Queering Nuclear Legacies:
Anti-Nuclear Space-Time in Hayashi Kyōko and Kobayashi Erika

by Sarah Humiko Lam

A thesis accepted and approved in partial fulfillment of the
requirements for the degree of
Master of Arts
in Asian Studies

Thesis Committee:
Rachel DiNitto, Advisor
Jina Kim, Member

University of Oregon
Spring 2024

Thesis Abstract

Sarah Humiko Lam

Master of Arts in Asian Studies

Title: Queering Nuclear Legacies: Anti-Nuclear Space-Time in Hayashi Kyōko and Kobayashi Erika

In 1945 the first detonation of a nuclear weapon was conducted at the Trinity Site in New Mexico. The decades leading up to and following this event involved the systematic displacement, exploitation, and poisoning of Indigenous, ethnic minority, and poor communities for the purposes of nuclear progression. This thesis suggests a framework called "anti-nuclear space-time" to address, challenge, and rewrite nuclear colonial histories. This framework is both a subversion of Western nuclear colonial domination over time and space as well as an imagining of alternative nuclear narratives outside of colonial systems. Using queer analytics, this framework will be applied to two Japanese literary texts: *From Trinity to Trinity* (1999) by Hayashi Kyōko, and *Trinity, Trinity, Trinity* (2019) by Kobayashi Erika. I suggest these two authors are "queering" the spatial and temporal dynamics of nuclear colonial histories and creating a global nuclear conversation that denationalizes and decolonizes nuclear timelines and nuclear spaces.

Acknowledgements

It is with endless gratitude that I would like to thank the people that made this project possible. Rachel DiNitto provided invaluable guidance, conversation, support, and feedback at every step of writing this thesis. Jina Kim also provided tremendous support being a part of my thesis committee. I would like to thank the members of the EALL Writing Workshop led by Roy Chan, all of whom kindly offered comments and insight on my early chapter drafts. Other UO professors such as Dong Hoon Kim, Abigail Jinju Lee, Ana-Maurine Lara, and Yu-Fang Cho were all instrumental in my academic growth over the course of my degree and gave me the confidence to pursue this research with a variety of sources and ideas in tow. I am indebted to the faculty, staff, and community in GSL, EALL, WGSS, and IRES, all of which were foundational to my research. EALL and GSL in particular provided financial support to this degree in the form of teaching and grading positions for which I am extremely grateful.

And to my friends and family, where to begin? I have made life-long friendships over the past two years who have been my confidants and supporters along the way. Finishing this degree would not have been possible without the sense of community they provided. And to my family: it is difficult to put into words how much I owe this to them. My father has instilled in me the importance of being humble, being patient, and following my dreams. My sister and her crocheted gifts and sunny personality has given me a well of laughter and light. My mother has sacrificed more than I will ever understand, and is the reason I am here today. Her strength, her intelligence, her kindness, and her humor are the building blocks of who I am now. And to my husband, who has witnessed the behind-the-scenes of this whirlwind of an experience and has met it with love, care, patience, and understanding: I love you.

Dedication

This thesis is dedicated to my mother, Helen Humiko Gilbert, to my husband, Mon Lam, and to the martyred and displaced Gaza Class of 2024. Free Palestine.

Table of Contents

Chapter One

Introduction

"Who gave them this power?
Who anointed them with the power to burn?"
-Kathy Jetnil-Kijiner, "Anointed"

In the year 2000, atmospheric chemist Paul Crutzen first introduced the term "Anthropocene," which he suggested marked the current geological epoch that factored in humanity's effects on the environment. Since then, decades of debates have persisted on whether or not we are living in the Anthropocene. In March 2024, however, the International Union of Geological Sciences made a public statement after an official vote in their organization. With 4 votes in favor, 12 votes against, and 3 in abstention, the Anthropocene was officially out.[1] The Holocene continues to be the official term for the current geological era, however, the IUGS recognized in their statement that the concept of the Anthropocene will continue to be widely used within scholarly and public realms. Part of the reason for the term's rejection was the inability to both mark and agree upon the specific time that the Anthropocene would have begun. In her short essay "The Anthropocene Debate: Marking Humanity's Impact," Elizabeth Kolbert writes about the various debates that have taken place. "One argument..." she writes, "is that humans have been changing the planet for a long time already, indeed practically since the start of the Holocene." At the same time, however, she mentions "... that the Anthropocene has not yet arrived because human impacts on the planet are destined to be even greater 50 or a hundred years from now." With the inability to agree upon a specific date that the Anthropocene began,

[1] Celebrating 50 Years of Earth Science for the Global Community, International Union of Geological Sciences. https://www.iugs.org/_files/ugd/f1fc07_40d1a7ed58de458c9f8f24de5e739663.pdf?index=true

and with human history to also consider, the typical approaches to defining a geological age, such as using fossil records, are not able to be applied in this debate. One relevant argument that Kolbert highlights, however, is the role of human nuclear activity. She writes:

> Since there is no rock record yet of the Anthropocene, its boundary would obviously have to be marked in a different way. The epoch could be said simply to have begun at a certain date, say 1800. Or its onset could be correlated to the first atomic tests, in the 1940's, which left behind a permanent record in the form of radioactive isotopes. (Kolbert)

The first atomic test on July 16th, 1945, happened at the Trinity Site in New Mexico as a part of the Manhattan Project, Trinity being the code name for the detonation assigned by J. Robert Oppenheimer, the director of the Los Alamos Laboratory at the time. This test would be the blueprint for not only subsequent testing in the United States, but eventual nuclear warfare in Hiroshima and Nagasaki, as well as additional testing into the 1950's by the United States government in the Marshall Islands. The nuclear decimation of the Marshall Islands is a significant example of "a permanent record in the form of radioactive isotopes." In "The Myth of Isolates: Ecosystem Ecologies in the Nuclear Pacific," Elizabeth DeLoughrey discusses the decimation and formation of the Marshall Islands as an ahistorical laboratory that erased and displaced Indigenous Pacific Islander presence to aid in American scientific nuclear progress. The islands as an isolated space, DeLoughrey argues, is the framework that was used to justify the bombing of the islands. However, she further argues that this island as isolated framing is ultimately a myth due to the "global distribution of radioactive fallout" from the testing of the bombs (DeLoughrey 172). She writes of the fallout from the *Castle Bravo* test in 1954 as having been "detected in the rain over Japan, in lubricating oil of Indian aircraft, in winds over Australia, and in the sky over the United States and Europe" (DeLoughrey 171). While the effects of these testings were felt on a global scale, it is important to emphasize the degree of

violence that was enacted upon, and continues to be enacted upon, the Marshallese peoples. In her article "Nuclear Disaster: The Marshall Islands Experience and Lessons for a Post-Fukushima World," Barbara Rose Johnston documents Marshallese nuclear history with an emphasis on the lived experiences of victims. For instance, she writes of infant mortality rates and life expectancy in the Marshall Islands compared to the United States: "...infant mortality in the US is about six deaths per thousand; in the Marshall Islands the 2012 rate is about twenty-three per thousand.... on average, Americans live for some 77.5 years; in the Marshall Islands the end of life comes considerably sooner, 15 years sooner, as overall longevity is 62 years" (Johnston 147). She also writes about the repatriation of Rongelap communities, Rongelap being an atoll within the Republic of the Marshall Islands, to their irradiated land by the US government, who spent the decades following nuclear testing using Rongelap people as nonconsenting human subjects measuring the effects of radiation on human bodies. Johnston writes: "... given the degree of contamination and remediation limitations, return to a traditional self-sufficient life in heavily contaminated atolls like Rongelap is impossible." She further writes that "These islands, and many, many others on the heavily contaminated northern atolls, have been declared off-limits to human life for the next 24,000 years" (Johnston 148).

The history of American nuclear activity within the Marshall Islands is one that continues to unfold as a pro-nuclear United States refuses the Marshallese peoples justice on their terms. However, through these experiences comes global solidarity within communities who have also been victims of nuclear colonialism. In the same essay, Barbara Rose Johnston discusses Marshallese nuclear survivor Lijon Ekilang, who traveled the world sharing her experiences and was able to speak at the first World Uranium Hearing in 1992. Years later at the second Indigenous World Uranium Summit, Johnston notes that Lijon Ekilang's presence had a

profound impact on Indigenous communities globally, the Navajo Nation president at the time mentioning her at the opening of the summit. She writes that:

> They repeatedly emphasized that it was her testimony that helped indigenous delegates from diverse communities to understand that their experiences with radiation and other toxic poison in the air, food, soil, water, plants, and human bodies was not unique; that their suffering is a form of nuclear colonialism shared by the indigenous peoples around the world who disproportionately host nuclear militarism. (Johnston 143)

I present this brief historical discussion to make clear a colonial nuclear order, nuclear colonialism being a system of power that, through nuclear weapon manufacturing, nuclear resource extraction, and nuclear testing, has both displaced communities and devastated land. The Marshall Islands are one example of this nuclear order, the authors I included above detailing the disproportionate effects nuclear colonialism has had on Indigenous communities on a global scale at the hands of white American and Western military and government forces. Another reason it is important to engage Indigenous histories within discussions of the nuclear order is to understand an organization of knowledge. Nuclear violence towards Indigenous communities is often at risk of receiving less engagement and being less visible in historical narratives due to efforts towards censorship and erasure by government leadership. It is with this in mind that I created the framework I will be using in this thesis, which I am calling anti-nuclear space-time. I am proposing this framework to address the unique spatial and temporal nuclear effects on bodies and land, and the cultural productions that have engaged histories of nuclear violence. This framework is a subversion of Western nuclear modernity's dominance over nuclear space and time, providing alternative imaginings of history and futurity.

