

The Bomb and Beyond: Teaching Nuclear Issues through Popular Culture Texts

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America's atomic attacks on Hiroshima and Nagasaki—on August 6 and 9, 1945, respectively—instantly killed some 200,000 Japanese and precipitated the end of World War II. They also helped usher in the Cold War, a new era of global tension that pushed the world towards the brink of destruction. In this menacing climate, in which the United States and the then-Soviet Union pursued a fierce international rivalry, nuclear issues became central to top-level diplomacy and policymaking. Citizens around the world experienced a full spectrum of emotions—fear, paranoia, rage, and hope—as they lived in this “nuclear world.”

Presently, nearly three decades after the fall of the Berlin Wall, the original nuclear arms race has subsided, but nuclear issues remain seminal. Continued challenges related to the development and proliferation of nuclear weapons, and the risks posed to the environment and resident populations from an aging nuclear power infrastructure are among the top concerns in the United States and worldwide. Nuclear related issues will continue to affect nations, humanity, and the environment for decades, and perhaps centuries, to come.

We present three strategies, appropriate for history or public issues classes, for engaging students in nuclear themes through popular culture texts. We do this in part by looking at the legacy of the Hiroshima and Nagasaki bombings beyond the typical strategic and policymaking perspectives. We also provide teaching activities for other nuclear issues—namely the arms race and nuclear power—that developed in the decades that followed. We specifically encourage the use of popular culture in the

classroom, including films, TV shows, video games, photography, and online databases. These cultural texts illustrate diverse societal views from different points in time. As we describe below, these texts can be explored through a Socratic-style seminar discussion, as evidence for a historical inquiry lesson that aligns with the C3 Inquiry Arc, or as sources for deliberation of a controversial historical or contemporary issue.¹ Overall, we seek to demonstrate new ways of thinking about how to teach the ideas, actions, consequences, and legacies of nuclear developments on an international scale (NCSS STANDARDS 8 and 9) while also developing student critical literacy skills in analyzing and interpreting popular culture artifacts.

Teaching about the Bomb through Seminar Discussions

In almost every U.S. and world history course, one of the most challenging lessons involves the use of atomic weapons on Japan at the end of World War II. This topic is taught in a myriad

of ways, but often revolves around an effort to understand how and why the Truman administration unleashed a pair of destructive weapons on a mass of civilians. Often a debate or deliberation model is used to engage students in exploring the motives and implications of official U.S. decision making—such as to save American lives, check Soviet expansionism, or justify the two-billion-dollar cost of the Manhattan Project. But this intellectual exercise also carries the risk of reducing the experience to strategic considerations, while neglecting the thoughts and emotions of people outside the U.S. policymaking community.

As a way of filling this void, we encourage a greater focus on the perspectives of two vital groups through discussions of texts that focus on the creation of the bomb and the legacy of its use on Japanese citizens. Through seminar discussions, teachers can provide students with the opportunity to explore the issues, ideas, and values of the texts and their authors—these discussions ask students to explore a text in common to gain an understanding of the issues and the perspective of the author of that text.²

The first perspective is of those scientists who made the bomb. Those who joined the Manhattan Project—including a number of Jewish exiles from Europe—were initially determined to build the “winning weapon” against the Nazis, but many of them soon decided

to oppose its use, for moral and ethical reasons. Studying their voices could lead students to re-evaluate the bomb decision from outside strategic thinking. The scientists' views can be drawn from the Atomic Heritage Foundation's "Voices of the Manhattan Project," a web resource that contains a welter of biographies, interviews, and oral histories (www.atomicheritage.org).

