed a bomb that played a large role in ending a war, and either lived for years with physical ailments or died as a result of their work. This omission further highlighted the ways in which the Oak Ridge vernacular narrative reflected an official government perspective focused on the victorious use of the atomic bombs. War memorials honoring dead and wounded abound throughout the United States. Yet, the Oak Ridge community has not publicly acknowledged the sacrifice of those who suffered from exposure. Overlooking this opportunity to celebrate war casualties is unusual, especially for a town like Oak Ridge that is dedicated to commemorating its war history.

Predominantly, the exhibit scriptwriters were able to eliminate nuclear fear from the exhibit by narrowing the scope to the 1942-1945 war years. The interpretation did not reflect on a post WWII world. The birth of worldwide atomic awareness and subsequent

²⁵⁶ Peter Bacon Hales, *Atomic Spaces: Living on the Manhattan Project* (Chicago: University of Illinois Press, 1999), 276-298.

²⁵⁷ Exhibit, *The Oak Ridge Story*, exhibit, American Museum of Science and Energy, Oak Ridge, TN, 2009- 2018.

²⁵⁸ Hales, *Atomic Spaces*, 276-298.; Freeman, *Longing for the Bomb*, 172.

fallout intersected with the Allies' victorious war-ending moment, yet the exhibit only included the victory narrative. AMSE and the DOE could avoid discussing the complexities of the nuclear arms race, the Cold War, the Vietnam War, the wars of the Middle East, ongoing nuclear exposure, and the rise of nuclear fear if the exhibit portrayed a venerated story of the construction of the atomic bomb ending with a patriotic WWII victory image.²⁵⁹

In the mid-1990s and again in the early 2000s, the DOE installed a small exhibit on the second floor about the hazardous environmental exposure that affected Oak Ridge due to post-war manufacturing chemical ground leaks at the government facilities. The DOE established a Site Specific Advisory Board (SSAB) and required that AMSE allow space for a public service announcement-type exhibit. In the 1990s, the government began a widespread cleanup movement to eliminate aluminum, among other harmful substances, from the ground water in the surrounding area. This exhibit was placed in a small corner, some distance from the *Oak Ridge Story* room. Moreover, the DOE glowingly touted a successful end to the cleanup process.²⁶⁰ Conversely, the Oak Ridge Environmental Peace Alliance refuted this claim.²⁶¹

²⁵⁹ Exhibit, *The Oak Ridge Story*, exhibit, American Museum of Science and Energy, Oak Ridge, TN, 2009- 2018.

²⁶⁰ *Site Specific Advisory Board*, exhibit, American, Oak Ridge, TN, original: circa mid-1990s-2009, current: circa 2009 present.; "Public Involvement News," pamphlet, US Department of Energy Oak Ridge Operations, February 1999.; Newspaper Clippings Collection; FC 2 4.5; AMSE Archive, Oak Ridge, TN.; US Department of Energy Oak Ridge Operations, *Environmental Update*, Issue 20: Spring 1999.; Newspaper Clippings Collection; FC 2 4.8; AMSE Archive, Oak Ridge, TN.; American Museum of Science and Energy.

²⁶¹ Ralph Hutchison, (Coordinator 1991-present, Oak Ridge Environmental Peace Alliance), in discussion with the author, September 2, 2015, Oak Ridge, TN.