While there are hundreds of rich cultural productions that could be included within this analysis, the scope of this thesis will be limited to two texts: *From Trinity to Trinity* by Hayashi

Kyōko, and *Trinity, Trinity, Trinity* by Kobayashi Erika. [2] These texts offer alternative visions of Western nuclear colonialism where the falsity of its history is revealed. Both texts reach across time and space to create transnational, connected, and queer nuclear spaces wherein they reject the spatial and temporal paths taken by Western nuclear modernity, encountering the violence of these histories but not arriving at the same place. The titles of these texts also offer profound connections, the Trinity Site being a significant point of engagement for both authors. Western nuclear modernity, and for Hayashi, American nuclear modernity, are targets of critique for these two texts through the evocation of the term Trinity. Moreover, the repetition of the term within both titles represents a cyclicality of space and time, both forcing a confrontation with the word and the histories it holds and, as we will see in the chapters to come, reconfiguring what the term and that space represents. There is an additional commentary on history being repeated, the legacies of nuclear colonialism from the Cold War era being experienced by communities to this day.

Hayashi Kyōko (1930-2017) was a student factory worker in Nagasaki when the United States dropped the second atomic bomb on Japan on August 9th, 1945. Having survived the bombing, she then battled radiation illness, and after briefly studying nursing, she began to document her experiences as an atomic bomb survivor, or *hibakusha,* through writing. Hayashi wrote short stories, novellas, and novels that often contained an autobiographical element, translating her experiences into aestheticized words that blended history and personal narrative. She became a fierce critic of nuclear progress, denouncing the use of nuclear power and nuclear weapons. Her work is often categorized as atomic bomb literature, which was a genre of literature that arrived after the atomic bombings in Japan and consisted of both survivors and

[2] I am following Japanese naming customs when naming Japanese authors, which includes the surname first followed by the first name. I will refer to the authors Hayashi Kyōko and Kobayashi Erika throughout this thesis by either their full name or only their last name.

non-survivors, all contending with the aftermath of the bombings. Writing from this generation, Hayashi, with her 1999 text *From Trinity to Trinity*, began finding community in nuclear spaces outside of Japan, traveling to the Trinity Site in New Mexico and reflecting on not only her own losses, but the losses of those in the American Southwest. This is reflective of a budding transnational perspective that extends outside of the local context of Japan and begins the conversation of a global nuclear world, which will be elaborated upon more in chapters to come.

Kobayashi Erika, born 1978, is a contemporary author and multimedia artist who is not a *hibakusha* but writes to make radiation visible across boundaries of time and space. Her work reflects a particular interest in women and radiation, writing about Marie Curie,[3] the radium girls,[4] and populating her stories with girls and women, such as the matrilineal family line in her 2019 novel *Trinity, Trinity, Trinity.* Kobayashi does not write from the local or historical context of the atomic bomb literature era, but rather, is writing in an increasingly globalized present moment heightened by social media communication allowing for the sharing of stories and experiences. Her work embodies an interconnected and global perspective that illuminates the systemic operation of nuclear colonial powers. While these two works are not the only works that exist on topics of the nuclear, their pairing serves as a compelling case study that showcases the growth of literary, artistic, and intellectual spheres within Japan regarding our growing nuclear world. I envision this thesis, then, as a flower blooming, Hayashi starts us with a bud which, over the course of the thesis, will gradually grow into a flower once we reach Kobayashi. Hayashi starts us off within a localized, budding transnational perspective wherein she is unable

3 Marie Curie (1867-1934) was a Polish French scientist credited with the discovery of radium and polonium alongside Pierre Curie and Henri Becquerel. She is responsible for coining the term "radioactivity." Engaging with her life and her work, Kobayashi Erika wrote the 2018 book *Breakfast with Madame Curie,* マダムキュリーと朝食を

4 Radium girls is a term used to refer to the women who worked in factories painting watches in the 1910's and 1920's in the United States. The paint used by the women was self-luminous which contains radioactive elements. Many of the women fell ill to radioactive poisoning. Kobayashi Erika, in collaboration with Phew and Dieter Moebius, released a music album titled *Radium Girls 2011*.

to sever herself from August 9th, but through her travel to the United States, she begins a nuclear conversation connecting nuclear violence in Japan to nuclear violence in the American Southwest. Kobayashi, writing decades later, in a post-Fukushima world, waters those connections until a flower blooms into a globalized nuclear world not confined by national borders. Writing across generations, Hayashi and Kobayashi allow for insightful connections regarding nuclear history, putting 1999 in conversation with 2019.

I chose these two authors and texts not only for their global perspectives and rich commentary, but also for the noteworthy conversation that blooms when they are joined together. Placing an anti-nuclear space-time framework within a Japanese context allows for an analysis of nuclear histories to be grounded within a specific region, having a footing that will be conducive to a broadening of perspective. There is also an importance in engaging with nuclear histories that continue to unfold within Japan, the 2011 Fukushima Daiichi Nuclear Power Plant meltdown still reverberating through Japanese society today. Japan is also deeply tied to American nuclear colonialism, and American power, and becomes crucial within analyses of nuclear histories. I would like to suggest gender and queerness as additional factors that make a Japanese context compelling, the Japanese government continuing to operate under conservative ideologies of gender and sexuality that promote traditional gender roles and family formations. This thesis is committed to a project of subversion, and to do so within a Japanese context, and within the field of Japanese studies where queer readings and queer studies is not common, reaffirms the interventions this project is attempting to make. In "Queer Reading and Modern Japanese Literature," J. Keith Vincent encourages queer approaches to reading Japanese literature, writing that, while the Japanese canon is not necessarily populated by works that are queer in terms of gender and sexuality, they "can be read queerly both for the deep insight they

provide into the damage wrought by the heteronormative culture of modern Japan, and for their textured accounts of how people have lived and died in its grip" (Vincent 72). He notes that in the 1990's and early 2000's Japanese scholars, activists, and intellectuals were engaged with queer knowledge being published in Western countries, Judith Butler's *Gender Trouble* being translated into Japanese in 1999, nine years after its initial English publication. Vincent clarifies, however, that transnational engagements with queer studies in Japan have lessened over the years, writing that recent English works in queer studies have not been translated into Japanese, and Japanese texts in queer studies have not been translated into English. While discussing whether the texts I will be engaging with are a part of the Japanese literary canon or not is not within the scope of this thesis, I find Vincent's proposal of reading Japanese literature queerly as a useful framing for the queer analytics I will apply to my own readings of Japanese literature.

This introduction, Chapter 1, is followed by Chapter 2, titled "Power, Safety, Victory: Hayashi Kyōko and the Gendering of Nuclear Landscapes in *From Trinity to Trinity,*" that explores the connection between nuclear colonialism in the American Southwest and the atomic bombing of Nagasaki. Chapter 2 challenges and rewrites American logics of nuclear power, nuclear safety, and nuclear victory as Hayashi transforms the New Mexican landscape and the Trinity Site into the bodies of living and nonliving *hibakusha*. I apply to this analysis Stacy Alaimo's framework of "trans-corporeality" which considers the embodied, material connections between humans and the more-than-human world. I read Hayashi's gendered characterization of and relationship to the New Mexican land as providing an agency to living and nonliving *hibakusha* as well as the land itself which was decimated by nuclear testing and settler colonial violence. Rather than allowing the Trinity Site to symbolize American progress and victory, Hayashi reconfigures the space, reframing how histories of American nuclear warfare are

engaged. As a survivor of the Nagasaki bombing, Hayashi's text is a vital window into the realities of nuclear violence, her first-hand accounts of August 9th being placed in conjunction with her pilgrimage to the Trinity Site presenting alternative understandings of the nuclear colonial order.