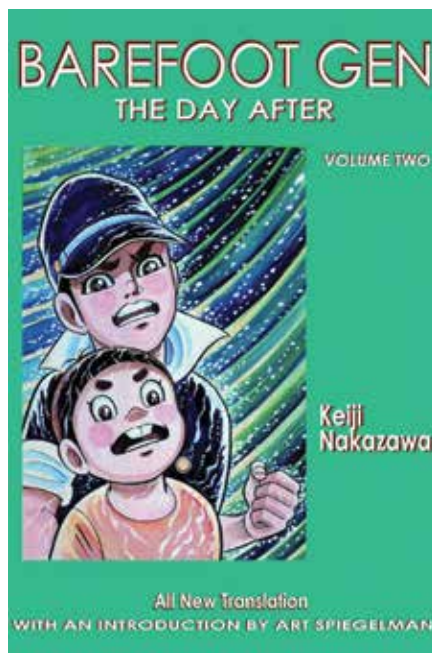
The other group perspective often missing is that of the Japanese. Given the devastation that unraveled on the ground, it is important to explore how the *hibakusha*—the victims of nuclear attacks—have grappled with the bomb experience. A commonly used book that introduces the victims' perspective and explores the decision behind dropping the bombs is John Hersey's *Hiroshima* (1946), a best-selling account of six individuals who survived the nuclear attack. There are also powerful visual texts that will engage students. One is *Pikadon* (1978), an award-winning Japanese anime that dramatizes the fate of citizens in Hiroshima on August 6, 1945. Produced by Renzo and Sayoko Kinoshita, the 10-minute film shows how the bomb instantly transformed an otherwise ordinary morning into a hellish nightmare. (See the *Pikadon* Seminar Activity on p. 151.) One could also turn to a selection from *Barefoot Gen* (1973-85), a 10-volume graphic novel that tells the story of the Hiroshima bombing through a young boy who survived the deadly explosion.³ Its second volume, "The Day After," offers the author (and bomb survivor) Keiji Nakazawa's sobering depiction of ground zero.

Popular Culture as Seminar Texts

These texts are useful because they help to establish the conflicted views of nuclear scientists along with Japan's collective memory of the bomb experience and can present a comparative viewpoint for our students to the commonly taught debate over Truman's decision to use the bomb. Teachers could break up their classes into two or more groups for a fishbowl seminar in which

groups discuss their assigned text and observe their classmates discuss divergent or complementary texts. Further, teachers could ask the class to compare the power of different narrative formats, from anime, graphic novel, to conventional written narratives. Which do they find most powerful? Which do they find more trustworthy? And why?

Films can be powerful seminar texts, but should be accompanied by discussion in the seminar of film as a source.⁴ For example, a powerful text for under-



standing the legacy of the bomb in Japan is *Gojira* (*Godzilla*, 1954). A silly monster movie at first glance, this Japanese film offers a serious commentary on the 1954 U.S. BRAVO nuclear test—conducted a few months before the film was released—and its contamination of a Japanese fishing boat. It portrays the monster as being awakened by hydrogen bomb testing in the Pacific. Therefore, asking students for a "thick" analysis of the iconic creature might lead to fruitful conversations about the traumas of Hiroshima and Nagasaki, the horrors of U.S. incendiary bombings, and nuclear anxieties of the Cold War era. By focusing on the mythic Godzilla as symbolic of a particular view on the past, students will begin to understand the role that

popular culture texts hold in understanding social, cultural, and political perspectives from the periods and places of production.

Inquiry into the Nuclear Arms Race

Gojira's allusion to the Cold War is worth probing further. Indeed, during the 45 years after Japan's unconditional surrender, the United States and the Soviet Union participated in an intense arms race that gave rise to nearly 70,000 nuclear warheads at its peak. Other states, such as Great Britain, France, and China, built their own bombs to boost their military power and diplomatic leverage. The era gave rise to the first Soviet atomic test, the thermonuclear bomb, the Cuban Missile Crisis, and Reagan's Strategic Defense Initiative—all of which elevated the prospects of global annihilation. In light of these developments, it is vital to think of the atomic bombings not as the end of an era, but the beginning of an "atomic age" that would soon envelop the globe. In addition to looking at the key events of the Cold War, we encourage teachers to use popular culture texts as evidence in attempting to answer a unit-long inquiry question such as "What drove policy decisions during the Nuclear Arms Race?" or "How did Americans view the Cold War?" The following are a number of film clips and other popular culture sources that could be used as part of this C3-style inquiry to potentially get at Dimension 2 (perspectives, in particular) and Dimension 3 (use of evidence) while answering these questions.