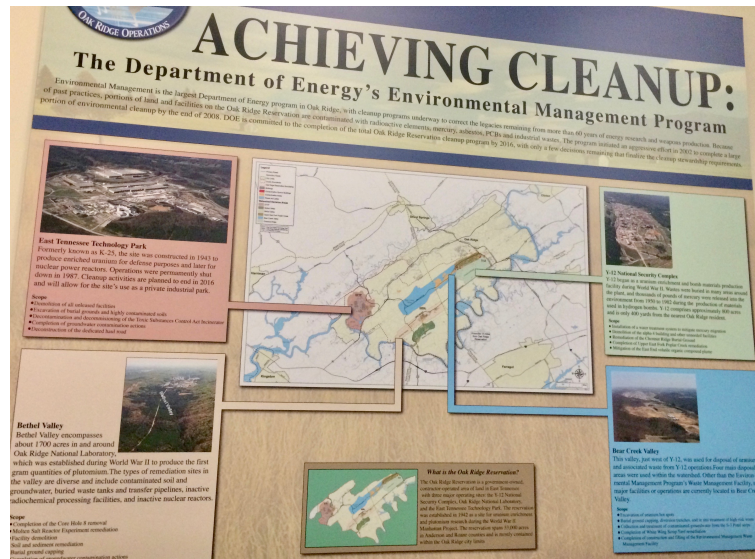


Fig. 4.8. AMSE 2000s Exhibit, *Site Specific Advisory Board*: Exhibit text stated that the Department of Energy had removed all hazardous environmental waste in Oak Ridge (Photograph taken by the author).²⁶²

Attempting to interpret the Oak Ridge narrative beyond August 6, 1945 was a complicated task, as the townspeople were no longer *innocent* or necessarily *victors*. Once the first bomb fell, Oak Ridge citizens ceased to be innocent; they knew in what they were participating and spent decades watching the world react. Perhaps the most poignant understanding of this nuanced conflict can be found through the perspective of one of the 2009 AMSE exhibit scriptwriters. When asked about the reasons the *Oak Ridge Story* did not connect the Manhattan Project to the Cold War narrative, King began to weep. As he composed himself he stated that they simply could not do that. Through tearful eyes, he explained the ways he personally struggled in the post-WWII era. King served his country in the Vietnam War. He returned home to live a life plagued by medical issues and pain that he would prefer to keep separate from the joy he feels

²⁶² Exhibit, *Site Specific Advisory Board*, American, Oak Ridge, TN, original: circa mid-1990s-2009, current: circa 2009 present.

reflecting on the glorious victory that emerged from his hometown. The wounds of the Cold War run deep and, for many, like King, remain unhealed. Perhaps basking in the pre-explosion glow associated with the Manhattan Project nostalgia provides an antidote to the painful difficulty that unfolded after the end of nuclear innocence.²⁶³

Whitewashing What Is Included

To AMSE's credit, the 2009 *Oak Ridge Story* exhibit was the first in the museum to formally approach several difficult issues; however, the ways in which King and Hennessey addressed those topics also underscored the *innocent victor* narrative. In the exhibit content, they explored the experiences of the farmers who were asked to leave their land, difficulties of living in a government town, the treatment of African Americans, and the destruction caused by the atomic bomb. The inclusion of these storylines represented a significant addition of voices previously missing from AMSE interpretation. However, each of these topics was couched within the grand victory narrative, barely addressed, or visually set apart from the main narrative.²⁶⁴

King and Hennessey's interpretation of the early farming communities mimicked two conflicting narratives within the Oak Ridge community. Prior to the start of the Manhattan Project, 3000 people inhabited the land the government cleared for the project. Suddenly, and with little warning, they were removed from their land. The grand war narrative has overshadowed their sacrifice and perspectives. Coutant, who has spent two

²⁶³ Cecil D. King (Graphic and Exhibit Designer, 2002-2010, American Museum of Science and Energy), in discussion with the author, July 23, 2015, Oak Ridge, TN.

²⁶⁴ Exhibit, *The Oak Ridge Story*, exhibit, American Museum of Science and Energy, Oak Ridge, TN, 2009- 2018.

decades reconnecting members of these pre-war communities, wrote, “we are telling all this wonderful stuff that went on during the war and the Cold War, and lost in all that is the fact that a lot of people got kicked off their land to make way for this big secret government project, got minimal amount of money for their land, got two weeks to get off and never come back.”²⁶⁵ This narrative divide was obvious in the exhibit space. Visually and interpretively, the farm community section was separated from the victory narrative. Moreover, the opening panel began with these words, “These people had names too,” and made clear that the land was not vacant before the government occupied it.²⁶⁶ This simple phrase advocated for the farmers as real people with stories, agency, import, and names. They were not merely objects that needed to be removed from the land to make space for the bomb project and were no less important than the *innocent victors* who worked on the Manhattan Project.

