

2012

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Recommended Citation

Underhill, Bethany (2012) "Marvin the Martian, Godzilla, and Other Purveyors of Atomic Destruction," *History in the Making*: Vol. 5 , Article 7.

Available at: <https://scholarworks.lib.csusb.edu/history-in-the-making/vol5/iss1/7>

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Marvin the Martian, Godzilla, and Other Purveyors of Atomic Destruction

By Bethany Underhill

Abstract: “Marvin the Martian, Godzilla, and other Purveyors of Atomic Destruction” examines the cultural impact of atomic testing as represented in popular culture. Children’s media, specifically served as a rich source of examples of atomic testing as presented to the general public. Research exposed a trend concerning to attitude toward atomic testing, and how this cultural attitude changed over time. This shift in attitude directly connects to the events surrounding a specific atomic test the Bravo Test in the Castle series. The context of the Castle Bravo test reveals the motivations for this change in attitude. The research encompasses an examination of the event and its direct representation in popular culture, revealing a corollary relationship between the two.

On a quiet atoll in the Pacific Ocean a man-made terror grew out of human control. This horror expanded to unexpected size, emitted radiation, and consumed human flesh. Scientists were sent to study it, and the atoll remained forever marred by its existence. This horror is, of course, the enormous crab beast of the 1957 film *The Attack of the Crab Monsters*. This B-rated movie is one of many films and other media created during the 1950s which addressed the issue of atomic technology both metaphorically and directly.

Issues that are products of the 1950s are often generalized as products of the entire decade. Many of these issues defined the decade: The Cold War, the beginnings of the Civil Rights and Feminist movements, the rise in consumerism, and the beginning of a more mobile society are among a few. Unfortunately, these larger themes are often applied as context for media indiscriminate

of the year they were produced. This attitude causes a great deal of inappropriate generalizations when it comes to cultural manifestations in media. Films and other media are often explained in light of larger trends that the decade encompassed with little contextual analysis. This is especially true in regards to the “paranoia” surrounding the atomic bomb. Media produced in the 1950s is lumped together regardless of the audience or year of creation. In response to these issues the question arose: What was continuous and what changed in the presentation of the Atomic Bomb to children in the 1950s and why?

Research was limited in media that specifically targeted children and young people, or was intended to include youth as part of its audience. Atomic imagery pervaded nearly every form of media during this decade, youth oriented media no exception. What is unique is that media that included young people in its demographic tended to sanitize or neglect issues that were controversial or generally unsavory. The presence of something as serious and menacing as the nuclear bomb in this type of media reveals the gravity this issue had on society. Focusing on children's media exclusively allowed the examination of a large sample size of primary source material that spans the entire decade. Also, trends that emerged in this sample carry more levity, in that atomic issues received mild censorship for their young audiences.

Film in both long and short format composed the largest percentage of sources. These films were sometimes intended for the general movie-going audience, or alternatively intended for classrooms. Printed works rounded out the research, varying from novels, encyclopedias, and comic books, all intended for young readers. The large sample size ensured that any trends observed could be thoroughly supported by primary source material. Also any assumptions about life in the 1950s would quickly be negated by the numerous sources discounting them and thereby improving the overall conclusions.

The research produced evidence of a trend in the presentation of the atomic bomb during the decade. When media produced early in the decade was compared to media produced later the contrast revealed evidence of severe thematic differences. Immediately after the end of World War II, films depicted atomic technology with hopeful and optimistic overtones. The media of this period portrayed nuclear advancements as a benefit to

humanity and hinted at the possibility of it ushering in a utopian age of science and safety. However, mid-decade, the treatment of the atomic bomb and nuclear technology completely reversed. Technology became a source of suspicion and fear. Issues of contamination, never before linked to nuclear technology, became the basis of any reference to atomics. The hope for atomic age of the early 1950s became the bane of man at the end of the decade.

The severe shift in tone and theme prompted exploration into events which occurred mid-decade as a possible cause of the change in popular media. The source of this shift can be pinpointed to the public relations nightmare that took place in 1954. The United States detonated the first thermonuclear bomb in the Bikini Atoll in the South Pacific.¹ The Bravo test in the Castle series, or Castle Bravo as it would come to be known, twice the amount of fallout expected.² Many of the nearby islands had to be evacuated, and a Japanese fishing boat got caught in the fallout cloud.³ The inhabitants of the evacuated islands suffered from birth defects and many fishing boat crew members became gravely ill, one crew member even dying.⁴ Beyond the cost in human lives, the fallout contaminated millions of fish, devastating the Japanese fishing industry.⁵ The United States government initially intended to keep this event from the American public. However, the international issue it caused with Japan,⁶ along with the Associated Press obtaining a letter from a soldier describing the horror radiation had afflicted on the fisherman, resulted in the event going public.⁷

Both international and domestic outcry forced the United States to take responsibility for the destruction caused by Castle Bravo to the environment, the economy and the people. The

¹ Jozef Goldblat and David Cox, *Nuclear Weapon Tests: Prohibition or Limitation?*, illustrated edition. (Oxford, UK: Oxford University Press, 1988), 96.

² *Ibid.*, 96.

³ Wm. F. Vandercook, "Making the Very Best of the Very Worst: The "Human Effects of Nuclear Weapons" Report of 1956," *International Security* 11, no. 1 (July 1, 1986): 185.

⁴ *Ibid.*, 185.

⁵ *Ibid.*, 186.

⁶ Goldblat and Cox, *Nuclear Weapon Tests*, 96.

⁷ Barton C. Hacker, *Elements of controversy: the Atomic Energy Commission and radiation safety in nuclear weapons testing, 1947-1974* (Berkeley, CA, University of California Press, 1994), 148.

American government paid the Japanese two million dollars to compensate for the contamination of fish as well as reparations to the family of the fisherman who died.⁸ Castle Bravo shocked and horrified Americans once learning the true nature of the Atomic Bomb. This served as the American public's first exposure to the horrors of nuclear fallout and radiation sickness. Prior to the disaster, the United States government had censored any reports of what occurred in Hiroshima and Nagasaki.⁹ The Castle Bravo test shifted the depiction of the bomb in children's media from an optimistic yet dangerous technological advancement to a violently destructive contaminator that was beyond the control of modern man.

Historiography

Unfortunately, the connection between the Castle Bravo test and a shift in the presentation of the nuclear bomb has yet to be explored by many historians. Regarded as a monolithic entity, historians often treat events of the decade as if their dates are interchangeable as long as they came after World War II and before 1960. This tendency ignores the realities of the period, simplifying the decade's events into themes that are easy to comprehend, however, not necessarily representative of the truth. This attitude can be observed in Cyndy Hendershot's article "Darwin and the Atom: Evolution/Devolution Fantasies in 'The Beast from 20,000 Fathoms, Them!,' and 'The Incredible Shrinking Man.'" In the article, Hendershot examines three films to trace their overarching theme. Although these films were produced in 1953, 1954, and 1957 respectively, Hendershot treated them as if they were the product of a single cultural movement, known as the "50s." She cited the Cold War and Feminism as major threads found in all three, ignoring the subtle difference in these films that are the direct result of specific events within the period.¹⁰ The "50s" are often criticized for the homogenization of culture, yet some

⁸ Vandercook, "Making the Very Best of the Very Worst," 187.