Chapter 3 will focus on work by Kobayashi Erika and is titled "Nuclear Memory, Nuclear Revenge: The Matrilineal Cyclical World of *Trinity, Trinity, Trinity*." This chapter moves outside of an America-Japan framework and considers nuclear legacies on a global scale. Although America is not the focus of Kobayashi's text, she remains engaged with Western nuclear modernity. Cyclicality becomes a major point of interest through both chapter structure and narrative structure. I suggest the cyclicality of the novel to be affirming a temporal and spatial disturbance that reinforces the subversive goals of anti-nuclear space-time. Kobayashi populates her story with a matrilineal family who are living in a Japan afflicted with the Trinity disease, one that is primarily contracted by elderly people. Through this disease elderly people become vessels for nuclear history reaching as far back as the discovery and mining of radium. The memories of this disease connect a post-Fukushima Japanese society to global nuclear histories in places like Jachymov, America, and Germany. I examine these interconnected histories through a few different lenses such as intergenerational kinship, in which I consider the population of girls and women in the novel within organizations of nuclear history. Kobayashi uses the female characters to provide compelling commentary on reproduction, and I use the term "nonreproductive futurity" as a point of examination. I also look at the significance of elderly bodies as victims of the Trinity disease and the queer operation of technology, social media, and more generally, cyberspace, within the novel. I use the term "queer hacking" by

Allegro Wang to explore the incestuous, online sexualities and pleasures that arise through Kobayashi's writing.

I close out this thesis with a brief conclusion titled "From the River to the Sea, Palestine will be Free," the title being an act of resistance against the ongoing repression of pro-Palestinian speech and action at the University of Oregon and university campuses worldwide. I intend for the conclusion to function in two ways: to summarize and reflect upon the work that is presented in this thesis, as well as to document and make visible the encampment movement unfolding alongside the writing of this thesis. I suggest that anti-nuclear histories cannot be disentangled from Palestinian liberation, Indigenous sovereignty being at the core of each of them. I envision these connections as providing broadened imaginings of anti-nuclear space-time and building upon the global solidarity it represents.

I would like to now shift to explaining the process behind the development of anti-nuclear space-time. The use of the term anti-nuclear takes inspiration from Indigenous activists who have been leading movements on transoceanic, global resistance to the nuclear industrial complex. Kathy Jetnil-Kijiner, a Marshallese poet, scholar, and activist, has been a leading figure in anti-nuclear and climate change resistance movements alongside Marshallese and other Indigenous communities. Her 2017 poetry collection, *Iep Jāltok: Poems from a Marshallese Daughter*, is the first book of poetry to be published by a Marshallese author, her writing addressing the nuclear history of the Marshall Islands as well as current threats of climate change. In a poem titled "History Project," she reveals the revisionist power American forces have had over the Marshallese nuclear narratives. She writes:

> I flip through screenshots
> of american marines and nurses branded

white with bloated grins sucking
beers and tossing beach balls along
our shores
and my islander ancestors, cross-legged
before a general listening
to his fairy tale
about how it's
for the good of mankind
*(*Jetnil-Kijiner 21)

In this poem she is recalling how at the age of fifteen she sifted through archives to create a project for her school's "History Day," in which she glued her findings onto a poster board and spray painted at the top "FOR THE GOOD OF MANKIND." She also recalls the moment when the judges saw her work:

and when the three balding white judges
finally
came around to my project
one of them looked at it and said
Yea...
but it wasn't really
for the good of mankind, though
was it?
and I lost.
(Jetnil-Kijiner 23)

These two stanzas represent how whiteness holds supreme authority over historical narratives. It is also a powerful symbol of resistance against these systems of whiteness, and within the Marshallese context, against white American military power. I am rooting my usage of anti-nuclear within these contexts of Indigenous resistance, disruption, and alternative

organizations of history and futurity. In one poem titled “Dear Matafele Peinam,” Jetnil-Kijiner directly addresses her seventh month old daughter:

> and there are thousands
> out on the street
> marching with signs
> hand in hand
> chanting for change NOW
> and they’re marching for you, baby
> they're marching for us
> (Jetnil-Kijiner 72-73)

This stanza, as well as the poem as a whole, expresses a hope for the future, one built by activists, mothers, artists, scholars, and anyone else bravely joining movement spaces. She is imagining a future defined by solidarity, connection, and hope, challenging and denouncing a futurity dominated by nuclear modernity. Global connections and solidarity across space and time are of additional importance to how anti-nuclear is being engaged within this thesis. This poem is a recognition of the global fight against climate change that thousands have committed to, and the acknowledgment that Indigenous histories of displacement and erasure are becoming a larger part of the global conversation within these environmental movements. In “Waves of Destruction: Nuclear Imperialism and Anti-Nuclear Protest in the Indigenous Literatures of the Pacific,” Michelle Keown analyzes Indigenous protest literature and provides the historical context that led to anti-nuclear transoceanic solidarity amongst Indigenous Pacific Islanders. She cites the 1985 sinking of the Greenpeace flagship, Rainbow Warrior, by the French government, as a uniting catalyst, the ship being sunk in Auckland Harbor before it could set out to disrupt French nuclear testing. She writes: “While such events created severe schisms between the nuclear powers and white settler nations in the Pacific, they also prompted indigenous Pacific

peoples to unite against the nuclear desecration of their homelands, triggering affiliations that transcended the geopolitical and linguistic divides that often hamper creative dialogue between... anglophone and francophone Pacific writers" (Keown 589). She also cites Epeli Hau'ofa and his essay "Our Sea of Islands," an important text in Pacific studies published in 1994. In this essay Hau'ofa proposes the viewing of the Pacific as "a sea of islands" rather than "islands in a far sea," the latter being the product of imperial mappings of space in which Europeans and Americans "drew imaginary lines across the sea, making the colonial boundaries that confine ocean peoples to tiny spaces for the first time" (Hau'ofa 153). For Hau'ofa, the Pacific, or what he refers to in his essay as Oceania, is an interconnected, thriving space that must reject colonial framings of Pacific islands as remote, far-off places. Michelle Keown situates this mapping of solidarity within anti-nuclear protest and Indigenous literature, bringing attention to the importance of understanding anti-nuclear resistance within Indigenous contexts.

Pacific solidarity and anti-nuclear movements also gained traction within Japan in the late 1970's into the 1980's during protests against nuclear waste dumping in oceans around the Pacific Islands. In "Pacific Solidarity and Atomic Aggression," Simon Avenell outlines the tense history between the Japanese government and the growing transnational Pacific solidarity movement. Unethical waste disposal by the Japanese government, Avenell confirms, began as early as 1955 as oil cans filled with radioactive material were dumped into Sagami Bay south of Tokyo. However, in the 1970's, a site B was targeted for ocean dumping, which was placed closer to the oceans surrounding the Northern Mariana Islands. Despite the histories of nuclear violence experienced in Japan, they were set to become complicit in nuclear colonial violence as atomic aggressors in the Pacific. In 1979, Pacific Islander governments and groups learned of the new ocean dumping plans, which they immediately rejected, threatening to forbid Japanese

fishermen from their waters and to end trading and tourism from Japan. The years following saw a transnational movement of solidarity between people within Japan and people within the Pacific Islands. Japanese activists traveled to the Pacific Islands, and Pacific Islander activists traveled to Japan. Geldens Meyer, a Belauan activist, traveled to Japan in 1981, giving speeches across the country. In one such speech Meyer rejected the ideology that the Pacific Islands were far-off places and expressed that "Japan was itself an island nation of the Pacific" (Avenell 170). I have provided a brief glimpse of this history to emphasize the conclusions that Avenell drew in their article, that "Japanese nuclear power was entangled in a global nuclear architecture that could be truly comprehended and addressed only through new transnational perspective and politics that integrated local struggles into the larger battle against nuclearism" (Avenell 172). My desire to include information and analyses of Indigenous nuclear histories, especially Pacific Islander histories, within a thesis that is focused on Japanese nuclear literature is for exactly this reason: anti-nuclear history is not independent history. As Avenell writes: "There could be no genuine solidarity with the people of the Pacific so long as the domestic movement was based solely on empathy toward national victims" (Avenell 174). In order to contextualize the anti-nuclear positions I argue Hayashi and Kobayashi take, there must be an understanding of the solidarities and connections that have informed those positions.

Since I have explained my usage of one half of my proposed framework, I would like to now discuss my usage of the second half, "space-time," which takes inspiration from a few different places. One is the scholar Damon Salesa and his essay "The Pacific in Indigenous Time." In this essay he discusses the vast and distinct formations of time, history, and space within Indigenous Pacific communities. He writes: "Genealogy orients time towards ancestors and descendants, not to an external systematic or a disembodied calibration of time. Time was

thus experienced and understood differently through different cultures of genealogy, and so with history and the past" (Salesa 41). He further connects embodied space as having inextricable connections to embodied time, writing that "The historical nature of space-time also comes into focus because for many indigenous Pacific Islanders... histories of great migrations and discoveries mean that the past is not just time, but also a *place*" (Salesa 43). Indigenous space-time is a framework and way of being that addresses the deep cultural ties Pacific Islander communities have to the land and to their ancestors. It insists that time and space cannot be isolated experiences, and it operates outside of Western formations of linear time and dominant historical narratives. In *Space-Time Colonialism: Alaska's Indigenous and Asian Entanglements*, Juliana Pegues brings further attention to Western formations of time and space against Indigenous formations of time and space. Her framework of "space-time colonialism" was a crucial text for my creation of an anti-nuclear space-time framework. In her articulation of Western colonial time, Pegues writes: "This temporal strategy, which differs fundamentally from Indigenous epistemologies and ontologies of land and emplacement, situates white Americans as the privileged subjects of history, resulting in a vicious binary of 'modern' versus 'traditional'" (Pegues 12). Her framework is placed in conversation with Asian and Alaskan Native entanglements which make legible the ongoing imperial project that is the United States. Both Damon Salesa and Juliana Pegues, through their engagement with Indigenous histories, are highlighting the importance of situating conversations of space alongside conversations of time, and by doing so the repressive linearity of Western colonial formations of time and space are challenged.

