



# Socio-Economic and Environmental Impact of Nuclear Bombings: *Drawing Upon Hiroshima and the Movie “The Day After”*

**Zoya Akther Fathima**  
*Research Associate, CAPS*

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## Introduction

Seventy-five years ago the atom was weaponised for the first time which ushered a revolution in global geopolitics that continues to dictate the behaviour of nation-states to this day. Almost four decades after Hiroshima, at the peak of the Cold War period, when the nuclear threat loomed large, Hollywood director Nicholas Meyer directed a movie called “The Day After”. Broadcasted in the year 1983, the movie is based on a fictional nuclear war. The movie created a stir back in the days and remained as one of the most-watched television movies in US cinematic history. The movie is relevant to the discussion on nuclear disarmament as the world commemorates the 75<sup>th</sup> anniversary of the Hiroshima and Nagasaki bombings, as it portrays effectively how the fate of humanity lies unreservedly in our imprudent hands.

Discussions on the grave impact of nuclear bombings is felt more than ever now as a long era of nuclear restraint appears to be dwindling. *The Doomsday Clock*, a representation of a manmade cataclysm in the offing, which will end civilization if the clock strikes 12'o clock, currently stands at 100 seconds to midnight. This is the closest we have ever been to doomsday since the concept was introduced in 1947.<sup>1</sup> One of the two reasons cited for this probable catastrophe is the danger of nuclear war. As countries have been pulling out of treaties, undertaking nuclear weapons modernization and with world leaders making nuclear threats over twitter, it is important to ruminate over the gravity of a nuclear war.

## ***Revisiting the Horrors of Hiroshima***

The unique feature of nuclear bombs is that it does not just create a huge explosion. It destroys

everything within a certain radius of ground zero depending on the yield of the weapon, leaving no chance of survival. When the bomb was dropped in the Japanese city of Hiroshima in 1945, the explosion produced a surge of heat that resulted in a temperature rise of 3000- 4000 degrees Celsius on the ground.<sup>2</sup> The effect of the bombing as one could imagine was dire. People, plants, animals and buildings within 500 metres from ground zero were burned.<sup>3</sup> The ones near the direct range of explosion, fell sick from radiation poisoning. The symptoms extended from hair loss to severe burns and bleedings. To make matters worse, hospitals were damaged and most of the medical workers were killed. Much after the bombings, the effects continued to show amongst the survivors in the forms of leukaemia, tumours and conditions such as post-traumatic stress disorders (PTSD) among other medical disorders.<sup>4</sup> Destruction of a similar scale was witnessed again, two days later, as another nuclear bomb was dropped on the Japanese city of Nagasaki.

Drawing upon the experience of Hiroshima and Nagasaki, *"The Day After"*, served as a strong political statement by depicting the ghastly impact of nuclear weapons and representing the trauma of the citizens. In fact, Nicholas Meyer, director of the movie, approached the film not as entertainment, but rather as "public service announcement" that would allow "...ordinary Americans' know of the potential hell on earth they faced if international tensions escalated

towards war..."<sup>5</sup> The objective of the movie was to inform the public and invoke a reaction and it did exactly so.

### ***Socio- Economic Impact of Nuclear Bombings***

The fundamental role of movies is that of creating an experience. *"The Day After"* in this regard tends to make the audience uneasy with its gory imagery and its dismal representation of how social existence as we know it, will fundamentally change in case of a nuclear war. Scenes, such as the one where the nuclear weapons are launched, are thus significant as they show how in a matter of seconds, one's life can shift from quotidian normalcy to utter chaos. Life as the characters in the movie knew it – just a day before – becomes a thing of the past.

As the Hiroshima and Nagasaki experiences have revealed, these depictions are not exaggerated. The sociological impact of nuclear bombings are severe. The Japanese people for example have been experiencing a phenomenon known as *Kaku Arereugi* or Nuclear Allergy. There has been a foreboding fear of nuclear fallout among the people ever since the 1945 nuclear bombings. In addition, incidents such as the Lucky Dragon Number 5 accident and the 2011 Fukushima Daiichi nuclear power plant accident have further compounded these fears. The horrors of the 1945 nuclear bombings have been permanently etched in the Japan's collective memory. This effect on the psyche of the people has led to a strong sociological impact which continues to have effect on the Japanese citizens

even decades after the bombings. For example, in Japan the survivors of the bombings known as *Hibakushas*, have been facing ostracism and discrimination amidst false assumptions that they are physically and mentally impaired and could infect others with diseases .<sup>6</sup> These discriminations are revealed in the forms of reduced employment opportunities and marriage prospects among others.

Interestingly, Nicholas Meyer was himself diagnosed with clinical depression during the course of the production of the movie. The cause for his depression was attributed to the in-depth research he did on the effects of nuclear war. The American Broadcasting Company (ABC) too had set up special hotlines during the airing of the movie to address the audiences' anxieties.<sup>7</sup> If having to read and watch about the bombings could have such a strong psychological effect, imagine having to live through it!