⁹ Christine Hong, "Flashforward Democracy: American Exceptionalism and the Atomic Bomb in Barefoot Gen," *Comparative Literature Studies* 46, no. 1 (2009): 125.

¹⁰ Cyndy Hendershot, "Darwin and the Atom: Evolution/Devolution Fantasies in 'The Beast from 20,000 Fathoms, Them!,' and 'The Incredible Shrinking Man,'" *Science Fiction Studies* 25, no. 2 (July 1, 1998): 319-335.

historians continue to lump decade's worth of media together regardless of the events that actually occurred in that ten-year period. If one were to examine the year-to-year changes in the 1950s with the same magnifying glass that is often applied to other decades, a deeper understanding of the period could be garnered.

To avoid generalization the Castle Bravo test of 1954 must be explained historiographically. The first mentions of the Castle Bravo test in academic research emerged during the late 1980s. The long gap between the event and any serious examination by historians is troubling. When scholars finally examined Castle Bravo it consisted only of a chronicle of the event. Jozef Goldblat wrote a brief description of the Castle Bravo test to provide context for his work on anti-nuclear actions taken during the 1970s.¹¹ “Making the Very Best of the Worst” by Wm. F. Vandercook described in detail the effects of the fallout contamination that took place on March 1, 1954, using statistics and public responses.¹² This late 1980s analysis coincided with the fall of the Soviet Union, and perhaps the Cold War’s eminent end encouraged the first look into the incident. But historians did not stop their exploration there, and as time progressed, their analysis gained in depth.

The 1990s represented a shift from chronology to the full exploration of the Castle Bravo event. In *Elements of Controversy*, Barton Hacker analyzed the events of Castle Bravo alongside radiation protection standards and attempts by those involved to make the test safer.¹³ In “Radiation Safety, the AEC and Nuclear Weapons Testing,” Hacker placed Castle Bravo in a larger historical context by comparing it to the nuclear outcry that occurred in the 1970s. It explored how information about the Castle Bravo test reached the general public, and attempts made by the government to improve public relations.¹⁴ One would hope that the Castle Bravo event would garner more attention from the academic community; however the historiography of the topic ended with Hacker in the 1990s.

This trend, however, was broken with the turn of the twenty-first century. In 2005, Nina Tannenwald, conducted an in-

¹¹ Goldblat and Cox, *Nuclear Weapon Tests*, 96.

¹² Vandercook, “Making the Very Best of the Very Worst.”

¹³ Hacker, *Elements of controversy*.

¹⁴ Barton C. Hacker, “Radiation Safety, the AEC, and Nuclear Weapons Testing,” *The Public Historian* 14, no. 1 (January 1, 1992): 47.

depth analysis of Castle Bravo, claiming it served as the roots of public outcry in the anti-nuclear movement that gained popularity in the 1960s and 1970s. She explored the attempts to keep the event from the public, and the motivation of government officials to do so.¹⁵ She took a unique position stating that opposition to nuclear testing “crest(ed) in the late 1950s,”¹⁶ instead of focusing on the counter culture movement of the late 1960s early 1970s, as the source of all anti-nuclear protest. Unfortunately, the new millennium does not have a quantity of historians exploring these issues, but the few who are, are producing quality work. The Castle Bravo test deserves more exploration than it has received in the last half century, and such research would improve the general understanding of a Post-World War II America.

The end of the Cold War era promoted research into the Civil Defense Administration by historians. The end of the Cold War allowed historians to reflect on the United States’ contribution to the problems of the last half-decade, and provided room for some self-criticism. JoAnne Brown reflected this in her 1988 article in which she chronicled the change in presentation of the atomic threat to children. Her analysis is unique in that it looked at specific changes from year to year, instead of lumping all the trends together under the guise of “The Fifties.” Like Castle Bravo, civil defense has not been adequately explored by historians, but at least this work helps to see past the divisive issue of propaganda in the United States and examines the motivation and persistent themes.

After the fall of the Soviet Union, the focus on the United States’ handling of the Cold War continued. Guy Oakes and Andrew Grossman explored the motivation behind the use of fear by the Civil Defense Administration. They made a fascinating connection between civil defense strategies and those employed by the United Kingdom during the blitz of World War II.¹⁷ They asserted that both were fueled by patriotism, and that Civil Defense used this as part of their strategy to “diminish the perceived danger

¹⁵ Nina Tannenwald, “Stigmatizing the Bomb: Origins of the Nuclear Taboo,” *International Security* 29, no. 4 (2005): 5.

¹⁶ *Ibid.*, 21.

¹⁷ Guy Oakes and Andrew Grossman, “Managing Nuclear Terror: The Genesis of American Civil Defense Strategy,” *International Journal of Politics, Culture, and Society* 5, no. 3 (April 1, 1992): 371.

of nuclear war.”¹⁸ According to Oakes and Grossman, the Civil Defense Administration created back up plans and shared them with the general public so the average American could feel prepared for the worst resulting in a feeling of security.¹⁹ Although the fear never truly went away, the title “Managing Nuclear Terror” suggests it was more important to manage the terror, than to eradicate it. The publishing of this article coincided with the fall of the Soviet Union, again aligning end of the cold with more attention to self-reflection.

Deeper exploration of the Civil Defense Administration arose in the early 2000s. The article “Between History and Event”, by Tracy Davis explored in detail civil defense strategies used during the 1950s. She cited multiple case studies, eyewitness accounts, and detailed statistics, to describe the manner in which the Civil Defense Administration prepared the public for an atomic attack. She argued that “the persuasiveness of rhetoric depended crucially on a campaign of performance”²⁰ and this performance reinforced how necessary and important anti-communist actions were to the public. Davis cited the wide variety of preparatory activities the Civil Defense Administration employed, and the lengths they would go to insure as much realism as possible in these practices. Civil Defense Administration did not inform the public of all the dangers of an atomic blast (specifically radiation sickness), but did go to great lengths to ensure populations were familiar with escape routes in the target cities.²¹ The specificity of information Davis synthesized to support her thesis represented a shift towards valuing small changes within the Post War period.

Another 21st century historian, Bo Jacobs, looked at an alternative aspect of civil defense strategies in the article “Atomic Kids.” He examined films like *Duck and Cover* for their implicit and explicit messages to determine what effect they had on their young audience.²² Instead of providing in depth analysis of the Civil Defense Administration drills like Davis, Jacobs combined his analysis of film with first-hand accounts to create a

¹⁸ Ibid., 362.

¹⁹ Ibid., 361.

²⁰ Tracy C. Davis, “Between History and Event: Rehearsing Nuclear War Survival,” *TDR (1988-)* 46, no. 4 (December 1, 2002): 25.

²¹ Ibid., 27.

²² Bo Jacobs, “Atomic Kids: Duck and Cover and Atomic Alert Teach American Children How to Survive Atomic Attack,” *Film & History: An Interdisciplinary Journal of Film and Television Studies* 40, no. 1 (2010): 28-32.

comprehensive visual of what life for a child during this period was like.²³ The new millennium promoted detailed analysis of Civil Defense practices and programs, and some historians took this further to better understand the cultural attitude of the period. Civil Defense is a difficult issue, with its less-than-truthful tactics often reeking of propaganda in an attempt to control hysteria. However, when examined in extreme detail their motivations are revealed to be less malevolent and more the result of fear.