Since I will be applying an anti-nuclear space-time framework to literary texts, I also find literary scholar Mikhail Bakhtin's theory of the "chronotope," a term originally introduced by

Einstein's Theory of Relativity, useful for further unpacking my own conceptualizations of space-time. As Bakhtin theorized it, chronotope is a term that addresses the connection between time and space within literature. In *Dialogic Imagination: Four Essays*, he writes: "In the literary artistic chronotope, spatial and temporal indicators are fused into one carefully thought-out, concrete whole. Time, as it were, thickens, takes on flesh, becomes artistically visible; likewise, space becomes charged and responsive to the movements of time, plot and history" (Bakhtin 84). In this passage Bakhtin applies an embodied, somewhat agential identity to realms of time and space, emphasizing the call and response between these realms, as well as the palpable dependence between them. One cannot fully function without the other. As I am imagining and examining space-time within an anti-nuclear context, there is an additional layer I must consider which is a "nuclear time" in which the legacies of nuclear colonialism dominate futures not inhabited by the people responsible. This can be seen in the form of nuclear waste, as well as areas that have had extreme exposure to radiation, such as the Marshall Islands which still contain highly radioactive areas even decades after US nuclear bomb testing. In ″Framing a Nuclear Order of Time," Bernadette Bensaude-Vincent calls for a "radical revision of time," bringing attention to the effects nuclear technology has had on visions of the future and its connections to the nuclear past (Bensaude-Vincent 275). As she maps out a nuclear timeline, she argues that the multiplicities produced by nuclear history cannot be placed into a linear formation. She instead insists on a consideration of nuclear effects on the future, stating "As the future continues to drive the present, atoms nevertheless diversified visions of the future" (Bensaude-Vincent 274). With threats of a nuclear world war, the unsustainability of nuclear waste, as well as nuclear violence of the past, Bensaude-Vincent urges readers "to consider the multiple temporal regimes that make up our inescapably nuclear world," as well as "to learn how

to share the world with these atomic traces and scars, the alien and dangerous creatures borne of human innovation whose temporality far exceeds ours" (Bensaude-Vincent 275). I read Bensaude-Vincent's call for revision as a challenge of Western nuclear modernity's organization of a singular timeline that is imbued with sentiments of progress, victory, and security. Her framing of nuclear time makes important points on how nuclear history as well as nuclear futures are constructed, her emphasis on the enduring temporalities of the nuclear further building upon how space-time is conceptualized within this thesis.

Anti-nuclear space-time is a decolonial framework that seeks to subvert the domination of space and time by Western nuclear modernity. Queer analytics, therefore, become crucial to its application, queer being used to address 1) the function of resistance and disruption inherent in queer studies and queer theory and 2) the act of rewriting and decolonizing nuclear colonial knowledge. The framework of "queer ecology" provides illuminating interventions into the relationship between queer studies and environmental studies and how these two fields can be placed closer in conversation. In the *Companion to Environmental Studies*, Nicole Seymour offers an overview of "queer ecology," citing art and activism as realms that have aided in the framework's development. This connects to the discussions earlier in this introduction regarding anti-nuclear Indigenous activism and poetry, both being crucial to the conceptualization of the term "anti-nuclear." She clarifies that queer ecology "refers to a conceptual framework that considers how sexual and environmental issues intersect, in cultural representations, scientific research, and other realms" (Seymour 448). She goes onto note that there has been a binary divide and hierarchy between the scientific conceptions of the natural world and the queer world, but queer ecology emphasizes the unique connections between them, writing: "...both sets of entities have been subjected to biopolitical control and surveillance; both have been objects of

scientific scrutiny; [and] both have historically been oppressed and exploited...” (Seymour 449). This framework is a means to bring together not only these binary categories, but also fields of queer studies and ecocriticism, the former being more human focused. Seymour writes, however, that both have “...mutual interests in questioning notions of ‘progress’ and breaking down conceptual binaries” (Seymour 449). I present this framework to align queer analytics with an anti-nuclear space-time project, the latter of which seeks to address not only the humanist side of the nuclear world, but the environment as well.

Kobayashi Erika and her 2019 art installation titled 1F in the Forest of Wild Birds (野鳥の森 1F) comes to mind as an example of queer ecology.[5] The “Forest of Wild Birds” refers to a rich forested area on the premises of the Fukushima Daiichi Nuclear Power Plant. After the nuclear plant meltdown in the 3/11 triple disaster, vegetation around the plant had to be cut down and replaced with concrete to decontaminate the area. After visiting the plant post-meltdown, Kobayashi noticed this change and created a series of art pieces containing plant life that used to thrive in the Forest of Wild Birds. She used silver paint to then cover her painting, writing the name of the plant life on top of the silver paint. Layered with both paint and with meaning, I read her art installation as a queering of ecological remembrance, and a commentary on the erasure and invisibility that is produced by nuclear violence. I introduce this art installation not only to further elaborate upon queer ecology, but to highlight the interconnectedness of Kobayashi’s work, the Forest of Wild Birds making an appearance in *Trinity, Trinity, Trinity* as well as her short story collection *Sunrise: Radiant Stories*. Her art contains multiplicities that carry across mediums, people, places, and histories being placed in different contexts across her work. While queer ecology is not a central component of this thesis, I find it a useful framework for joining

5 Kobayashi Erika, 1F in the Forest of Wild Birds, https://erikakobayashi.com/1F-in-the-Forest-of-Wild-Birds

queer analytics and studies with environmental studies. In Chapter 2, queering the environment is a central part of the argument, therefore it is vital to arrive at that chapter with an understanding of how those two terms and fields can be put together. As I have explored, the core goals of this thesis are to emphasize the queer, alternative visions of nuclear history and futurity present in Hayashi and Kobayashi's writing. In doing so I hope to decolonize nuclear knowledge and history and place this project within broader discourse of nuclear violence. I have found placing this analysis within the realm of Japanese writers has been useful for focusing on the growth of a social consciousness of the nuclear within a specific area, for understanding the violent nuclear histories that continue to unfold within Japan today, and for engaging formations of gender and queerness not commonly present in Japanese literary readings and studies. There was an additional serendipitous influence in which these two texts, when joined together, created a compelling conversation. By the end of this project, what will be left is a bloomed flower, and I hope to plant this flower amongst a larger environment of global settler colonial violence, both nuclear and non-nuclear.

Chapter Two

Power, Safety, Victory: Hayashi Kyōko and the Gendering of Nuclear Landscapes in *From Trinity to Trinity*

"This is a space of everything and nothing,
a space of visual intoxication and invisible toxicity."
-John Beck, "Without Form and Void: The American Desert as Trope and Terrain"

In 1946, the Miss Nagasaki beauty contest organized by American GI's was held just nine months after the atomic bombing of the city. In the *Pacific Stars and Stripes*, a newspaper for U.S. servicemen, photographs of the winner and runners-up show Japanese women in kimono posing with American GI's, with the caption "Miss Atom Bomb." Masako Nakamura explores how this misrepresentation of the Miss Nagasaki beauty contest in American newspapers as "Miss Atom Bomb" "... sheds new light on displays of Cold War atomic beauty" and connects the nuclear politics between the United States and Japan (Nakamura 117). In 1957, Las Vegas dancer Lee Merlin was crowned Miss Atomic Bomb, one of four women to be the face of the atomic bomb beauty pageants of the 1950's Las Vegas cultural scene. Meant to ease growing public anxiety about nuclear testing, the connection between the atomic bomb and "the sexuality of and the bodies of beautiful white women" altered the nuclear narrative to one where "its deadly power turned into something fascinating, desirable, potentially explosive-- and yet something that could be tamed" (Nakamura 135). The gendered aestheticization of nuclear power reveals one-sided American narratives of nuclear history, creating a connection between the atomic bombings of Japan and the region of the American Southwest.

In 1999, Japanese *hibakusha* Hayashi Kyōko embarked on a pilgrimage from Japan to the Trinity Site in New Mexico, the home of the very first atomic bomb test. Born in Japan and having spent most of her childhood in Shanghai, Hayashi and her family relocated to Nagasaki several months before the atomic bombing of the city. A Nagasaki bombing survivor, she documented her pilgrimage to the Trinity Site in her novella *From Trinity to Trinity*, in which she seeks to sever herself from the events of August 9th but finds herself unable to do so. By returning to the site where nuclear violence first began, she believed she would be freed from the confines of her identity as an atomic bomb survivor or *hibakusha*, however, what instead occurs is not severance but transformation. Hayashi recounts her pilgrimage through poetic yet tragic descriptions of the surrounding New Mexican landscape, which she characterizes as "O'Keefe's world," referring to the American painter Georgia O'Keefe who often painted the New Mexican landscape, and onto which her ashes were spread upon her death. Hayashi gazes upon this terrain with awe, which is juxtaposed by her equating the New Mexican scenery with images of death and bodily trauma associated with radiation illness. Despite these histories of tragedy, there is a sense of honoring both living and nonliving *hibakusha* present in her story.