To set the context for the inquiry, it would be helpful to introduce some statistics and figures on nuclear weapons production. Equally important is to tease apart the idea of Mutually Assured Destruction (MAD). A clip from the Hollywood film *Fail Safe* (1964) may be of use, as it suggests how human error, technological advancement, and communication glitches—all of which did occur in real life—could have led to a fatal nuclear standoff between the United

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States and the Soviet Union. Students should be engaged in analyzing the perspective, evidence, and context of each source in an attempt to identify warranted answers to the inquiry question. The satirical comedy *Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb* (1964) addresses similar issues to *Fail Safe* by depicting national leaders as childlike individuals obsessed with the possession of militarized “gadgets”—from bombers and bombs, to mine shafts. This film also provides an opportunity to teach about the concept of satire and how satire is used as a form of social criticism.

In addition to fictional narratives, teachers could turn to documentary films, of which portions can be used to engage students in evidence to examine the competing issues and perspectives on nuclear testing. *Radio Bikini* (1988), for example, revisits Operation Crossroads—the first U.S. tests conducted in the Pacific atolls—

by showing the bizarre hoopla surrounding the tests as well as stunning images of the actual blasts. The film invokes ethical questions on these experiments, as we learn that some U.S. soldiers suffered from serious radiation damage and many Marshall Islanders were forced to abandon their home islands for the sake of U.S. strategy. Another scene from a documentary is one from *The Atomic Café* (1982), which presents the detonation of tactical (small-scale) nuclear weapons in Nevada. Following the explosion, front-line soldiers, who had already received a full dose of the blast in their faces, crawl out from the trenches and march toward the growing mushroom cloud. Here, too, one could debate the validity of this military exercise. These sources ask students to wrestle with the policy decisions made to push forward with atomic weapons tests despite the danger to human life—including one’s own soldiers.

Fast-forward to the 1980s era and we encounter another treasure trove of teaching material. This of course was a time in which the prospects of nuclear

Armageddon soared high as President Ronald Reagan exalted pressure against the Soviet “evil empire.” The larger political culture of the 1980s can be explored by prominent texts aimed at adolescent audiences. A book that is particularly appropriate for young students is *The Butter Battle Book* (1984). Authored by Dr. Seuss, this pictorial volume chronicles a clash between the fictional Yooks and Zooks as an arms race between the two groups escalates in their efforts to protect the border that divides them. The book ends with the two sides nervously posing to drop a powerful egg-shaped weapon to blow up the opponent “into pork and wee beans.” *When the Wind Blows* (1986), a feature-length British animation, follows an aging couple who build a makeshift bomb shelter before facing a Soviet missile attack. This bleak film reflects the revived clash between the two superpowers and critiques Margaret Thatcher’s hardline policies.

A somewhat more light-hearted text is *War Games* (1983), a film in which a

Socratic Seminar: *Pikadon* (1978)

ACTIVITY

Preparation for the seminar (for more on seminars see Walter Parker, *Teaching Democracy: Unity and Diversity in Public Life*, 2003)

Have students view the film more than once if possible. Provide a warning that while it is an animation it does present a traumatic and violent event (and would be more appropriate for high school over middle school).

During the film, have them record how the film makes them feel, what it makes them think about, and what questions it raises (they can record this on a graphic organizer). You may want to stop the film at the 4:00 minute mark before the bomb drops to have them record their impressions.

An entry ticket for the discussion of *Pikadon* might ask students to answer the following questions:

1. Who is the intended audience for the film?
2. What kind of scenes does the filmmaker focus on in the beginning of the film before the bomb is dropped? Why?
3. What kind of scenes does the filmmaker focus on at the

end of the film after the bomb is dropped? Why?

Opening Question:

How does the filmmaker view the dropping of the atomic bomb?

Follow-up/Closing Questions:

1. How are sound effects (e.g., bugs, clock, baby crying) and music used in the film to get you to consider the Japanese view? Life in Hiroshima?
2. What other elements of the film foreshadow the disaster about to fall on Hiroshima?
3. How are the people of Hiroshima portrayed?
4. What is the purpose of the ending sequence with the paper airplane? What might the paper airplane signify?