The twenty-first century produced the most research conducted on atomic bomb propaganda in the United States. Historians explored this issue prior to 2000, but never with the fervor as in recent years. It is no accident that initial works about the government deceiving its people were published in 2003. This may have been prompted by the issue of weapons of mass destruction in Iraq, and the rise of the sentiment in America that the entire event was the product of American propaganda. This is only one of many explanations, but could be the antecedent of the influx of academic research. The book *Propaganda and Mass Persuasion* attempted to compile a record of all major works of propaganda in the last 500 years. It contained a brief section on the Civil Defense Administration and compared it to its English cousin, the FCDA, describing how both worked to reduce paranoia about a nuclear attack after World War II.²⁴ Andrew L. Yarrow published an article in 2009, "Selling a New Vision of America to the World," which focused on the shift from general patriotism to the concept of "people's capitalism."²⁵ He found that this shift occurred because by focusing on the high standard of living one's political system produced is "apolitical and (an) upbeat message that could unite Americans, patching over the bitter social divisions."²⁶ Yarrow examined the motivation behind propaganda in their historical context, instead of merely assuming a malicious attitude from the government. Greg Barnhisel researched the origins of American propaganda in "Cold Warriors of the Book" and discovered the "cultural tension" between the Soviet Union

²³ Ibid., 32.

²⁴ Nicholas J. Cull, David Culbert, and David Welch, *Propaganda and Mass Persuasion: A Historical Encyclopedia, 1500 to the Present* (Santa Barbara, CA: ABC-CLIO, 2003), 81-82.

²⁵ Andrew L. Yarrow, "Selling a New Vision of America to the World: Changing Messages in Early U.S. Cold War Print Propaganda," *Journal of Cold War Studies* 11, no. 4 (2009): 3.

²⁶ Ibid., 20.

and the United States existed long before it physically manifested in the 1950s.²⁷ The historiography of American propaganda created for the Atomic Bomb is, again, limited but varied enough to provide differing perspectives on the entire issue.

Like Castle Bravo and the Civil Defense Administration, the issue of media and the bomb were only explored academically after the Cold War. In 1987, Chon Noriega published "Godzilla and the Japanese Nightmare." Noriega detailed social issues in the Japanese creature-feature *Godzilla*, and their comparison to those in American creature-features like *Them* and *The Beast of 20,000 Fathoms*. Noriega concluded *Godzilla* maintained a very different message by being uniquely Japanese in style and theme. Japan's direct experience with the horrors of nuclear destruction differentiated it from American creature-features, created for an audience made ignorant of these realities due to government censorship.²⁸ Yet again, the imminent end to the Cold War allowed for limited examination of this topic. However, Noriega's work is specifically a Japan-centric exploration, revealing only a tangential criticism of American nuclear policy. The paper's familiarity with, but continued removal from the major issue of the period possibly allowed Noriega more freedom to objectively explore his research questions.

The 1990s represented an expansion in the exploration of nuclear technology's representation in film. In 1992 "Master Mechanics and Evil Wizards" by Glen Scott Allen continued Noriega's assertion that fear of the atom bomb could be traced back to Hiroshima and Nagasaki,²⁹ and he used this as a launching point for the rest of the work. Allen explored the failure of nuclear science to meet expectations and the backlash it garnered.³⁰ Allen examined how this disappointment manifested in film. He cited the resulting characteristics, varying from the hope of a nuclear-fueled utopia,³¹ alien invasion standing in for a real invasion,³² and the

²⁷ Greg Barnhisel, "Cold Warriors of the Book: American Book Programs in the 1950s," *Book History* 13 (2010): 186.

²⁸ Chon Noriega, "Godzilla and the Japanese Nightmare: When "Them!" Is U.S.," *Cinema Journal* 27, no. 1 (October 1, 1987): 99.

²⁹ Glen Scott Allen, "Master Mechanics & Evil Wizards: Science and the American Imagination from Frankenstein to Sputnik," *The Massachusetts Review* 33, no. 4 (December 1, 1992): 505.

³⁰ *Ibid.*, 537.

³¹ *Ibid.*, 513.

³² *Ibid.*, 537.

ultimate acceptance of the nuclear bomb as a thing of terror.³³ Cyndy Hendershot also examined film in *Darwin and the Atom*. She noticed trends that persisted through three films, *The Beast from 20,000 Fathoms*, *Them!*, and *The Incredible Shrinking Man*, and examined them in light of the larger social issues. She found that radiation and feminism were connected as sources of fear within the context of Post-War America. Continuing this trend towards context, Jerome Shapiro explored the entire genre of the Apocalyptic Narrative in the article “Atomic Bomb Cinema.” He concluded that this genre is not unique to the 1950s but part of a larger trend of society's obsession with ending it all,³⁴ as a hope of “cleansing the world of evil.”³⁵ He too examined 1950s films that encompassed these themes, two films were American and two were Japanese. Rebirth was the major trend that continued throughout these works. After the fall of the Soviet Union, historians used the changing societal events to examine a few films in light of their larger Cold War context, revealing a more complex situation than merely the fear of communism.

The new millennium contained fewer attempts to explore atomic bomb imagery in media by historians. Yet, Tristan Abbot broke this trend in 2008 with the article “Bomb Media, 1953-1964.” Abbot continued the 1990s tradition of examining films to answer larger questions. The films Abbot examined are unique in that instead of being explicitly about the armament race, or nuclear technology, they are about Soviet spies and antagonists attempting to attain the “nuclear mystery.”³⁶ He provided a detailed analysis of the plots and characters of these films, and connected them to issues present in the early 1950s. Abbot concluded that these films served a dual purpose, “to keep the public aware of the constant danger of nuclear war” and “to underplay the actual danger...to make it look survivable and manageable.”³⁷ Abbot discovered that the goals of the Civil Defense Administration were often reflected in Hollywood films. Some films occasionally broke outside the

³³ Ibid., 506.

³⁴ Jerome F. Shapiro, “Atomic Bomb Cinema: Illness, Suffering, and the Apocalyptic Narrative,” *Literature and Medicine* 17, no. 1 (1998): 128.

³⁵ Ibid., 130.

³⁶ Tristan Abbott, “Bomb Media, 1953–1964,” *Postmodern Culture* 18, no. 3 (2008),

http://muse.jhu.edu.libproxy.lib.csusb.edu/journals/postmodern_culture/v018/18_3.abbott.html.

³⁷ Ibid.

norm and preached an anti-nuclear message.³⁸ The 2000s contained fewer explorations into this issue, but did encourage examining the issue in different ways, by employing different research material. Film and the atomic bomb have been examined for the last 30 years, but differing forms of media are only now serving as a source of historical information.

Comic books are unique in that they were specifically created for a youth audience and their interpretation of the political climate is especially revealing. However, this perspective on comic books was not always acceptable by academics. In 1958 Paul Blakely wrote an article in which he refers to comic books as a “gaudy products”³⁹ and concludes that “objectionable” comics were “read with appreciable frequency.”⁴⁰ There existed an unfavorable view of comic books as harmful during this period. Yet as time progressed and comic books took up the mantle of folklore for the postmodern era, singular characters and their impact on society began to be explored. For example in the 1980s James Van Hise wrote a book concerning the evolution of Superman with chapter headings such as “The Importance of the Legend.”⁴¹ This terminology revealed that these works of fiction traveled beyond a child's amusement and left a relevant impact on American culture. Finally in the 2000s comic books took their place as a source of historical information. This is the entire purpose of Charles Hatfield's article written in 2006, “Comic Art, Children's Literature, and the New Comic Studies.” Hatfield even argued that the non-historical view of comic books had “sorely impoverished the field.”⁴² To avoid this pitfall, comics are incorporated as a primary source, and they continue to reveal a great deal about the period in which they were created.