I argue that Hayashi challenges hegemonic narratives of American nuclear colonialism through her interactions with and transformation of the New Mexican landscape. I suggest that this provides alternative visions of nuclear history that reveal the falsity of American nuclear colonialism. Hayashi not only travels to New Mexico but is actively engaged in dismantling the revisionist narratives that she perceives. Her embodied connection to her *hibakusha* identity becomes closely tied to her rewriting of the land around her, giving a transformed agency to Japanese *hibakusha* subjectivities that reach outside of histories of death and decay and are given a chance at life and beauty through a connection to the land. The landscape of New Mexico

becomes significant in her journey given the colonial history attached to the region and its eventual connections to Japan.

New Mexico is part of the American Southwest, a region that has historically been a stage for nuclear colonial activity, harming and displacing communities living downwind of nuclear testing sites, with a disproportionate effect on Indigenous communities in the region. Justification for nuclear testing in the American Southwest is in part due to the colonial construction of the region as empty and disposable. John Beck opposes this notion of emptiness, describing the American desert "... as gap, as chaos, as primordial vacancy… easily reconfigured as space to be filled, as a national laboratory, a place meaningless in itself and useful in its very expendability." Expendability, as he describes, of not only space, but of persons, a landscape upon which "the conception of emptiness that facilitated its creation is a federally constructed emptiness" (Beck 67). In *From Trinity to Trinity*, Hayashi writes life into the "constructed emptiness" of northern New Mexico by connecting her and other nuclear bodies to the American Southwestern terrain. The connections Hayashi makes between bodies and nature is indicative of what Stacy Alaimo calls "trans-corporeality" in which "...the human is always intermeshed with the more-than-human world." Alaimo further posits that, "... thinking across bodies may catalyze the recognition that the 'environment,' which is too often imagined as an inert, empty space, or as a 'resource' for human use, is, in fact, a world of fleshy beings, with their own needs, claims, and actions" (Alaimo 238). The revision of the environment from empty space to "a world of fleshy beings" ties together both the deserted American West discussed by Beck and the resurrection of life and memory in Hayashi's descriptions of the New Mexican nuclear landscape. I argue that this complicates the "constructed emptiness" Beck describes and exhibits an anti-nuclear stance that critiques American nuclear colonialism and transcends locally focused nuclear narratives.

Hayashi is engaging with a nuclear space that is not Nagasaki, the era of atomic bomb literature that Hayashi was a part of often focused on the local narratives of the atomic bombs in Hiroshima and Nagasaki. By engaging with a space that is not Nagasaki, Hayashi is forming a conversation that considers the global conditions and histories of other regions that have also experienced nuclear violence. The bombing in Nagasaki is connected to the bombing at the Trinity Site, and Hayashi uses her writing to make visible the harm that has occurred in places outside of Japan, and the solidarities that can be formed between them. Additionally, there is a bending of linear nuclear timelines when Hayashi connects past events with present landscapes. That is, she places the past moment of Nagasaki in the present moment of her travels at the Trinity Site, connecting these moments and illuminating how nuclear legacies endure. I am using the term landscape to refer to not only the environmental terrain, but to built environments such as the museums that Hayashi visits. By expanding outside the environmental terrain and including built environments, I am hoping to highlight the nuclear museum narratives that Hayashi confronts, and how she rewrites American logics of nuclearism.

This chapter will examine how anti-nuclear space-time is operating in *From Trinity to Trinity* through the landscape and temporal relations being formed by Hayashi, and the alternative visions of nuclear history that result from this reading. These alternative narratives being created by Hayashi can be considered a queering of heteropatriarchal nuclear narratives, with queering, as discussed in the introduction, being a function of anti-nuclear space-time. Through her transformation of the New Mexican landscape Hayashi queers American nuclear logics of power, safety, and victory. Additionally, her reimaging of *hibakusha* bodies as embodied within the New Mexican landscape collapses a human/nature divide that reconfigures categorizations of *hibakusha* women. Through an engagement with landscape, temporality, and

trans-corporeality, I will explore the operations of nuclear power, nuclear safety, and nuclear victory, and how nuclear bodies, especially those of Japanese *hibakusha* women, disrupt American nuclear colonialism.

(Nuclear) Power: "This Earth, Once Abandoned"

The American Southwest was constructed in the public imagination as an empty space available for the unrestrained nuclear race that devastated communities in the region and eventually led to the atomic bombings of Japan. In *The Tainted Desert: Environmental Ruin in the American West,* Valerie Kuletz writes that, "This is a landscape– a nuclear landscape– too often ripened by sacrifice, for sacrifice, shrouded in secrecy, and plundered of its wealth" (Kuletz 5). Kuletz expertly provides visibility for marginalized communities in the United States, particularly in the American Southwest, who were victims of militarized nuclear violence within a region that is often regarded as not only empty, but mysterious and biblical, home to apocalyptic dreams and aliens, stories that reveal "... the effectiveness of the military in erasing its own traces…" (Beck 69).

With these narratives of American fabrication and devastating reality dueling for territorial rights in the American historical timeline, *From Trinity to Trinity* becomes a transgressive text due to the direct connections it makes between the American Southwest and the realities of Japanese *hibakusha.* This characterization of the American Southwest as empty can be further clarified using the term biotrope. Introduced by Christine Marran in *Ecology Without Culture*: *Aesthetics for a Toxic World*, a biotrope describes the reproduction of human culture within the material world, the material world having its own historicity while also being wielded by humans to create cultural claims. She writes, "A certain iteration of natural objects can represent the imperial 'soul' of an empire, and in this way biotropes can be potent allies in

producing cultural and imperial identity because they are seemingly so benign, so neutral, so *natural*" (Marran 11). Biotrope can be applied to Hayashi in two ways: to think through the American Southwest as "constructed emptiness" as well as nuclear energy as a vital, natural, and clean source of power. Nuclear testing in the American Southwest was framed within American culture as a means towards progress, either for American security against foreign threats or for powering American cities. Hayashi complicates this narrative as she inserts herself into the nuclear landscape of the Trinity Site, negotiating her identity as a Japanese *hibakusha* woman in a nuclear space that is not Nagasaki. This section will examine the disruption of American nuclear power in two spaces occupied by Hayashi: The National Museum of Nuclear Science & History in New Mexico as well as the Trinity Site itself.

The National Museum of Nuclear Science & History is the first location Hayashi visits at the start of her trip. Upon Hayashi's entrance into the museum, she spots the gift shop and makes the following observations: "In the nearest corner was a sales place for gifts such as mushroom cloud T-shirts. As I walked past gift items, jewelry pins in a basket caught my eyes. Mixed among Stars and Stripes, double-headed eagles, and so forth, there were Fat Man pins." (Hayashi 5). Fat Man is the name of the bomb that was dropped on Nagasaki in 1945. The inclusion of nationalistic American merchandise such as the eagles and the flags alongside a pin of Fat Man creates a visual connection between American nationalism and nuclear warfare, a stark example of American nuclear power and the narratives of domination it represents. As pins of national power sit amongst a symbol of nuclear violence, Fat Man becomes conflated with American national power. It shows a claim of nuclearism as American and reproduces the narratives of nuclear power as national pride, the squashing of foreign threats such as Japan, and the maintenance of a thriving American society. The power of capitalism is on display, the dilution of

nuclear violence being packaged into aesthetic trinkets and t-shirts, marking the entanglement between nuclear power and capital modernity. It brings to mind the term pinkwashing, popularized by Sarah Schulman, which is a strategy used by nation-states and corporations to promote queer visibility as a distraction from the violence they commit against other groups, often using profit-driven means to do so, such as the selling of aesthetic products. The pins at the gift shop are promoting American national pride distracting from the nuclear violence the pins represent. As Hayashi contemplates buying one of the pins, she has an interaction with another museumgoer: "As I wavered, a young white man, who was handing some change to a silver-haired woman, said to me, 'The yellow goes well with your white sweater.' 'Thank you,' I said and turned around to look at the shop" (Hayashi 5). The white man that Hayashi speaks with has been successfully indoctrinated into the American narrative; rather than grappling with the violence and trauma the pin symbolizes, he simply remarks on its color, unaware of Hayashi's background nor what the pin represents. The young white man looks upon the pin as not a symbol, but as both aesthetic product and commodity. Hayashi decides to buy the pin but observes that "White sightseers were passing through the merchandise, but nobody was looking at me" (Hayashi 5). She observes her surroundings with a racialized lens and notices she is a minority in the building as Japanese, woman, and *hibakusha*. Because she does not occupy the category of white male American, she is forced to be aware of the racial and gendered power dynamics that exist around her. But despite Hayashi not occupying whiteness, she blends into the background. The products of the gift shop create a veil around its patrons, their focus on the pride the merchandise brings them, and the narrative of American power that they represent. Hayashi buying the Fat Man pin disrupts this veil as the meaning of the pin is reconfigured in her hands.