Assessment:

Write a short reflection on what the experience of the victims of Hiroshima (as portrayed in *Pikadon*) means in our lives?

Table 1: Cultural Texts for Teaching Nuclear Issues

Title / Year / Media Type	Author / Publisher / Source
The Beginning or the End 1947, Mock Documentary (DVD)	Director: Norman Taurog • Writers: Robert Considine, Frank Wead
Barefoot Gen 1973–85, (Original Graphic Novel) 2004–2010 (English Translation)	Author: Keiji Nakazawa
Barefoot Gen: Volume 2 “The Day After” 2004, Graphic Novel (English Translation)	Author: Keiji Nakazawa
Pikadon 1978, Anime Film	Available on YouTube www.youtube.com/watch?v=eEOZ1sBppWs
Children of the Atomic Bomb , UCLA Website	www.aasc.ucla.edu/cab/index.html
Gojira (Godzilla) 1954, Film (DVD)	Director: Ishirō Honda • Writer: Shigeru Kayama • Production manager: Teruo Maki Toho Film Co. Ltd.
Fail-Safe 1964, Film (DVD)	Director: Sidney Lumet • Writer: Walter Bernstein • Producer: Max E. Youngstein Columbia Pictures Corporation
Dr. Strangelove or: How I Learned to Stop Worrying and Love the Bomb 1964, Film (DVD)	Director: Stanley Kubrick • Writers: Stanley Kubrick, Terry Southern, and Peter George • Producer: Stanley Kubrick Columbia Pictures Corporation
The American Experience: Radio Bikini (Season 1, Episode 2) 1988, Documentary (DVD)	Director: Robert Stone • Producer: Robert Stone Crossroads Productions
The Atomic Café 1982, Documentary Film	Directors: Jayne Loader, Kevin Rafferty & Pierce Rafferty The Archives Project Productions
Civil Defense Films Sites (website)	www.atomictheater.com/civildefensefilms.htm www.conelrad.com
The Day After 1983, TV Movie (DVD)	Director: Nicholas Meyer • Writer: Edward Hume ABC Circle Films
WarGames 1983, Film (DVD)	Director: John Badham • Writers: Lawrence Lasker, Walter F. Parkes Sherwood Productions
Missile Command 1980, (Video Game)	Atari, Inc. Available online: www.mindjolt.com/atari-missile-command.html
The Butter Battle Book 1984, (Book) 1989, (TV) (DVD)	Director: Ralph Bakshi • Writer: Theodor Geisel (Dr. Suess) Turner Network Television
When the Wind Blows 1986, Animation (DVD)	Director: Jimmy T. Murakami • Writer: Raymond Briggs British Screen Productions
Eisenhower’s “Atoms for Peace” Speech	Available on YouTube: www.youtube.com/watch?v=2B8R-umE0s0 Transcript available online: http://voicesofdemocracy.umd.edu/eisenhower-atoms-for-peace-speech-text/
The Simpsons “Homer Defined” 1991, Television Show (DVD)	Director: Mark Kirkland • Writers: Matt Groening (creator), Howard Gewirtz 20th Century Fox Television
A is for Atom 1953, Animation (video)	Director: Carl Urbano • Writer: True Boardman John Sutherland Productions Available online: http://archive.org/details/isforAto1953 Also available on YouTube: www.youtube.com/watch?v=Gi-ItrJISQE
The Battle of Chernobyl 2006, Documentary (DVD)	Director: Thomas Johnson • Play Films Production Available on DVD through this website: http://icarusfilms.com/new2007/batt.html Available on YouTube: www.youtube.com/watch?v=MKKz45ORPQQ
The China Syndrome 1979, Film (DVD)	Director: James Bridges • Writers: Mike Gray, T.S. Cook, and James Bridges IPC Films
Harvard University’s “ Japan 2011, Disaster Archive ”	http://beta.jdarchive.org/en/home
Dig That Uranium , 1956, Film (DVD)	Director: Edward Bernds • Writers: Bert Lawrence, Elwood Ullman Production Company: Allied Artists Pictures
Waste: A Nuclear Nightmare 2009, Documentary (DVD)	Director: Eric Gueret Production Company: Bonne Pioche
The Nuclear Comeback 2007, Documentary (DVD)	Director: Justin Pemberton Production Company: Docufactory