Whatever their intentions, the exhibit planners generated an additional problem by trying to fit the farmers’ complex story into the manufactured simplicity of AMSE’s 2009 version of the Oak Ridge story. Rarely do the complexities of war-sacrifice present a simple binary. This was true of both the farming communities and wartime laborers. But, in order for the counter farming community narrative to work in the exhibit’s construct, it

²⁶⁵ Charles C. Coutant (Distinguished Research Ecologist 1970- 2005, Oak Ridge National Lab, Committee of Fifty member), in discussion with the author, July 22, 2015, Oak Ridge, TN.; Coutant initiated a project to refurbish a church on DOE property that predates WWII. He collected artifacts from remaining members of that community, wrote interpretation that described their experience, and invited the community members and their families to attend an annual reunion.

²⁶⁶ Exhibit, *The Oak Ridge Story*, exhibit, American Museum of Science and Energy, Oak Ridge, TN, 2009- 2018.



Fig. 4.9. AMSE 2009 *Oak Ridge Story* Exhibit Section, “Displaced Communities”: For the first time, the museum included images and stories of the displaced communities in the *Oak Ridge Story* exhibit (Photograph taken by the author).²⁶⁷

needed to be molded into the one-sided *innocent victor* paradigm. The museum’s only previous mention of anyone from the farming communities was in the *Oak Ridge Prophet* exhibit, which played into the victory narrative. The 2009 exhibit scriptwriters attempted to connect the farmland community’s experience and the Manhattan Project experience through the *innocent victor* narrative, the desire to win the war at all costs. This connection was too weak. In the last panel the writers concede, “Patriotism did little to stem resentment among the land holders.”²⁶⁸ In order to accurately insert the nuance of the farming community narrative, the writers would have needed to frame the entire exhibit with a more balanced interpretation of the Manhattan Project.

²⁶⁷ Exhibit, *The Oak Ridge Story*, exhibit, American Museum of Science and Energy, Oak Ridge, TN, 2009-2018.

²⁶⁸ Ibid.

The writers upheld a utopian facade of Manhattan Project living by presenting a nostalgic viewpoint as opposed to addressing the complex wartime struggles. Living in Oak Ridge was similar to living on an army base in that residents were denied many standard American rights and were provided no knowledge of the impact of the work they were conducting. However, none of AMSE's history exhibits included this perspective. In her 2015 book, *Longing for the Bomb*, Lindsey Freeman, a sociologist and Oak Ridge native, analyzed the undeniable sense of nostalgia that permeates Oak Ridge. "Most Oak Ridgers use memory and nostalgia not primarily to articulate historical authenticity, but to celebrate a glorious past and to grapple with a present moment of uncertainty."²⁶⁹ The 2009 exhibit scriptwriters upheld this nostalgic viewpoint by addressing the minor wartime struggles and upholding the ideals of the *innocent victor* construct. An entire display showed Oak Ridgers battling against the ever-present construction mud, which resulted from the rapidity with which the town was built. Additionally, the writers highlighted the way the Oak Ridge community felt alienated from neighboring communities who became envious of the government resources that poured into the newly formed Oak Ridge community. The interpretation also demonstrated the social struggles of living in a new top-secret military town away from home, including the requirement of driving through a checkpoint at the edge of town and restrictions to owning objects such as binoculars, radio transmitters, cameras, alcohol, and firearms. These inconveniences were no doubt real. However, they are some of the lesser difficulties of Manhattan Project living. The nostalgic retelling of the community

²⁶⁹ Freeman, *Longing for the Bomb*, 5.

experience fed the idea that Oak Ridge happily and blindly sacrificed for the war cause. While this perspective is not entirely incorrect, it is undoubtedly incomplete.²⁷⁰



Fig. 4.10. AMSE 2009 *Oak Ridge Story* Exhibit Section, “Construction of the New City”: Text and Ed Westcott images show the muddy mess that plagued the construction of the Manhattan Project Site X, now known as Oak Ridge (Photograph taken by the author).²⁷¹