No longer does the pin represent American pride, but it represents the traumas of August 9th, connecting the past of the bombing to the present of the gift shop.

Moving through the museum, Hayashi then comes face to face with a model of Fat Man: "I felt the fish-shaped belly of Fat Man with my hand. Beneath the smooth film of paint, I felt the roughness of the steel surface...I retraced my steps to the center of the room and looked at the a-bomb models placed side by side. The two masses of iron stood hushed like coffins" (Hayashi 9). The bomb dropped on Hiroshima, called Little Boy, sits beside Fat Man, "like coffins." The fragility of her flesh is vulnerable against the "roughness of the steel surface," roughness attempting to be concealed by the "smooth film of paint," much like the United States attempts to conceal their nuclear violence with a rhetoric of American pride and peace. Making a physical connection between Fat Man and her irradiated body is a symbolic collapse of American nuclear power-- no longer can Fat Man and Little Boy sit pridefully in the museum as a victim of its devastation stands before them having survived, challenging the power they represent.

The built environment of the National Museum of Nuclear Science & History stands amidst the nuclear environment of New Mexico. The building is an ominous symbol of power, sitting not too far from the Trinity Site, but the presence of Hayashi and her friend Tsukiko in the museum challenges the histories being presented: "I became aware of being Japanese and a hibakusha, and the conduct of these Americans began weighing on my mind. The fact that the visitors were all white except Tsukiko and myself, too, seemed to make me feel as if I stood in opposition to them" (Hayashi 8). Her observations here echo her observations in the gift shop. The dominant pool of visitors being white and American represents the dominance white American ideology has over nuclear histories, that, when viewed more closely, becomes illogical, Hayashi observing that "There were neither blacks nor Mexicans here... given that this was the

core location of the bomb, the all-white scene appeared out of the ordinary" (Hayashi 8). Given that the areas around the Trinity Site were chosen due to the absence of white American communities, Hayashi views the all-white space as odd, wondering why she is not seeing people of color at the museum given the diversity of the surrounding area. But the populace of the museum speaks to how white, American, national power over nuclear history comprises the museum, and as a result, knowledge production. Hayashi's presence there disrupts the knowledge being reproduced, and Hayashi is creating new threads of knowledge that critique American nuclear colonialism. The museum stands tall over the natural landscape and its non-human creatures whose autonomy has been stripped away, however, once Hayashi visits the Trinity Site a renewed sense of power is imbued onto the land.

At the end of the story, Hayashi finally visits the Trinity Site, a flat, silent, irradiated terrain where her story first began:

> I walked toward Ground Zero, stopping when I reached just outside the circle of visitors surrounding the stone monument. I lifted my face upward and looked around. It was a boundless expanse of bleak land where nobody could hide. Nothing was taller than the earth's surface except for humans, the fences surrounding Trinity Site, the distant red mountains connected to the horizon, and the Ground Zero monument that stood before me. (Hayashi 22)

Present at the site is the birth of American nuclear power, and as Hayashi walks upon the earth, Fat Man feet away, taken from the museum to the Trinity Site that day, she remembers August 9th. She sees herself as part of the terrain, a trans-corporeal connection between herself and the natural world, a world that, like her, has been violated by radiation. She writes, "I felt like applying the Geiger to my body for them to see. If the counter started to make harsh sounds, everyone would be shocked, I thought" (Hayashi 24). By conflating her body with the Trinity Site, she is revealing the truth of American nuclear power as unnatural, and the colonial beliefs that support nuclear power as illogical. While the museum stood tall over the land, here at the

Trinity Site "nobody could hide" and humans were the only thing taller than the land. This site makes visible the tragedies of nuclear violence, not just in the American Southwest, but globally. The perpetrators, the victims, the humans, the animals, the land: "nobody could hide." Power dynamics are collapsed, and nuclear narratives rewritten. How Hayashi understands herself as a Japanese *hibakusha* woman is also reconfigured. She can compare her body and experiences to the humans and nonhumans at the site, finding a sense of solidarity with those amongst her, regardless of their backgrounds. The category of *hibakusha* is no longer limited to a localized context within Japan, it is expanding to consider the global connections created by nuclear colonialism, and the power that comes from standing together against the colonial systems that led to those connections.

The terrain becomes a landscape of bodies, both living and nonliving, and the emptiness is filled with nuclear memory that transcends national borders. Hayashi feels their presence: "Until I stood on Trinity Site, I had thought that the first victims of nuclear damage on earth were us humans. I was wrong. There were elderly victims here. They were here, without being able to weep or cry out" (Hayashi 23). Unable to connect to the natural world in the urban setting of the museum, the landscape of the Trinity Site reveals to Hayashi the environmental damage nuclear violence has caused to the Earth and non-human creatures. She is sympathetic, and devastated, but she is seen. As she views the exhibits in the museum, she feels a sense of disconnect, describing the images of the bombing of Nagasaki as "...the surface of things. Behind the printed landscape were Instructor T, classmates A and O, and others who met instant death" (Hayashi 7). The images in the museum were not able to replicate the true reality of that day, but standing on the Trinity Site, she is able to claim a sense of power: "It may be that, for the first time as a human being, I now shed the tears that I did not shed on August 9th. Standing on the silent earth,

I trembled at the earth's pain" (Hayashi 23). Through her trans-corporeal connection with the irradiated landscape of the Trinity Site, Hayashi confronts her trauma, and by doing so, confronts American colonial violence.

(Nuclear) Safety: "As Nature Reflects the Body"

Regarding the atomic beauty pageants in 1950's Las Vegas, Nakamura explained that one of the purposes of the pageants was to assuage public anxiety about nuclear testing, especially as uncertainties began to arise reacting to the newly built Nevada Test Site. Images of attractive, white women were used to appeal to accepted standards of beauty, pleasure, and comfort, and reassure the public that nuclear testing was safe. Through these beauty pageants whiteness was framed as the valued demographic which resulted in the displacement of and harm against marginalized communities surrounding the test site. The site was strategically designed to deflect harm from metropolitan, white neighborhoods, many Indigenous communities living downwind of the radioactive fallout. In his book *Nuclear Bodies: The Global Hibakusha*, Robert Jacobs writes: "To the east…were thousands of Native Americans and Mormons; thus, it was the explicit policy of the AEC to test nuclear weapons in Nevada when the wind was blowing directly toward the communities of eastern Nevada and southern Utah." The United States attempted to ease the anxiety of these downwind communities with "...an explicit policy of testing only lower-yield fission weapons at the NTS and testing all their much higher-yield thermonuclear weapons at the PRG in the Marshall Islands." Jacobs describes this as "...colonialist prioritization to help pacify the people living downwind from the NTS in official government documents" (Jacobs 161). This "colonialist prioritization" is revealing the expendability of not only bodies, but of natural landscapes, deeming the people and land of the Marshall Islands as more expendable than the people and land of the United States.

From Trinity to Trinity makes a striking connection between nuclear bodies and irradiated landscapes as Hayashi shares her observations of the New Mexican landscape. When she first gazes upon the landscape of New Mexico she felt she was gazing upon the world of Georgia O'Keefe, an American painter whose art has been widely interpreted as mirroring female bodies. Hayashi writes: "Sitting back in my seat, I gazed at O'Keefe's world. Everything I saw from the car window could be found in her paintings" (Hayashi 12). The landscape is, to Hayashi, a woman: "Pink sand dunes smoothly connected like a girl's breasts. Caverns reminiscent of a woman's organs. The sandy land and the sky glowing in the setting sun suggest a woman in her early years of old age who has finished reproduction" (Hayashi 12). By viewing the landscape as not only female bodies but as "O'Keefe's world," Hayashi is expressing feelings of safety and connection to the late painter, and to the environment that envelops her. Despite the histories of radiation that ravages her body and the body of the landscape, beauty remains in its image, and if she can look upon the dunes and caverns with awe, her body can be granted the same grace. After the atomic bombing of Japan, *hibakusha* women were treated as social outcasts due to the disfigurements and scars on their bodies, as well as the effect radiation poisoning had on female reproduction. No longer considered feminine nor desirable, they were barred from the sphere of marriage due to the stigma attached to their bodies. Projects like the Hiroshima Maidens preyed on their bodies and made a politically driven spectacle out of their scars: "The journey in 1955 of the so-called Hiroshima Maidens from Japan to the United States to receive cosmetic and reconstructive surgeries had provided an opportunity for the mainstream US media to re-envision the nation as the healer of the *hibakusha* rather than as the perpetrator of their wounds and disfigurements" (Jacobs 30). While the 1955 travel of *hibakusha* women to the United States strategically reaffirmed American nuclear hegemony, the 1999 journey of Hayashi to the United

States is one that deconstructed American nuclear hegemony. By seeing beauty and safety in an American nuclear landscape, Hayashi is honoring her irradiated body, as well as the bodies of those living and non-living, and is challenging the narratives of nuclear safety the United States subscribes to. I am also reading this as reconfiguring categorizations of *hibakusha*, allowing irradiated bodies from Japan to acquire transformed subjectivities outside of a Japanese sociocultural space and the discrimination attached to that space. With Hayashi and her own irradiated body present at the Trinity Site, stances in favor of nuclear energy deteriorate, nuclear narratives of safety are challenged, and alternative understandings of nuclear history arise with victims at the center.