### **Economic Impact of Nuclear Bombings**

The economic impact of the bombings too were dire. Hiroshima, which was a military and an industrial hub came crumbling down. About 92% of all structures in Hiroshima got destroyed or damaged because of the explosion.<sup>8</sup> This included ammunition factories, schools, hospitals and industries. Important structures like the Mitsubishi Steel Works complex collapsed completely. As Doctor Michihiko Hachiya, a survivor of the Hiroshima bombings recalls in his journal, "...Hiroshima was no longer a city, but a

burnt-over prairie. To the east and to the west everything was flattened...How small Hiroshima was with its houses gone..."<sup>9</sup>

### **Environmental Impact of Nuclear Bombings**

The environmental impact of the bombings too were appalling. The radioactive particles contaminated land and water bodies. In addition, the rivers were teemed with corpses of people who were looking for water to drink or take some relief from the inferno before they died.<sup>10</sup> The explosions even resulted in genetic mutations in the generations of plants. The magnitude of the nuclear fallout was revealed by a marine ecologist named Mario Wannier, who was studying microorganisms in beach sands as a part of his research on shallow marine environments. He noticed tiny glass globules in the samples of sand that he took from the Motoujina Peninsula, a place located just a few kilometres from the ground zero of the Hiroshima bombing. More detailed study on these glass globules proved to be nothing but the fallout debris from the blast! As the bomb detonated, the magnitude of the explosion led to the city literally tearing apart!<sup>11</sup>

### **Conclusion**

One of the most striking and profound features of the movie is that , it intentionally obscures who launched the nuclear weapons first and instead addresses the bigger issue of the dangers of a nuclear war. It is summarised effectively in the movie, as the character of Joe Huxley quotes

Einstein, "I know not with what weapons World War III will be fought, but World War IV will be fought with sticks and stones."

The movie succeeds in bringing to life the gross realities of a nuclear war and tries to portray it effectively to the audience. The measure of the movie's success could be assessed by looking at the effect it had on not just encouraging debates on US nuclear policies but also in influencing foreign policy decisions that lead to more stability. Ostensibly, US President Ronald Reagan is said to have sent a telegram to Meyer after signing the INF nuclear treaty with Michael Gorbachev, saying "...Don't think your movie didn't have any part of this, because it did..",<sup>12</sup> Considering the impact the movie had on American citizens and on their leaders, we perhaps need more such eye-opening and impactful movies today.

***(Disclaimer: The views and opinions expressed in this article are those of the author and do not necessarily reflect the position of the Centre for Air Power Studies [CAPS])***

## Notes

<sup>1</sup> "Closer than ever: It is 100 seconds to midnight", *The Bulletin.org*, <https://thebulletin.org/doomsday-clock/current-time/>. Accessed on August 2 2020.

<sup>2</sup> Mari Yamaguchi, "Hiroshima marks 75th anniversary of world's 1st atomic attack". *ABC7news*, August 06, 2020. <https://abc7news.com/hiroshima-bomb-a-atomic/6357274/>. Accessed on August 10, 2020.

<sup>3</sup> "5 Things to Know as Hiroshima Marks 75th A-Bomb Anniversary", *The New York Times*, August 05, 2020 <https://www.nytimes.com/aponline/2020/08/05/world/asia/ap-as-japan-hiroshima-anniversary-qa.html>

<sup>4</sup> "Hiroshima and Nagasaki", *Campaign for Nuclear Disarmament*, <https://cnduk.org/resources/hiroshima-and-nagasaki/>. Accessed on August 09, 2020.

<sup>5</sup> Deron Overpeck, "Remember! It's Only A Movie! Expectations and Receptions of the Day After (1983)", *Historical Journal of Film, Radio and Television*, v. 32, n. 2, June 2012, p. 267

<sup>6</sup> "Survivors of Hiroshima and Nagasaki", *Atomic Heritage.org*, July 27, 2017. <https://www.atomicheritage.org/history/survivors-hiroshima-and-nagasaki>. Accessed on August 02, 2020.

<sup>7</sup> Jake Rossen, "When 'The Day After' Terrorized 100 Million Viewers With a Vision of Nuclear War", *Getpocket.com*, <https://getpocket.com/explore/item/when-em-the-day-after-em-terrorized-100-million-viewers-with-a-vision-of-nuclear-war>. Accessed on August 01, 2020.

<sup>8</sup> "Hiroshima and Nagasaki", *Campaign for Nuclear Disarmament*, <https://cnduk.org/resources/hiroshima-and-nagasaki/>. Accessed on August 01, 2020.

<sup>9</sup> Michihiko Hachiya, "Hiroshima Diary: The Journal of a Japanese Physician", University of North Carolina Press; (North Carolina: 1995)

<sup>10</sup> "Flashback Hiroshima: Charred bodies, smell of burned flesh", *Hindustan Times*, August 06, 2015. <https://www.hindustantimes.com/world/flashback-hiroshima-charred-bodies-smell-of-burned-flesh/story-qMIIcJ2BPVWmewXl25nhN.html>. Accessed on August 12, 2020.

<sup>11</sup> Rowan Hooper, "Revealed: What happened, physically, to the city of Hiroshima after the A-bomb", *Japan Times*, June 20, 2019. <https://www.japantimes.co.jp/news/2019/06/20/national/science-health/revealed-happened-city-hiroshima-bomb/>. Accessed on August 12, 2020.

<sup>12</sup> Pat Cunningham, "A few recollections of Ronald Reagan on the day after his 104th birthday", *The Leader*, February 07, 2015. <https://www.the-leader.com/article/20150207/BLOGS/302079995>. Accessed on August 05, 2020.