The area most closely related to the atomic bomb's representation in child media may be that of media and the bomb. A disturbing trend persisted through all the historical research regarding this topic, the fact that the historians only observed a few films, and rarely examined other forms of media. The research in

³⁸ Ibid.

³⁹ W. Paul Blakely, “Reading of Comic Books by Seventh-Grade Children,” *The Elementary School Journal* 58, no. 6 (March 1, 1958): 326.

⁴⁰ Ibid., 320.

⁴¹ James Van Hise, *Comics file magazine spotlight on the Superman files* (Canoga Park, CA: Heroes Pub, 1986), 8.

⁴² Charles Hatfield, “Comic Art, Children's Literature, and the New Comic Studies,” *The Lion and the Unicorn* 30, no. 3 (2006): 361.

this study contrasts with this trend, in that it is composed of about 50 primary source materials. Also very few historians examined a wide variety of media, with the exception of Bo Jacobs,⁴³ for his research incorporated both film and print, and the many forms those two can manifest in. There are elements in the historiography of the Castle Bravo test that come close to the answering the overall question, yet they do not reveal what effect this test failure had on media from this period, and do not trace the change over time. The research contained here is unique and I will provide the basis for future exploration. Media representation of the atomic bomb for children took a unique form in the early part of the 1950s; however in 1954, after the Castle Bravo test, the themes and attitudes concerning the bomb quickly changed to mirror those of the newly informed public, shaping the way media represented the bomb to young audiences for the remainder of the decade.

Pre-Castle Bravo

Prior to the media disaster that followed the Castle Bravo test, atomic technology represented a dangerous yet viable option for future progress. There was hope this new technology would improve modern life and protect the United States position as a world power. The government ensured that American public knew little about the true nature of the nuclear bomb.⁴⁴ The population relied on the government's optimism regarding the technology's potential to shape their own opinions. This resulted in ignorance about radiation, helping to shape the perception of its danger. The government emphasized the importance for citizens to prepare for a possible atomic attack. It was important for the public to know, if the United States was attacked, they were willing to retaliate. The view of atomic technology before the Castle Bravo test, was naive and overly hopeful, with a generalized warning about its dangers.

The anticipated expectations of atomic technology's potential manifested itself in children's media. It was assumed that new rocket advancements would run on hydrogen, and everyone from astronauts⁴⁵ to aliens⁴⁶ employed this technology. The rocket

⁴³ Bo Jacobs, "Atomic Kids."

⁴⁴ Christine Hong, "Flash forward Democracy," 126.

⁴⁵ Kurt Neumann, *Rocket ship X-M* (Image Entertainment, 1950).

in *Rocket ship XM* ran entirely on hydrogen, which fictionally served as an abundant source of energy. In *XM* a space voyage intended for the moon, which is only a few hundred thousand miles away, is readjusted for a journey to Mars, tens of millions of miles away, the amount of fuel never an issue.⁴⁷ In *The Day the Earth Stood Still* there is an interesting exchange in which the alien Kaatu encouraged a young boy, that nuclear technology is not just for bombs, but can allow for inter-planetary travel.⁴⁸ The general attitude assumed that new nuclear advancements would allow for unhindered space exploration. Although, these assertions were fanciful, and not grounded in reality, they did reveal the enthusiasm and confidence surrounding nuclear technology.

The optimism that accompanied nuclear technology was not solely applied to space exploration. In a General Electric short film entitled *A is for Atom*, cartoon characters explain radioactivity, and how it could be useful in a variety of fields. Atomic technology was personified as the warrior, the healer, the farmer, and the scientist, because of its uses in the military, medicine, agriculture, and science.⁴⁹ The film made the assertion that all this is possible because technologies “are within man's power, subject to his command.”⁵⁰ The film claimed that future generations would be dependent on humanity's “wisdom (and)...firmness in the use of that power.”⁵¹ This is an example of optimism evolving one step further into hubris. The public not only hoped that nuclear technology would bring about a better world, but that it was their mandate to be the guardian of such nuclear technology.

The mystery surrounding nuclear advancements can be observed in the nearly surreal way they were presented to children. In 1951, Jack Coggins and Fletcher Pratt wrote a children's book entitled *Rockets, Jets, Guided Missiles and Space Ships* in which new technological advances were explained at a level presumed to be understandable to children. When the issue of inter-ballistic missiles arose the authors explained the “(m)ost of the military

⁴⁶ Robert Wise, *The Day the Earth Stood Still* (20th Century Fox, 1951).

⁴⁷ Neumann, *Rocket ship X-M* (1950).

⁴⁸ Wise, *The Day the Earth Stood Still* (1951).

⁴⁹ *A Is For Atom* Vintage Atomic Film, 1952,

http://www.youtube.com/watch?v=Gi-ItrJISQE&feature=youtube_gdata_player.

⁵⁰ Ibid.

⁵¹ Ibid.

results have been kept secret because they concern one of our newest and best weapons.”⁵² The government did not inform the public of the advancements they were making so the authors had to reassure their young audience that this was for the best. The assumption was, experimentation with radiation and nuclear bombs would improve society, and everyone was expected to entrust this technology to its guardian, The United States government. This can be construed as a form of patriotism and went unchallenged.

Despite the hope brought by atomic technology, the public was not so naïve to ignore the extreme danger it represented. The public may not have known the extent of the human suffering radiation caused, but they did know that the atomic bombs forced had Japan to surrender. This can be observed in some of the previously mentioned works. In the climax of *Rocket ship XM* the main characters learned that a grand society that existed on Mars destroyed itself during nuclear war. The astronauts then worked to ensure that the people of earth learn this as well, before their rocket is destroyed in Earth's atmosphere.⁵³ *The Day the Earth Stood Still* depicted the fear surrounding nuclear decimation as well. The main plot point in this film concerns an alien police force noticing the earth's nuclear capabilities and experimentation in rockets. Kaatu is sent to warn the earth and is accompanied by an indestructible robot, meant to exterminate the human race if they ever threaten other planets.⁵⁴ Both of these films contain a transparent message: nuclear war has the potential to destroy the earth. After the first Soviet atomic tests that occurred in 1949, the concern about mutually assured destruction emerged.

The Soviets were not the only source of atomic threat. According to some works of media, the United States was its own worst enemy. In the film *Beast from 20,000 Fathoms*, atomic testing in the Arctic awakens a prehistoric beast that goes on a rampage in New York City.⁵⁵ Instead of warning about the potential for nuclear war, this film illustrated that even experimentation with nuclear technology can have dire consequences. This point is rendered somewhat mute in that the

⁵² Jack Coggins, *Rockets, jets, guided missiles and space ships*, First edition. (New York: Random House, 1951), 33.

⁵³ Neumann, *Rocketship X-M*.

⁵⁴ Wise, *The Day the Earth Stood Still*.