high school computer wizard taps into the U.S. government's defense system and nearly ignites a global thermonuclear war. The film associates nuclear strategy with video games like *Missile Command* (1980), in which players shoot defense missiles to protect their cities against ballistic air attacks. This game, currently available for free online, may be a useful tool to revisit the 1980s, as it challenges players with standard warheads as well as Reagan-era weapons like the Multiple Independent Reentry Vehicle (MIRV), which forks off in mid-air to strike multiple targets. The game usually ends with the total destruction of the cities. It might be worth examining the reasons why its algorithm (or "narrative") is designed in this particular way and what that tells us about how Americans viewed the inevitability of nuclear conflict during this heightened Cold War era. In this way, portions of these texts can provide evidence on the popular culture view and critique what drove policymakers during the Cold War era nuclear arms race while also helping develop students' media literacy.

Deliberating Nuclear Power

The bombings of Japan and the nuclear arms race are "spectacular" developments that tend to occupy the bulk of our attention. However, we should also encourage students to probe into issues concerning nuclear power. Since President Dwight D. Eisenhower's famous "Atoms for Peace" speech (1953), the United States and the world have grown increasingly dependent on atomic energy. As evidence, some 100 nuclear reactors exist in the United States and over 440 currently operate across the globe. While touted as a "clean" and "promising" power source, nuclear energy can yield serious damage on the welfare of citizens as well as the surrounding environment. It can also exacerbate the threat of terrorism. For such reasons, teachers should not avoid discussing nuclear power in the classroom. Students will benefit from a chance to develop their opinions on this vital issue using a

deliberation model of discussion and the use of sources to inform the deliberation.

One way to do this is to launch a deliberation on the pros and cons of nuclear power by showing video clips. Teachers could use a framework similar to a Structured Academic Controversy model, with the students gathering evidence for both sides on nuclear power from the different popular texts throughout a unit.⁵ For starters, instructors could assign pro-nuclear newsreels such as *A is for Atom* (1953), a GE-sponsored animation that introduces an atom-headed professor, "Dr. Atom," and boasts of the promises of nuclear energy in the fields of medicine, agriculture, and industry. Less sanguine texts are available as well. Episodes from *The Simpsons* may come in handy here, such as one entitled "Homer Defined" (1991), in which Homer Simpson miraculously saves a nuclear power plant from a core meltdown by using a counting rhyme to decide on a button to push. A more serious example is *The China Syndrome* (1979). Coincidentally released 12 days before the Three Mile Island crisis began, this suspenseful drama follows a female journalist who tries to expose the cover-up of a nuclear accident in Southern California. These texts can be used to provide evidence for deliberations on the promises and pitfalls of nuclear energy in relation to politics, business, health, and the environment.

For government or environmental studies courses, more recent cases could be used to deliberate the potential versus the risks of nuclear power and the threat of nuclear waste. Cases from the USSR and Japan could be used to answer the question: Do the costs of nuclear power—economic, environmental, and human—outweigh the benefits? Evidence can be gained from viewing documentaries that explore different dimensions of the disaster, such as *The Battle for Chernobyl* (2006), *Forbidden Ground, Fukushima* (2011), and *A2-B-C* (2013), just to name a few. Online archives may prove as useful. For Chernobyl, images are available if one looks into the Chernobyl Gallery

(<http://chernobylgallery.com>) and Dutch photographer Robert Knoth's works. For Fukushima, students may engage in primary research at Harvard University's "Japan 2011 Disaster Archive," an online repository of e-mails, tweets, blogs, and news reports (www.jdarchive.org/en/home).