The *innocent victor* narrative remained protected by the way AMSE presented WWII’s final victory moment in the 2009 exhibit. At the end of the exhibit, only two images of damage to Hiroshima and Nagasaki sat nestled amongst a barrage of celebration images. Ominously, those images physically juxtaposed the community life section, which included a wall of smiling people who appeared to be living in a government constructed idyllic society. The destruction images are present, but they are few. They are not accompanied by explanations of the potential damage of weapons of

²⁷⁰ Exhibit, *The Oak Ridge Story*, exhibit, American Museum of Science and Energy, Oak Ridge, TN, 2009- 2018.; Freeman, 172.

²⁷¹ Ibid.

mass destruction nor are they connected to the problematic legacy of the atomic bomb. In contrast to the Hiroshima Peace Memorial Museum, which is dedicated to documenting the devastation caused by the bomb, Oak Ridge included only two images plus some newsreel footage of the bomb's affect on human life.²⁷²

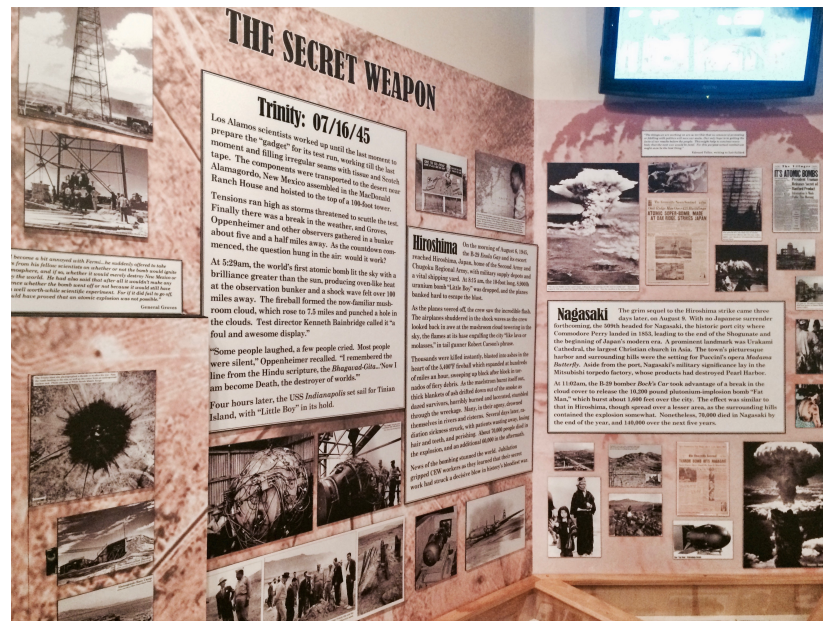


Fig. 4.11. AMSE 2009 *Oak Ridge Story* Exhibit Section, “Secret Weapon”: The 2009 exhibit included more images of destruction in Japan than in any previous history exhibit, yet still showed only a few (Photograph taken by the author).²⁷³

Within the exhibit space, the black and white narratives were segregated; images of black citizens are rarely included with images of white citizens. They are relegated to the black experience panels on a sidewall and exist outside the main narrative. The writers depicted African Americans much as they did the farmland communities, as a

²⁷² Hiroshima Peace Memorial Museum website, accessed August 2018, [http://hpmuseum.jp/modules/info/index.php?action=PageView&page_id=45&lang=eng.](http://hpmuseum.jp/modules/info/index.php?action=PageView&page_id=45&lang=eng;); Exhibit, *The Oak Ridge Story*, exhibit, American Museum of Science and Energy, Oak Ridge, TN, 2009- 2018.