⁵⁵ Eugène Lourié, *The Beast From 20,000 Fathoms* (Warner Home Video, 1953).

monster is destroyed by shooting it with a radioactive-isotope-tipped missile.⁵⁶ Although the message might seem mixed, the fundamental theme is that precaution must be maintained when nuclear technology is concerned; however, this does not mean the end of advancement in the field.

Some media created for children in the 1950s pessimistically observed the consequences of nuclear destruction. For example, in 1950 Bowman Gum Company produced a series of trading cards, one of which was entitled “Atomic Doom.” The card first warns of the possibility of nuclear war, a standard fear of the period. However, this card goes on to state that this “(e)xplosion might cause a chain reaction destroying the earth, or rendering it so barren it could not support human or animal life.”⁵⁷ The image on the card is that of the earth exploding. Perhaps what is most astonishing is that the destruction of earth was marketed to children, and included with a stick of gum.

Gum companies were not the only ones purveying doom to children. Looney Tunes produced a Daffy Duck and Marvin the Martian cartoon in 1953 entitled *Duck Dodgers in the 24 ½th Century*. In this cartoon Duck Dodgers, on orders from the Earth's authority, travels to Planet X to claim the planet and attain a rare element that is vital to the production of shaving cream. Upon arrival he finds that the martians have also sent their best, Marvin the Martian, to do the same thing. They exchange comical blows which culminate in both attempting to blow the other up, resulting in a nearly complete destruction of the planet.⁵⁸ On the surface, this is an amusing cartoon, but when all the gags are stripped away, it represents the presumed results of an atomic conflict. The result being even worse than that depicted on the “Atomic Doom” card, for all that is left of the planet is a small sliver.⁵⁹ Children's media was not immune from the fear of destruction the permeated the decade, but there were some that intended to lessen some dread for this specific audience.

Preparation manifested as a focus of films shown in schools in attempts to counter the pessimism expressed in other media. *Duck and Cover* was the best example of this. Produced by the

⁵⁶ Ibid.

⁵⁷ Ibid.

⁵⁸ Chuck Jones and Margaret Selby, *Chuck Jones - Extremes and In-Betweens, a Life in Animation* (Warner Home Video, 2002).

⁵⁹ Ibid.

Civil Defense Administration in 1951, its purpose was to encourage young people to be prepared for an atomic attack by explaining what should be done in case of such an event. Through the use of a cartoon turtle, children were encouraged that if a bomb were to go off, they are to “duck and cover.”⁶⁰ Done through song, this reveals another attempt to lessen the frightening nature of the subject matter. The assumption *Duck and Cover* functions on is that if a child is prepared for a disaster, they will be less fearful of it in their daily lives. The film *Invasion U.S.A.* maintained a similar message. After all the characters realized that the horrors they experienced were a mixture of mass hypnosis and foresight, they leave to take up government contracts and donate blood to the Red Cross.⁶¹ The message in this film asserted that common people could prevent nuclear destruction by being prepared. Both works espoused the virtues of preparation to make the public feel more comfortable in the (false) knowledge that being prepared for an attack will protect one from destruction.

The final theme that permeated the Pre-Castle era was an attitude of righteous retaliation. In *Invasion U.S.A.*, after an implied Soviet enemy decimated the entire west coast with atomic bombs, a character reassures the group that “for every bomb they drop (in the United States)...three are dropped” in their nation of origin.⁶² This bravado reveals the public's willingness to employ atomic technology in battle. It was acceptable for the United States government to drop exponentially more atomic bombs on their enemy after the United States had been attacked. This film shows that even though Americans feared the use of the bomb on themselves, they were more than willing to use it on an enemy.

This element of retribution was not exclusive to film. Between 1952 and 1953 Ace Comics produced a series entitled *Atomic War!*. The series speculated on events that might occur if the United States engaged in armed conflict with the Soviet Union. The first issue's cover depicts New York City destroyed by a mushroom cloud, and preceding comics depicted the United States engaged in retaliation.⁶³ The most blatant illustration of this

⁶⁰ *Duck And Cover* (1951) Bert The Turtle Civil Defense Film, 2009, http://www.youtube.com/watch?v=IKqXu-5jw60&feature=youtube_gdata_player.

⁶¹ Alfred E. Green, *Invasion USA* (Synapse Films, 1952).

⁶² Ibid.

⁶³ Aaron A. Wyn, *Atomic War!* Number 1 (Ace Comics, Springfield, 1952).

retaliation is expressed on the cover of *Atomic War #3* in which pilot detonates an atomic bomb, shouting that this will “avenge what the Reds did to New York, Chicago and Detroit...BOMBS AWAY!”⁶⁴ EC Comics also produced comics that espoused the principles of retaliation. In *Weird Fantasy No. 11*, published in 1950, a wife punished her abusive husband by using radiation to shrink him to the size of a doll.⁶⁵ Both of these comics promoted atomic technology as a means to enact revenge, justified by the terrible actions of the antagonist. These comics revealed that revenge was acceptable as long as it could be justified as a response to an attack or abuse, and this message was specifically geared towards children.

The elements previously described established the post-World War II attitude about the bomb. The American public anticipated the ways in which atomic technology would improve their life. The public also knew the danger associated with the bomb, they were just unaware of how dangerous it could be. People were encouraged to be prepared for a possible attack, in hopes of relieving some of the fear they felt. People were generally willing to use atomic technology in retaliation for these presumed attacks. Optimism, apprehension, preparation, and retaliation all worked together to create a tense yet balanced attitude concerning nuclear technology but these would soon be reformed by terrible reality.

Post-Castle Bravo

After the disaster of Castle Bravo, themes like preparedness, retaliation, and optimism for the new technology soon gave way to fear of what man had created. Issues that were only briefly mentioned in previous forms of media now became the focus of entire works. These works adopted a more pessimistic tone that would come to dominate for the remainder of the decade. Ultimately the Castle Bravo test caused immense change to themes explored in the media; however, superficial elements of characterization remained the same with few outliers.

A major new theme introduced post-Castle Bravo was that of contamination. It manifested in a variety of ways, depending on

⁶⁴ Aaron A. Wyn, *Atomic War!* Number 3 (Ace Comics, Springfield, 1953).

⁶⁵ Jack Kamen, *Weird Fantasy: Shrinking from Abuse* (EC Comics, 1950).

who or what was being irradiated and how, yet all being negative for human beings. Occasionally there was direct reference to the Castle Bravo test, but never by name and extremely rare. Contamination seemed to pervade the culture so much, that in some media, radiation was obviously the source of mutation, but is not mentioned. The shift from a positive view of nuclear technology was evident. The entirety of this shift can be traced to the Castle Bravo incident. Contamination remained in the public consciousness and shaped the way the atomic bomb was depicted to the American public.

The most intimidating form of contamination expressed in the media was that enacted on the environment. In some works it laid the foundation for the action, like *Day the World Ended*, in which six people survive a nuclear holocaust because of the luck of being in a particular lead filled valley, unable to leave the valley because of the fallout that consumes the earth.⁶⁶ This film explored the nature of man at his most desperate and primal, with the only goal being the fight for survival in the face of utter destruction caused by contamination of his fellow man.⁶⁷ Ultimately, much like a bad horror movie, all the other characters were killed except for the main protagonist and his love interest. The world also cleansed itself of the fallout with rain, although completely scientifically inaccurate, allowed the protagonist and his bride to leave the canyon and repopulate the earth.⁶⁸ This film was produced in 1955, only a year after the Castle-Bravo incident. Its message of preparation and rebirth are holdovers from the pre-Castle period. The new fear of contamination reshaped these old themes into a far grimmer view of what the future had in store.