These connections become clearer as Hayashi continues to observe the New Mexican natural world, and rather than only seeing O'Keefe's world, she begins to imagine *hibakusha* in the environment: "These holes were traces left by rocks that had been buried and then fallen off when winds swept away dirt. Rocks lay scattered at the base of the mesas. They were its dead members. I recalled my second trimester class that began after the war. Fifty-two students gone, our grade was one class fewer when the classes were reorganized" (Hayashi 13).

The holes in the mesas become symbolic of the holes in Hayashi's postwar life, holes that represent the deaths of people in her school as well as holes in her disembodied self. She continues to say, however, that "The mesas from which rocks had fallen were tranquil, having sucked away the sounds of the wind" (Hayashi 13). She is again seeing beauty in the nuclear landscape and nuclear bodies, honoring those who lost their lives. The mesas "having sucked away the sounds of the wind" seems to imply a quieting of her trauma, a process of healing that cannot be accomplished on her own, but in trans-corporeal companionship with living and nonliving humans, and living and nonliving nature, all victims of nuclear violence. Her

trans-corporeal relationship to the living world is then collapsed by the devastating reality of what happens when nuclear safety is ignored. As she walks around the Trinity Site, she is deeply aware of what is living around her, and what is missing:

> I listened for sounds in the hushed wilderness. I wished to hear the sounds of the small but powerful grass seeds that split open in the warm sun. Even the scratchy noise an insect makes on sand while sliding down a doodlebug pit would have been fine. I wanted to hear the sounds of a living creature. (Hayashi 22)

Rather than yearning for human connection, Hayashi is expressing a yearning for the natural world, wishing for a sign of life in the devastated terrain. By fostering this deep connection to the land, which she also views as reflecting back at her the friends and teachers she lost in the bombing, she is making a powerful image of land containing memory, and displaying an agential consciousness rather than being a space that reproduces human consciousness. Its inability to speak for itself at the Trinity Site is representative of the extensive loss that occurred, of not only humans but of more-than-human entities. Her trans-corporeal connection to the land and its inhabitants is heightened through absence, and the relationship between irradiated bodies and irradiated land is made clearer through Hayashi's longing.

At the Trinity Site, her connection to her living companions is snatched away from her; however, she maintains a connection to those in the nonliving world. After an explanation by a site attendant about the stones, or pearls, fused together after the atomic explosion, Hayashi reflects: "I wonder if humans who melted at high temperature turned into sphere-shaped pebbles and danced in the air. Young people's bones, I hear, are shiny pink. I wished, at the very least, that the bones of the friends I had lost were lovely, pink pearls" (Hayashi 24-25). The trans-corporeality of Hayashi's connections are ones that transcend the living world, much like her connection to the mesas and its "dead members" transcends living nature. Her trans-corporeal link to the nonliving, and her morphing of the Trinity Site into a space of nuclear remembrance

rejects the ideas of safety surrounding American nuclearism, while simultaneously granting her and other *hibakusha* a sense of safety within their own irradiated, gendered bodies.

(Nuclear) Victory: "With Uplifted Faces"

In the urban landscapes of atomic history museums in New Mexico, Hayashi witnesses the American nuclear narrative of victory and glory. At the National Museum of Science & History where she bought a Fat Man pin and came face to face with replicas of Fat Man and Little Boy, Hayashi encounters a group of visitors viewing an atomic bomb documentary:

> Three white men sat, viewing a black and white documentary film. The old man seemed to have been adding his own explanation to the film's narration... They turned toward me. They may have guessed that I was Japanese. They shifted their eyes back to the screen, playing innocent. I looked at the screen from behind them. It was an [sic] Hiroshima-Nagasaki a-bomb documentary. (Hayashi 7-8)

From her observations, it is clear the old men feel a sense of authority over the bombing, perhaps because, as Hayashi guesses, they were themselves American servicemen during the war. By "adding his own explanation to the film's narration," the American men are actively reproducing an American perspective of the nuclear history that is on display in the museum and aiding in the hegemonic knowledge production with which the museum is engaged. Hayashi's presence disrupts these American narratives, and the old men resort to "playing innocent," as they are confronted with a figure that complicates an American perspective. Hayashi goes on to write: "I had implicitly believed that the abolition of nuclear weapons was common human sense. In listening to the explanations, perhaps the men felt intoxicated by the thought of a powerful mother country" (Hayashi 8). This statement harkens back to the sense of pride imbued in the gift store merchandise with the Fat Man pin interspersed with pins of American national pride such as eagles and flags. Hayashi is recognizing the ties between nuclear violence and American nationalism, understanding the impetus behind the justification of the violence. As someone who

survived the devastation of the bombing, Hayashi believes that opposition to the use of nuclear weapons, past, present, and future, is "common human sense," however, she recognizes the power propaganda can have over public thought, perhaps pulling from her own wartime experiences in Shanghai, and how narratives of hegemony, when broken down, become illogical. There are also dynamics of gender happening in this urban landscape with Hayashi being the only woman amongst a group of men, a fact that further disrupts the male-dominated American glory of nuclearism. This dynamic of gender is also apparent during her next museum visit. Upon another visit to a history museum, this time the Air Force Museum, Hayashi is again confronted with an a-bomb documentary, this time viewing it with disdain:

> I had had enough of atomic bombs and Bock's Car. The characters who appeared in the film were all heroes: Dr. Oppenheimer, shaggy-haired Dr. Einstein, who was also on the labels of wine sold in the souvenir shop, and soldiers departing on an a-bomb carrier. They looked proud. While understanding this to be a record of victors, I found myself examining each detail with various objections and denials. (Hayashi 14)

Hayashi lists a group of men who were all people responsible for the creation and detonations of nuclear weapons, within and outside the United States. She disagrees with the victor narrative and does not argue that Japan instead are the victors, but rather, believes that victor is not a position any one can ethically take. Her presence at the museum disrupts the narrative of victor as it dismantles victory as a framework. She does not believe nuclear weapons will grant any one person or nation glory, but rather, it will provoke the annihilation of humanity, and an annihilation of self. Her experiences at the museum all contribute to her feelings of isolation and exclusion on this trip, whether it be the nuclear merchandise, the atomic bomb documentaries, or the museumgoers all being white. It is when she is outside of the museum space and outdoors amongst the land that she can break free from violent narratives of nuclear history and reconfigure her relationship to such history, highlighting the importance of her trans-corporeal

connection to the New Mexican landscape. While at the Trinity Site, she transcends the victim position and views people without prejudice. As she observes an elderly man at the site, she considers him with a sense of sympathy and understanding:

> He was walking alone, away from the groups of people. Around 72 or 73 years of age and with a long strongly built torso, he could be a disabled former serviceman. Perhaps he had weak eyesight, for he wore dark glasses. Nobody accompanied him. I imagined that he joined a bus tour to visit Ground Zero while he could still walk. I was drawn to his form that conveyed sadness. (Hayashi 24)

Much like Hayashi journeyed to the Trinity Site to seek healing and closure, she views the Americans who fought in the war as doing the same. At the Trinity Site, victory and victim are dismantled, and the landscapes upon which she attributed her irradiated body are revised. The Trinity Site offers final vestiges of hope for their visitors. As Hayashi stated earlier, on the land of the Trinity Site, "nobody could hide," the silent devastation of the site temporarily ignoring the power dynamics that led to the devastation.

As she reconfigures categories of victim and victory, Hayashi once again finds solace in the land around her as Hayashi and her friend Tsukiko observe signs of growth from the irradiated land: "Tsukiko and I were walking hand in hand before we realized it. A few five-petaled flowers, closely resembling a kind of quince seen in hills and fields in Japan, were abloom amidst the grass. There were also glossy, yellow flowers. We crouched to gaze at those flowers that kept themselves flat to the ground" (Hayashi 24). The flowers "resembling the kind of quince seen in hills and fields in Japan" inserts Japanese landscapes onto the American nuclear landscape, a convergence that connects the two nations, and reaffirms the global connections Hayashi is beginning to make with her *hibakusha* identity and experiences. Nature is once again granted agency through Hayashi's writing, as the flowers "kept themselves flat to the ground," indicating that their position is an intentional choice. By keeping themselves to the ground they

are shielding themselves, protecting themselves from the harm that has already been done around them. However, they are still visible. Rather than being so flat to the ground that they are invisible, they are raised just enough to where they can be seen. The flowers represent a hope for the future, hope for not only Japanese *hibakusha* women, but for all those affected by nuclear violence. Hayashi is pointing the reader towards not victory, but justice and hope. To be victorious is to have defeated someone, to be better than them. It reinforces hierarchical power dynamics. However, in Hayashi's world, even flowers that are flat to the ground are given equal importance to that of human life and can shape how we view narratives of victory.