²⁷³ Exhibit, *The Oak Ridge Story*, exhibit, American Museum of Science and Energy, Oak Ridge, TN, 2009- 2018.

distant “other” that made patriotic sacrifices but not as part of the central population. On the exhibit panel, the writers expressed the importance of black workers’ contribution to the building and maintenance work and explained the ways they fought and overcame segregation to make valued contributions. The remainder of the panel included an explanation of rampant and widely accepted discrimination and mistreatment. As exhibited, black Oak Ridge workers were housed in a hutment camp on the outskirts of town, allowed only menial labor jobs, and were not allowed to live with their spouses.²⁷⁴

The experience of African American workers in Oak Ridge did not fit exclusively in a victim or victor paradigm, as became obvious when positioned alongside the *innocent victor* narrative. Despite their valuable service and sacrifice for the war effort, a sentiment of blind patriotism did not necessarily permeate amongst all African Americans working in Oak Ridge. Their government subjected them to worse treatment than they would have received in many other parts of their country. AMSE staff wrote the African American panels after the original 2009 exhibit debuted and installed them roughly a year later. Perhaps the exhibit curators were unable or unwilling to address the underlying narrative conflict in the delayed attempt to fit the Oak Ridge African American workers’ experience into the primary *innocent victor* construct.²⁷⁵

A Paramount Conversation

In the two decades following the Cold War, the townspeople of Oak Ridge, DOE, and AMSE reviewed and renewed a long-held local commitment to an atomic identity. A

²⁷⁴ Ibid.

²⁷⁵ Ibid.

signification portion of the population participated in expressing this devotion through historical celebration, conversation, documentation, commemoration, memorialization, and exhibition. From those efforts emerged two monuments, a significant collection of memoirs and personal narratives, an online historical column, a Y-12 history center, a historical and preservation society, a WWII theme city festival, and two significant oral history projects among many other historical projects. AMSE also contributed updated versions of the Oak Ridge history exhibit, most notably the 2009 exhibit in which the vernacular presence finally became the central focus.

When AMSE created the 2009 *Oak Ridge Story* exhibit, it faced the same questions confronted by the National Air and Space Museum and the Harry S. Truman Presidential Library in telling the history of the atomic bomb. Ultimately, AMSE chose to create a grand patriotic narrative with a few controversial issues tucked into the exhibit. The tone of the exhibit content reflected a need to cleanse the atomic bomb's lasting legacy, the opposition to nuclear power and energy, and the implications of building a bomb. The omission of those key elements left a gaping hole. America's interaction with the atomic bomb has not been as contained or simple as the AMSE *Oak Ridge Story* exhibit suggests. The lens through which the exhibit was written bolstered a withering American victory narrative, which in many ways began with the use of the very first atomic bomb constructed in Oak Ridge.

While the 2009 exhibit contained elements of the basic historical narrative, the overriding voice is one of an identity agenda that is anything but basic. "Identities and memories," Gillis continues, "are not things we think *about*, but things we think *with*. As such they have no existence beyond our politics, our social relations, and our histories.

We must take responsibility for their uses and abuses, recognizing that every assertion of identity involved a choice that affects not just ourselves but others.”²⁷⁶ The identity presented at AMSE’s historical exhibits is a construct of the greater Oak Ridge culture, one that evolved over six decades through a series of conscious and subconscious choices. It is a construct that must be responsibly considered for those it affects and those whose voices are included and excluded from the discussion.

The people of Oak Ridge loudly and passionately inserted their collective voice and made their presence and perspective known. They did so with the support of and in conjunction with the local branches of the federal government. Together, the DOE, AMSE, and involved community members told a very local story at a national museum. With great dedication, they paid homage to a people, the *innocent victors*, whose honor became shrouded in a post-war national political conversation that far out dated their wartime efforts. “The good part of the story,” Coutant noted, “not that I am giving a value judgment, but this is the story you like to brag about. You don’t necessarily like to brag about the hutments that you made the blacks stay in and things like that.”²⁷⁷ Some of the more challenging parts of the narrative, including the hutments, did begin to surface in Oak Ridge public interpretation in the 1990s and early 2000s. Even so, the orchestrators of the 2009 version of the Oak Ridge story predominantly inserted the overlapping parts that both the official and vernacular camps liked to tout. In doing so, they ignored a paramount international conversation that resulted from the three short years those *victors* were still *innocent*.