Film was not the only medium touting the newly found dangers of atomic war and fallout. In *The Magician's Nephew*, written by C.S. Lewis in 1955, one section is essentially a veiled metaphor for the nuclear arms race. In chapters four and five, the children enter a world completely devoid of life. They are met by the Queen who explained that the destruction was all caused by a conflict between herself and her sister. She had resorted to the "secret of the deplorable world" in order to end the war.⁶⁹ This spell destroyed every person in the world except the person who

⁶⁶ Terence Gross, *The Day the World Ended* (Sony Pictures, 1955).

⁶⁷ Ibid.

⁶⁸ Ibid.

⁶⁹ C. S. Lewis, *The Magician's Nephew* (New York: HarperCollins, 1955), 30.

spoke it, the Queen. These chapters are an attempt by C.S. Lewis to inform his young audience of the dangers of nuclear war. Lewis used fantasy as a thin screen for his social commentary. The author used his platform to comment on recent events and communicate with his young audience. The environment in this section of *The Magician's Nephew* is so lonely and bleak, it is meant to reinforce the shift from optimism to pessimism concerning the bomb.

Radiation not only harmed the environment in works of fiction, animals also fell victim to mutation from radiation in media. This mutation took two forms, that of direct radiation resulting in growth, and that of indirect contamination of the food supply by nuclear fallout, which also resulted in growth. These two manifestations reflect the events of Castle Bravo, by re-imagining the effect nuclear fallout had on the Marshallese and the Japanese fishermen, and the contamination of the fish population caused by the blast. The overall message being that nuclear technology is destructive in unexpected and unforeseen ways, and thus should be harnessed before more harm occurs.

Godzilla represented the earliest use of radiation actually creating a monster. Not introduced to America until 1956, the Japanese original reflected the issues brought up by the Castle Bravo test. *Godzilla* initially attacked a fishing boat and a small island greatly resembling the destruction caused by the radiation fallout of Castle Bravo. The filmmakers avoided this comparison by asserting that *Godzilla* manifested because of the Hiroshima bomb, but the similarities and timing are undeniable.⁷⁰ *Godzilla* soon moved on to destroy the city of Tokyo and the rampage only stopped when a terribly dangerous weapon removed all the oxygen from the water in Tokyo Bay.⁷¹ This film also grappled with the issue of the morality of such a scientific advancement that can cause such destruction. *Godzilla* contained, though the veil of fiction, a harsher critique of nuclear technology than any American works.

In contrast, characters in *The Attack of the Crab Monster* discuss the Castle Bravo test more directly, yet refer to it as the “first big H-bomb test.”⁷² Characters mentioned how it completely

⁷⁰ Terry Morse, Gojira, *Godzilla* Deluxe Collector's Edition (Classic Media, 1955).

⁷¹ Ibid.

⁷² Roger Corman, *Attack of the Crab Monsters* (Allied Artists Classics, 1957).

irradiated the islands and the sea, “blanketing the island with hot ash.”⁷³ The film revolved around the more stupendous results of radiation. According to the film, Castle Bravo caused the growth of ocean crabs to an enormous size and provided them with the ability to absorb tissue by eating it. After they eat the brains of a group of scientists, the crabs become sentient. These crabs attempted to kill scientists on the island and are eventually killed by electrocution. This film represented the fear of mutation caused by radiation, as a result of the Castle Bravo incident.

Not all films fall in the category of giant lizards and crabs took place in the eastern Oceans. *Them!*, a film about huge radioactive ants, grew because of nuclear testing in Nevada.⁷⁴ After an attempt to destroy the colony, two queen ants escape to Los Angeles. The protagonists finally corner the remaining ants and destroy them with flamethrowers, but on reflection of their victory the characters wonder what other horrors the numerous nuclear tests may have caused.⁷⁵ This poignant scene left the audience to wonder and fear what terrors man brought on himself in the name of science, protection, and progress. By observing the events of the Castle Bravo test, one can sympathize with the audience’s fear of death and destruction.

Another form of direct radiation took place in the media that did not have a connection to actual events. This can be observed in the film *The Giant Behemoth* in which nuclear testing is referenced as the origins of the monster, but no specific test is cited as the cause. The Castle Bravo test is mentioned, only in that the burns observed looked similar to those caused by the nuclear fallout.⁷⁶ In *The Killer Shrews* a scientist intentionally irradiated shrews for non-governmental scientific experiments, causing their enormous size.⁷⁷ The characters' only escape method was to evacuate the island and let the shrews starve to death.⁷⁸ *Earth vs. the Spider* contained enormous arachnids produced by unnamed nuclear testing that are destroyed only when they are blown up with dynamite. These films were all produced towards the end of

⁷³ Ibid.

⁷⁴ Gordon Douglas, *Them!* (Warner Home Video, 1954).

⁷⁵ Ibid.

⁷⁶ Douglas Hickox and Eugène Lourié, *The Giant Behemoth* (Warner Home Video, 1959).

⁷⁷ Ray Kellogg, *The Killer Shrews* (Alpha Video, 1959).

⁷⁸ Ibid.

the decade, whereas the films that explicitly name the tests had production dates in 1954 and 1955. The difference in production date may reveal that initially after Castle Bravo, testing took the forefront of the collective American mind, and as time passed, specific names and dates faded from memory, but the horror of mutilation by atomic radiation still remained.

Although direct radiation poisoning scared the American public in works of fiction, contamination of the food supply also sprang up in media. For example, in 1955 the film *It Came from Beneath the Sea* a monster octopus left its deep trench home due to the irradiation of its food supply. The monster turned his attention to nuclear subs but the characters destroyed it with a radioactive tipped missile.⁷⁹ In *The Beginning of the End* giant grasshoppers grew from eating irradiated vegetables and proceeded to attack Chicago.⁸⁰ Unlike *Beneath the Sea*, the protagonists worked to destroy the grasshoppers without the use of atomic bombs. Instead they used high frequency sound to lure the beasts into Lake Michigan.⁸¹ In *Attack of the Giant Leeches* a presumably atomic source caused leeches to grow to the size of a man.⁸² In *The Giant Gila Monster* elements in the water transferred to plant life and then to animal life causing the exponential growth of the title creature.⁸³ Explosives were used to destroy both the leeches and the Gila monster. Just as Castle Bravo contaminated the Japanese fishing supply, the American public feared a similar situation would occur at home. This fear was especially great because it could not be remedied with money. The fact that contaminated resources manifest as such an integral part of the plots reveals that the American public feared the larger implications of atomic testing, recognizing that it may destroy or mutate their means of survival.

Although radiation affected animals and the environment in films created after the Castle Bravo incident, the effects of radiation on humans received the most attention in the media. Mutation served as the general theme that continued throughout all

⁷⁹ Richard Schickel and Robert Gordon, *It Came from Beneath the Sea* (Sony Pictures, 1955).

⁸⁰ *Beginning of the End* (Anchor Bay, 1957), videocassette.

⁸¹ Ibid.

⁸² Bernard L. Kowalski, *Attack of the Giant Leeches* (Rhino / Wea, 1959), videocassette.