Students will also benefit from looking at the vast infrastructure beyond the power plant. Documentaries such as *Waste: The Nuclear Nightmare* (2009), for example, could expose the daunting task of securely storing radioactive waste for generations to come. *The Nuclear Comeback* (2007), another provocative film, introduces an environmentalist who advocates nuclear energy as a "clean" alternative to fossil fuels. Another commentator argues against nuclear power not just because he sees it as a "dirty" source, but also because it could lead to the development of nuclear weapons. If one advocates the use of nuclear energy in the United States, shouldn't he or she support other countries' efforts to build nuclear plants? If so, what should one make of the possible military threat that it can yield? The answers may point to the fact that nuclear power and weapons are inseparable. For this reason, too, the future of atomic energy is also worthy of deliberation and an attempt to gain some kind of consensus among students.

Conclusion

William Faulkner once famously wrote: "The past isn't dead. It isn't even past." This adage applies to nuclear issues. Even though the bombing of Hiroshima and Nagasaki took place some 70 years ago, we continued to grapple with the effects of the two mushroom clouds to this day. In the meantime, the Cold War triggered the development of new issues, namely the nuclear arms race and the rise of nuclear power. Throughout the years after the Soviet collapse, atomic weapons continue to wield significant influence in our world, while governments and industries increasingly rely on nuclear energy to fulfill their political and economic objectives.

Nuclear issues demand greater attention in the classroom. We need to inspire students to explore diverse questions and problems so as to understand the past and address issues in the present. Using seminars, inquiry, and deliberation models, students can engage with a wide array of cultural texts to enhance their skills and understandings. Engaging students in them actively and thoughtfully will enrich our understanding of the vast and complex nuclear world. 🌐

Notes

1. *National Council for the Social Studies, The College, Career, and Civic Life (C3) Framework for Social Studies State Standards: Guidance for Enhancing the Rigor of K–12 Civics, Economics, Geography, and History* (Silver Spring, Md.: NCSS), www.socialstudies.org/system/files/c3/C3-Framework-for-Social-Studies.pdf
2. See Bruce Larson, *Instructional Strategies for Middle and High School Social Studies: Methods, Assessment, and Classroom Management* (New

York: Routledge, 2017), 247–274; Walter Parker, *Teaching Democracy: Unity and Diversity in Public Life* (New York: Teachers College Press, 2003), 125–149.

3. Another graphic novel to use to get at the perspectives of the scientists in the Manhattan project is Jonathan Fetter-Vorm's *Trinity: A Graphic History of the First Atomic Bomb* (Macmillan, 2012), which introduces the views of scientists such as J. Robert Oppenheimer and Leo Szilard, and provides an explanation of the science used to create the world's first fission bombs.
4. Jeremy Stoddard, "Teaching Thoughtfully with and About Film," *Social Education* 78, no. 5 (2014), 220–224.
5. Larson and Keiper; Parker.

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only emerged because of their ability to overcome their own very profound differences. If Constitute can encourage deliberation in the same spirit among students, we will consider it a great success. 🌐

Notes

1. Twenty-seven constitutions around the world come up in a key word search on constituteproject.org for "counter corruption commission"; ninety-one constitutions come up with a search for "establishment of constitutional court"; eighty constitutions have ombudsmen, according to a search on constituteproject.org.
2. One hundred and fifty-six constitutions refer to protection of the environment.
3. "Equality regardless of gender" appears in 166 constitutions; "equality for persons with disabilities" appears in 42 constitutions; "equality regardless of age" is addressed in 27 constitutions.
4. Ecuador, 2008 (rev. 2015), www.constituteproject.org/constitution/Ecuador_2015?lang=en#589.
5. Egypt, 2014, www.constituteproject.org/constitution/Egypt_2014?lang=en#218.
6. China (People's Republic of), 1982 (rev. 2004), www.constituteproject.org/constitution/China_2004?lang=en#1.
7. Bolivia (Plurinational State of), 2009, www.constituteproject.org/constitution/Bolivia_2009#89.
8. Matt Largey, "He Got a Bad Grade. So, He Got the Credit He Deserves," KUT 90.5, Austin's NPR (March 21, 2017) <http://kut.org/post/he-got-bad-grade-so-he-got-constitution-amended-now-hes-getting-credit-he-deserves>.
9. Ecuador, 2008 (rev. 2015), www.constituteproject.org/constitution/Ecuador_2015?lang=en#589.
10. Media is addressed in 102 constitutions.

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