²⁷⁶ Gillis, *Commemorations*, 5.

²⁷⁷ Charles C. Coutant (Distinguished Research Ecologist 1970- 2005, Oak Ridge National Lab, Committee of Fifty member), in discussion with the author, July 22, 2015, Oak Ridge, TN.

CHAPTER 5

CONCLUSION

“The world that we have made as a result of the level of thinking we have done thus far creates problems we cannot solve at the same level as the level we created them.”
- Albert Einstein²⁷⁸

As visitors approached the American Museum of Science and Energy (AMSE) in Oak Ridge, Tennessee, they were greeted by two monuments: a life-sized model of the atomic symbol and an iron art installation of the Twin Towers that were demolished during the attacks of 9/11. Neither structure was accompanied by written contextualization, leaving patrons to draw their own conclusions. The juxtaposition of these two images was striking. The atomic symbol designated the groundbreaking discovery of fission in 1938 that ultimately led to the atomic bombs the United States deployed over Japan in hopes of ending WWII, a war that represented the attack on much of Western Civilization’s democratic philosophies. The enriched uranium used for those bombs was manufactured in Oak Ridge during the war, which was the government’s impetus for AMAE/AMSE’s selected location. AMSE’s placement of the 9/11-art installation speaks to an ongoing fight to protect those same ideals. This fight is

²⁷⁸ Ram Dass, *The Only Dance There Is: Talks at the Menninger Foundation, 1970 and Spring Grove Hospital, 1972* (New York: Doubleday Anchor Original, 1974), 38.

evidenced by the terrorist attacks in New York City on September 11, 2001 and the nation's response to those attacks. After 9/11, much of America rallied around the ideals of the nation's victory culture identity. The iron towers reflected the ideals that followed 9/11: that America was the victim of a senseless brutal attack and then rallied to recover, heal, and defeat the perpetrators.

The connection between these two moments was anything other than a simple comment on American patriotism, so obvious it did not merit placement of an interpretive text panel. As Freeman describes her interaction with the monuments, she expounds on the ambiguity: "These three-dimensional renderings are remarkable in how they scramble time and space, strangely connecting science, catastrophe, and unrelated historical events, encouraging thoughts of innocence and victory and the imperative to never forget."²⁷⁹ In their most basic form, the two monuments were statements of patriotism, protecting freedom, and taking a stand against those who threatened America's way of life. Just beneath the simplicity laid a rich complexity directly connected to the ripple effect caused by the explosion of the atomic bombs over Japan in 1945. This complexity historically was and remained widely ignored both outside and inside AMSE.

In both cases, these seemingly foregone conclusions reflected AMSE's six-decade adherence to depicting the local atomic bomb history through an American victory narrative lens that actually began to dissolve with the use of the atomic bomb. American commemorative practices suggest that the two structures outside AMSE were placed in prominent public view as a way to pay homage to the nation's highest ideals. The

²⁷⁹ Freeman, *Longing for the Bomb*, 135.

juxtaposition of the structures directly connected two pivotal events that intersected with nuclear politics and shaped the historical interpretative landscape of Oak Ridge.



Fig. 5.1. American Museum of Science and Energy. Atomic Symbol Monument: The atomic symbol monument as it sat juxtaposed a 9/11 memorial outside the American Museum of Atomic Energy (Photograph taken by the author).²⁸⁰

The simple placement of these two monuments outside AMSE starkly represented the memory and identity of a city searching to define and validate an atomic past, present, and future. As Gillis attests, “If memory has its politics, so too does identity.”²⁸¹ In the 2009 *Oak Ridge Story*, exhibit scriptwriters King and Hennessey, in cooperation with AMSE, the DOE, and government contractors, drew some fairly straight lines between the rise of tyranny in both Nazi Germany and Imperial Japan and the justification for constructing the first atomic bomb and, by extension, the ongoing work at Oak Ridge

²⁸⁰ Atomic Symbol Monument, American Museum of Science and Energy, Oak Ridge, TN.