⁸³ Ray Kellogg, *The Giant Gila Monster* (Miracle Pictures, 1959).

these works. Sometimes this mutation manifested physically. In other films, it caused mental abilities. Bodily possession in regards to nuclear experimentation and technology occurred in multiple films. And finally, the intention to do good with this technology, resulting in negative outcomes, arose as a theme over and over again. The public feared the cost of atomic radiation on their environment and wildlife, but they were especially fearful of the ways radiation might affect them personally, and this manifested frequently in the media after 1954.

General mutation, as a theme, sprang up in the most films, killing and disfiguring human beings. In *Queen of Outer Space* these mutations are shown in the most realistic sense, illustrating that exposure to atomic radiation caused terrible burns,⁸⁴ the villainess' face terribly deformed by them. But burns showed up frequently in other films with an atomic element. Characters suffered mortal burns in *Day the World Ended*,⁸⁵ *Godzilla*,⁸⁶ and *The Giant Behemoth*.⁸⁷ The fear of death by the scorching heat of an atomic blast materialized in these films as a result of nuclear testing. Yet, characters also suffered non-life-threatening, but equally disfiguring, burns in *Day the World Ended*,⁸⁸ *The Amazing Colossal Man*,⁸⁹ and *Behemoth*.⁹⁰ The American public feared the disfiguring power of their new weapon. Burning from a nuclear blast was a fear grounded in reality, unlike some of the other mutating powers the public assumed radiation to have.

Fiction also endowed radiation with the ability to transform a human into a human-beast hybrid. In *Attack of the Sun Demon* the main character was exposed to deadly amounts of radiation in a lab. He remained unaffected until his doctors exposed him to the sun's rays, at which point he "evolves backwards" becoming a human lizard.⁹¹ His rampage only ended when his humanity briefly won over his animalistic urges and he threw himself off of a building. *The Day the World Ended* also contained this element of human mutation. Any person caught outside the safe valley

⁸⁴ Edward Bernds, *Queen of Outer Space* (Warner Home Video, 1958).

⁸⁵ Gross, *The Day the World Ended* (1955).

⁸⁶ Morse, Guiro, *Godzilla* Deluxe Collector's Edition (1955).

⁸⁷ Hickox and Lourié, *The Giant Behemoth* (1959).

⁸⁸ Gross, *The Day the World Ended* (1955).

⁸⁹ *The Amazing Colossal Man*, videocassette.

⁹⁰ Hickox and Lourié, *The Giant Behemoth* (1959).

⁹¹ Robert Clarke and Tom Boutross, *The Hideous Sun Demon* (Image Entertainment, 1959).

transformed into a flesh-eating monster.⁹² The audience assumed that the entire irradiated population took the form of a horned, clawed beast. Rainwater killed all the monsters, and cleansed the world of radiation.⁹³ This fanciful envisioning of the effects of radiation represented a fear that nuclear technology would strip away one's humanity and leave them a beast. These assumptions grounded themselves in fantasy, but played into deeper fears that the bomb was a sort of boogiemán. This element in media revealed a fear that radiation would accompany the end of civilization and the rise of brutality as the new world order.

The final representation of radiation causing physical mutation resulted in a change in size. In *The Amazing Colossal Man* a soldier participating in a nuclear test in Nevada, was left exposed when the bomb detonated and received a great deal of radiation.⁹⁴ Initially, radiation covered his body in second and third degree burns, but overnight they healed, and he began to grow. The exposure to atomic radiation caused his cells to over repair, and he eventually grows to sixty feet in height. This process is only stopped when doctors injected him with more radiation, but this merely stopped his rapid growth, and did not reverse it. Madness drove him to rampage, and the military shot him with a bazooka causing him to fall off of the Hoover dam⁹⁵ Conversely, in the 1957 film *The Incredible Shrinking Man*, a man absorbed too much radiation from an atomic test while on his boat and began to shrink.⁹⁶ He eventually shrunk to the size of a doll, but came to a more profound understanding that despite his size he still “meant something too” and that he “still existed.”⁹⁷ The man, who grew as a result of exposure, fell into madness and destruction, the man who shrunk found his place in the universe. *The Amazing Colossal Man* reflected the fear of unhindered progress, whereas *The Incredible Shrinking Man* restored man to a comfortable place, where he must accept his lack of control. These two films demonstrate fanciful fears that revolved around atomic

⁹² Gross, *The Day the World Ended* (1955).

⁹³ Ibid.

⁹⁴ *The Amazing Colossal Man*, videocassette.

⁹⁵ Ibid.

⁹⁶ Jack Arnold, *The Incredible Shrinking Man* (Universal Studios, 1957), videocassette.

⁹⁷ Ibid.

technology, each representing a different response to the issue: one of unchecked power, and the other of acceptance and humility.

Although *Shrinking Man* ends poignantly, it's a rare gem in the world of child's media concerning the bomb. Many more works included the disastrous results of atomic experimentation and the unforeseen consequences. For example "Fiend without a Face" revolved around a scientist who attempted to give a physical presence to thought.⁹⁸ He accomplished this by siphoning energy from a military establishment, using a nuclear reactor to power experimental radar. These thoughts soon attacked the local population, and through a spike at the nuclear plant, can be seen visually. They are only stopped when a soldier shuts down the nuclear reactor, and the monsters disappear.⁹⁹ Other creatures come to life on far away planets because of alien technology. In *Forbidden Planet*, a nuclear powered intelligence booster did exactly that, for a scientist who lived alone on the planet with his daughter. Unfortunately, it also provided his id with a physical presence and this uncontrolled id rampaged invisibly throughout the planet.¹⁰⁰ The rampage ended with the scientist's death, allowing his daughter to flee with her new love.¹⁰¹ Both of these films include a scientist who intended to use nuclear power to increase his knowledge, but ultimately released an invisible evil into the world. Comparisons can easily be made between the issues that arose in these films and the invisible terror unleashed on the world in the form of nuclear fallout.

Nuclear energy, at least in the world of fiction, allowed superior, non-physical beings to possess the body of a human. In *Brain from the Planet Arous* and *Kronos*, alien entities assume the bodies of unsuspecting victims in order to bring about their own dominance. In *Arous* an alien creature attempted to establish himself as ruler of the world by possessing a nuclear scientist and revealing a new and more powerful form of atomic bomb. The lead female character stopped the alien by acting on information given to her by an alien police force.¹⁰² In *Kronos* an alien force also inhabited the body of a nuclear scientist to ensure he gave the

⁹⁸ Arthur Crabtree, *Fiend Without a Face* - Criterion Collection (Criterion, 1958).

⁹⁹ Ibid.

¹⁰⁰ Fred M. Wilcox, *Forbidden Planet* (Warner Home Video, 2006).

¹⁰¹ Ibid.

¹⁰² Nathan Juran, *The Brain from Planet Arous* (Image Entertainment, 2001).

alien ship atomic energy. After the American government mistakenly detonated an atomic bomb on their ship, the aliens happily absorbed it as energy. However, the protagonist covered the ship with radiation, and it began to devour itself.¹⁰³ These films have many similar elements and reveal a distrust of science and scientist that coincided with fears about nuclear testing. Audiences could accept the imagery of a possessed scientist more easily, than the fact that the destruction caused by Castle Bravo resulted from ignorance and human error.

There are some consistencies that persisted heavily throughout the entire decade, occurring in nearly every primary source. These largely superficial trends visualized as images used or the character archetypes that pervaded each work. The shift in theme was so significant that a connection in message and attitude cannot be made between the early and late parts of the decade without resulting in extreme generalizations. However, these are not accurate measures of consistencies since they were the perimeters of my research. The superficial aspects do persist throughout the decade and warrant noting.

One visual consistency that existed throughout the decade was the use of stock footage of atomic tests in these films. For example, Hollywood produced *Invasion U.S.A.* and *The Beast from 20,000 Fathoms* in 1952 and 1953 respectively. Yet they contained some of the same stock footage used in *The Giant Behemoth* (1959) and *Fiend without a Face* (1958). The low quality visual effects of the period encouraged practicality of using footage from nuclear testing to represent the detonation of an atomic bomb. Films used test footage prior to Castle Bravo, despite the fact that the true nature of the bomb was kept largely from the public. This superficial consistency helps to describe more about the limitations of the time for filmmaking than the presentation of the atomic bomb, but still is a revealing aspect of this medium.

These films consistently employed the archetype that transformed into a stock character for the genre of creature-features. The first form of characterization was the foreign scientist. The films characterized this scientist sometimes as benevolent, other times as malevolent, or occasionally merely misguided. He was always the most intelligent person in the entire

¹⁰³ Kurt Neumann, *Kronos* (Image Entertainment, 2000).

film and he was always foreign. Most British or Canadian films as well exploited this archetype as well. Prior to Castle Bravo the foreign scientist character was present in *The Beast from 20,000 Fathoms*, *The Day the Earth Stood Still*, *Rocket ship XM*, and *Invasion U.S.A.* After Castle Bravo a foreign scientist appeared in *The Killer Shrews*, *Fiend without a Face*, *Them!*, *Bride of the Monster*, and many others. The United States imported scientists prior to and during World War II, and this may serve as a fictional representation of those actions. Their presence provided support or antagonism for the main protagonist and to explain the “science” behind the plot.

Another character that played prominently before and after the Castle Bravo incident was the female scientist or scientist assistant. Her intelligence was often overshadowed by her role as a love interest for the protagonist. In the 1950s, with a woman’s place being in the home, these characters contradicted this stereotype. These women played a significant role in bringing about the resolution of the plot, and their acceptance in the scientific realm was sometimes included. Female scientists showed up in *Rocket ship XM* and *Beast from 20,000 Fathoms* prior to 1954 and are seen in *Them!*, *Queen of Outer Space*, *Fiend without a Face*, *Kronos*, and numerous other films. The role of a female scientist may have served as an easy way to include a beautiful woman and love interest in stories that were dominated by men. Yet, the presence of these women refreshes the modern observer, along with the competence attributed to them.

There are a few outliers that either because of date or theme do not fit perfectly into my thesis. First, there are those films that have nuclear imagery but no mention at all of radiation. These films are *Fly*,¹⁰⁴ *Attack of the Puppet People*,¹⁰⁵ *The Blob*,¹⁰⁶ and *Donovan's Brain*.¹⁰⁷ These films sometimes included references to civil defense¹⁰⁸ explicit images that looked very similar to the depictions of atomic technology,¹⁰⁹ or shared themes with atomic narratives that were too close to just be ignored.¹¹⁰ So I thought it

¹⁰⁴ Kurt Neumann, *Fly* [VHS] (20th Century Fox, 1958).

¹⁰⁵ Bert I. Gordon, *Attack of the Puppet People* (MGM, 1958), videocassette.

¹⁰⁶ Irvin S. Yeaworth Jr and Russell S. Doughten Jr, *The Blob* [VHS] (Gaiam, Inc., 1958).

¹⁰⁷ *Donovan's Brain* (MGM, 1953).

¹⁰⁸ Yeaworth and Doughten, *The Blob* (1958), videocassette.

¹⁰⁹ Gordon, *Attack of the Puppet People* (1958), videocassette.

¹¹⁰ Neumann, *Fly Donovan's Brain* (1953), videocassette.

important to mention that even when media was not addressing atomic issues directly, many of the elements persisted, blending into other works. Secondly, I stumbled across a book that on the surface contained a pre-Castle attitude, but was published in 1959. *The Bookshelf for Boys and Girls Encyclopedia*, specifically its section on “Atoms,”¹¹¹ explained how atoms work and the scientific history behind the research into the atom, culminating with an explanation of the atomic bomb's use during WWII. It asserted “(f)ortunately, there are other ways to release this vast energy than in bombs.”¹¹² This optimism very much resembles the attitude prior to Castle Bravo, however upon further inspection; one can see that it is not quite the same. This section goes on to describe the duality of the decision humanity must make concerning atomic energy, the only “limit is man's own judgment.”¹¹³ Prior to Castle Bravo, children's media made no mention of judgment, prudence, or responsibility; this is a very post-Castle attitude. These outliers would seem to hurt the validity of the thesis but they actually bolster it in their own unique ways.

Conclusion

In researching these many primary documents I found a mid-decade event changed the attitude and presentation of nuclear technology. Upon further exploration, I deduced that a media nightmare, the Castle Bravo disaster, exposed the American public to the realities of the hydrogen bomb, thus changing its representation in media. I chose to examine children's media because that specific genre simplified major issues to their least complex themes, better encompassing acceptable norms for the period. Through the use of various primary source materials, I tracked the elements that remained consistent in a specific year and consistencies that lasted the decade entire. I also explored the changes that sprang up suddenly in 1954 and shaped the way

¹¹¹ The Editorial Board of the University Society, *The Bookshelf for Boys and Girls: Volume VII - Nature and Science* (New York: The University Society, Inc., 1959), 356.

¹¹² Ibid., 359.

¹¹³ Ibid., 369.

nuclear technology was represented by media outlets for the rest of the decade.

The issue surrounding the atomic bomb and fallout stood reached their most promising and most terrifying during the 1950s. The Castle Bravo test did not cause the loss of life and general destruction brought about by the atomic bombs dropped on Hiroshima and Nagasaki. The American government unintentionally caused Castle Bravo, creating minimal human casualties, in comparison to the severe loss of human life in Hiroshima and Nagasaki. Yet, because of Castle Bravo's exposure in mass media, this accident turned perception of nuclear technology on its ear. Media followed this shift, and changed themes and messages to fit the new attitude of its audience. Media serves as a both a barometer and time capsule, capturing the fickle nature of the viewing public. The unique way attitudes changed in 1954 reinforce the assertion that the attitudes transformed throughout the decade. Their attitude truly changed, disproving the prejudice that Americans only cared for homogenization and status quo. When major events became public knowledge, even the most "innocent" form of media changed. The children of the 1950s experienced this shift which then laid the foundation for future concerns for atomic technology.

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Author Bio

Bethany Underhill graduated California State University San Bernardino in 2011 with a B.A. in History. While at CSUSB Bethany participated in the annual student research conference. This involvement gave her a real love for the research and presentation process in the academic community. She currently is in the History Master's Program at University of Nevada, Reno, and continuing research in the area of American cultural history. While in the Master's program, Bethany has contributed to the Oral History program at UNR, interviewing members of the community for the Fourth Street Project. Upon completing her academic program Bethany hopes to teach within higher education. Yet, her recent involvement in the Fourth Street Project has also given her a taste for public history, and she hopes to better the community in the future with more incorporation of history directed at the general population.