²⁸¹ John Gillis, ed., *Commemorations*, 3.

government facilities. The conclusions in the exhibit are mimicked by the simplicity of the two monuments, neither of which adequately portrayed the breadth and depth of the bomb's ever-evolving legacy.

The final image of the 2009 AMSE exhibit is that of smiling Oak Ridge citizens celebrating in Jackson Square holding newspapers imprinted with "WAR ENDS." This same image is displayed throughout the town. Visitors can see it in restaurants, hotels, even on some street corners. Former Oak Ridge Mayor David Bradshaw said: "Oak Ridgers love their history. They are very loyal to that history. We are very patriotic and think what we are doing is important to national security missions, still."²⁸² In Oak Ridge, patriotism includes upholding American victory culture ideals and viewing the arc of the town history through that lens.

The whitewashed and local nature that AMAE and AMSE history exhibits conveyed is quite revelatory. Conversations within the museums' walls reflected and affected not only the 30,000 people living in a small industrial town, but also the nation. Yet, the DOE, AMSE, and the predominant voice of the Oak Ridge vernacular remained focused on a version of the Manhattan Project that removes nuanced and complex perspectives. Gillis posits that this type of collective narrative does not happen by accident and should not be taken lightly. He writes, "identities and memories are highly selective, inscriptive rather than descriptive, serving particular interests and ideological positions."²⁸³ The Oak Ridge story, as it is portrayed in the museum, could be viewed as simple fact. Aren't they just telling *the* story? Isn't history just history, after all? Indeed,

²⁸² David R. Bradshaw (Mayor 2001-2007, City Council Member 1995-2007, City of Oak Ridge), in discussion with the author, April 10, 2015, Oak Ridge, TN.

²⁸³ Gillis, *Commemorations*, 4.

it is not. Rather, each rendition of the Oak Ridge story as it was presented first in AMAE and later in AMSE represented but one interpretation of the historical record.

In reality, the Oak Ridge story does not exist in a vacuum. AMSE is *America's* museum and one that displays an event that forever changed the entire world. The local *innocent victor* construct is not the only lens through which the Manhattan Project can or should be viewed. Perhaps there will come a day when historical interpretation in Oak Ridge fits the Bodnar binary. Without question, many other local, national, and global voices permeate the landscape of the nuclear debate that could bring balance and inclusion to the Oak Ridge identity construct and, in fact, uncover and illuminate a richer legacy for the lives and sacrifice of the *innocent victors*.



Fig. 5.2. American Museum of Science and Energy, Einstein and Boy Photo: Einstein appeared to be imparting wisdom to the next generation of AMSE museum thinkers (Photograph courtesy of U.S. Department of Energy).²⁸⁴

²⁸⁴ ORDOE Photographer, #82-4, AMAE gallery hallway, c. 1982.; JLEFB. Photo courtesy of DOE.



Figs. 5.3-5.6. American Museum of Science and Energy, 1966, 1979, 1982, 1978 Static Hair: Six decades of school children left the American Museum of Science and Energy with this hair-raising memory (Photographs courtesy of U. S. Department of Energy).²⁸⁵

²⁸⁵ ORDOE Photographer, #66C550-1, #791927, #82-73, #781745, AMAE static hair activity, c. 1966, 1979, 1982, and 1978 respectively.; JLEFB. Photos courtesy of DOE.

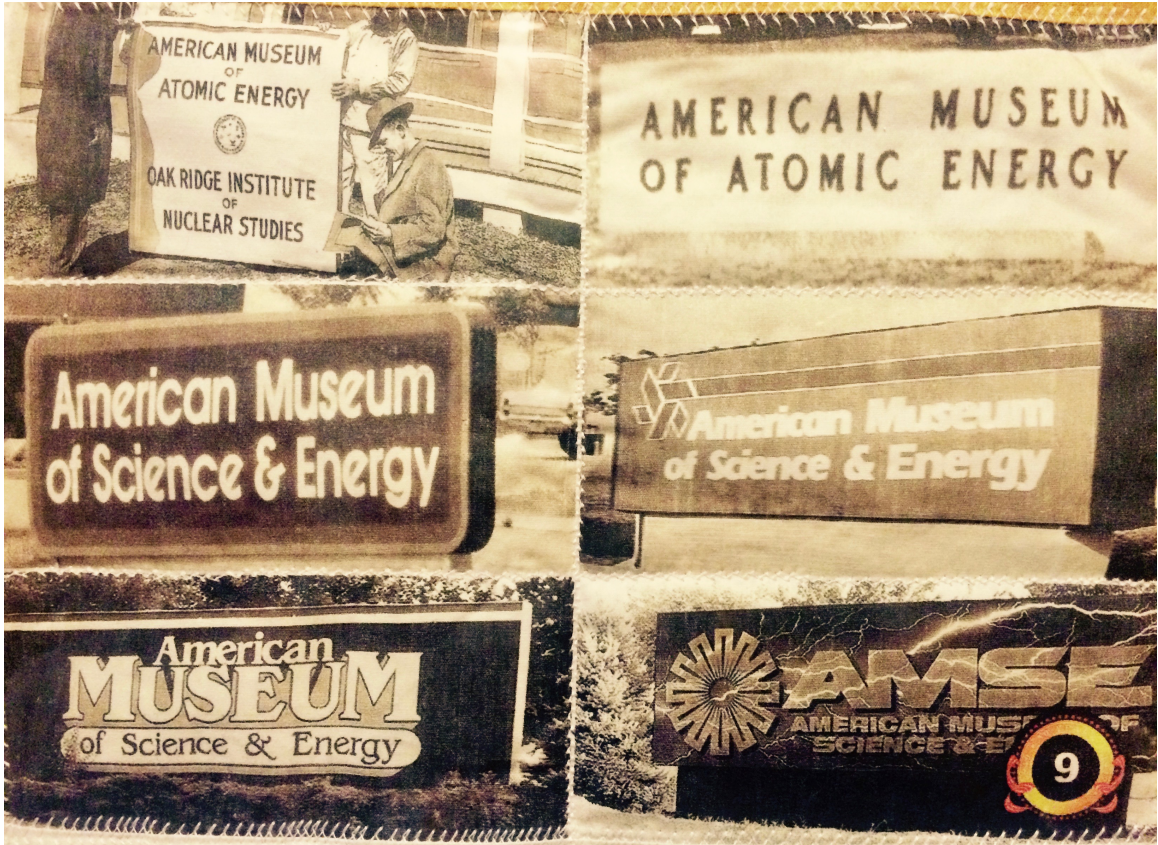


Fig. 5.3. American Museum of Science and Energy, Tapestry of Signs: Images of the American Museum of Atomic Energy and the American Museum of Atomic Energy outdoor sign from the 1950s-1990s (Photograph taken by the author).²⁸⁶

²⁸⁶ AMAE/AMSE tapestry, photograph captured in the AMSE Archive, Oak Ridge, TN.

EPILOGUE

In 2018, the American Museum of Science and Energy's storied history began a new chapter. The Department of Energy and City of Oak Ridge agreed to close and ultimately demolish the 300 South Tulane museum building location to make way for a new municipal project. AMSE's operations and exhibits moved to a new location inside a shopping mall that sat adjacent to the previous structure. Updated exhibits were limited to Department of Energy missions, brief mentions of the Manhattan Project, and no Oak Ridge city history. This change took place three years after Congress approved the Manhattan Project National Historical Park, which promptly established a park site in Oak Ridge. The National Park Service developed working affiliations with AMSE as well as other local museums. Together they continued the long-held quest of interpreting America's atomic bomb history within the borders of the largest Manhattan Project secret city.²⁸⁷

²⁸⁷ David Ray Smith (Electrician and Associate Director of the Facilities Management Organization 1970-2004, Y-12 National Security Complex; Historian 2005-2017, Y-12 History Center, 2015- present Oak Ridge Historian), in correspondence with the author, December 4, 2018.

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