Conclusion

I have argued that *From Trinity to Trinity* revised American hegemonic ideas of nuclear power, nuclear safety, and nuclear victory through the connection between Japanese *hibakusha* women and the American Southwest. I discussed landscapes as both environmental and built, and explored the trans-corporeal connection between nature and human bodies as one that transcended the living world to include the nonliving who lost their lives to nuclear violence. Hayashi viewed the landscape as simultaneously beautiful and tragic, the images of nuclear victims populating the terrain. I read this as a granting of agency to irradiated bodies, bodies that are no longer forced into the margins of a society that deems them disposable so long as their bodies are not considered desirable. The Trinity Site becomes a space without borders, one in which ideas of victimhood and victory are challenged. Hayashi views the American servicemen visiting the site with sympathy, reaffirming the idea that there cannot be victory for anyone under nuclear violence. At the end of her story, Hayashi and Tsukiko are no longer alone: "Surrounded by people, stood two Japanese men. They were *hibakusha* from Hiroshima, about to be interviewed. Wearing T-shirts, the two stood looking tense amidst American onlookers. They

stood upright, with uplifted faces" (Hayashi 25). At the Trinity Site are two more *hibakusha*, presumably to be interviewed by Americans. Hayashi carries the trauma she experienced on August 9th within her body, and the people she lost kept safe within her. She feels anger viewing the American a-bomb documentaries and hope when flowers bloom from the desolate earth of the Trinity Site. When she looks upon the *hibakusha* men, she sees their pride and their resiliency, and their willingness to tell their story. Of course, this can be interpreted as a mobility dictated by gendered experiences– Hayashi's female gendered, irradiated body is stigmatized in society, whereas a man's irradiated body is not connected to such gendered expectations and exclusions. However, she sees hope in their faces, and a realization that she will not be alone.

From Trinity to Trinity is a text that begins a global conversation around nuclear violence, creating a powerful connection between the atomic bombings in Japan and American nuclear violence. Hayashi recognizes the tense history of the region as she travels through the New Mexican landscape, reflecting on the history of Spanish colonization and the displacement of Indigenous communities. She writes: "This earth, once abandoned as 'a wilderness where no white culture can prosper' was, ironically, to be pioneered by aggressors' greed and bloody battles" (Hayashi 10). Despite the violence that the region holds, Hayashi focuses on the tragic beauty of the land, revising the land to that of nuclear remembrance. Hayashi queers narratives of nuclear violence and provides alternative histories that center the voices of those who have been harmed. Despite the threads of global connection that Hayashi is weaving in her text, she is unable to break free from August 9th. Her trip to the Trinity Site was her attempt to sever herself from August 9th, but as she advances through New Mexico, it only reaffirms her inability to leave August 9th behind. Her text exists in a moment in history where the localized experiences of *hibakusha* who survived the atomic bombings of Japan were the primary first-hand accounts of

nuclear violence. That is why Hayashi traveling to New Mexico is so significant; it disrupts the boundaries of a historical moment in time where global conversations around nuclear violence were not common amongst Japanese writers. *From Trinity to Trinity* is significant for marking the beginnings of global conversations, and by applying the framework of anti-nuclear space-time to this text we can witness the generational connections between literatures and writers. The next chapter focuses on a contemporary writer, Kobayashi Erika, whose novel *Trinity, Trinity, Trinity* was published in 2019. Kobayashi represents a newer generation of writers, many of whom are not *hibakusha*, whose work I will argue is also working within a framework of anti-nuclear space-time. By putting these two writers in conversation, we can further understand the ways that an anti-nuclear sentiment has grown and transformed across generations.

Chapter Three

Nuclear Memory, Nuclear Revenge:

The Matrilineal Cyclical World of *Trinity, Trinity, Trinity*

"This is the beginning of the revenge of the invisible."

- Kobayashi Erika, *Trinity, Trinity, Trinity*

In a short story titled "Precious Stones" from the 2023 collection *Sunrise: Radiant Stories* by Kobayashi Erika, a father trades his entire fortune looking for a cure for his dying teenage son. Using the last of his fortune, one quartz jewel, he buys a strange medicine that glows blue and white. As the son took this medicine, his hair began to fall out and his skin began to peel off, leaving a new, taut, glowing layer of skin. His new body was one that would not die, his interactions with the other characters in the story taking place over one hundred years in the future. In this new body he renamed himself Quartz. In one such interaction between Quartz and one of the sisters in the story, Quartz tells her: "Stone never dies, and never forgets. It remembers everything that happens to it—every little thing, down to the smallest detail—and preserves it all inside itself." The girl asks, "Even after a hundred years? A thousand?" Quartz responds, "Even after a million" (Kobayashi 62). The title of the story, "Precious Stones," not only refers to the fictional history of Quartz in his mutated, irradiated body, but also refers to the stones developed by Iimori Satoyasu after 1945. Dr. Iimori was one of the most prominent scientists who worked on the development of the uranium bomb in Japan under the Ni-Go Project. After the Allied Occupation of Japan in 1945, however, Dr. Iimori was barred from his research by U.S. authorities, and as a result he shifted his focus to engineering gemstones using radioactive ore. Many of these stones were sold widely in department stores, and the final connection between

these stones and the short story is the fact that these precious stones were passed down through the generations of women in the story. The grandmother owned a jewel shop years ago, and now, rather than granting her eternal life, her health is declining due to cancer because of the radioactive precious stones.

In her 2019 novel *Trinity, Trinity, Trinity,* Kobayashi introduces something she calls the "accursed stones." Tied to the Trinity disease spreading amongst elderly people in Tokyo in the year 2020, the stones are meant to represent pitchblende, a uranium-rich mineral used in fueling the atomic energy industry. The accursed stones are how Trinity disease spread amongst citizens, using the human body as a vessel to give voice to the unspeakable nuclear histories that are cast into obscurity. Those afflicted would gain inordinate spikes in speed and strength, news broadcasts showing authorities struggling to apprehend them, and would lose memory of who they were or where they were, their memories replaced with those of the accursed stones that were mined, engineered, and subsequently deemed "accursed" due to their radioactive effects. It is as Quartz said, "Stone never dies, and never forgets," the Trinities (the name given to those who have Trinity disease) are a device for the accursed stones to enact their revenge on a world fueled by nuclear power. Accompanying the trajectory of the Trinity disease is a grandmother, mother, sister, and daughter whose lives become cyclically intertwined with Trinity as the grandmother succumbs to the disease and the mother races to save her. The climax of the novel is a threat of a terrorist attack by the Trinities whose goal, under the will of the accursed stones, is to spread the disease and get revenge. The narratives of these characters also take place alongside global nuclear events, Kobayashi packaging events sprawling across time and space, from the discovery of radium to the nuclear disaster in Fukushima, within a cautionary tale detailing the irrevocable consequences of nuclear power.

In common with both "Precious Stones" and *Trinity, Trinity, Trinity* is the mystical power given to irradiated stones as they inhabit the familial timeline of multiple generations of girls and women, and how these stones represent larger nuclear narratives. These threads of history, memory, past, and future, are elements that Kobayashi utilizes in her work, both literary publications and art installations, as she embarks on the arduous task of addressing the nuclear past, present, and future of humanity and the planet. That said, while any part of her rich array of artistry can offer insight into our nuclear world, this chapter will focus on the novel *Trinity, Trinity, Trinity*. The narrative scale of *From Trinity to Trinity* analyzed in the previous chapter becomes smaller when read alongside *Trinity, Trinity, Trinity* due to the global nuclear ties Kobayashi prioritizes in her narrative. This chapter is therefore displaying a broader application of anti-nuclear space-time and its relation to transnational, interconnected nuclear histories that are contending with a wider variety of spaces and timelines. I argue that Kobayashi is using cyclical narrative structures and styles to disrupt colonial nuclear legacies, as well as reconceptualizing the nuclear as it is related to elderly bodies and female bodies. Rather than denying the realities of radiation violence, she brings attention to alternative imaginings of *hibakusha* bodies, which presents alternative narratives for nuclear history.

As I mentioned before, Kobayashi uses the word trinity to name the Trinity disease. Those who are infected with Trinity are known as Trinities. However, there are two other usages of trinity in the novel. One is to name the nuclear history of the Trinity Site, and another is to name a cybersex website called Trinity. I argue that using the word trinity to name disease and to name online sex alongside naming the nuclear history of the Trinity Site queers the nuclear histories attached to the word, allowing other narratives to exist. Trinity is also religious in origin, referring to the Holy Trinity, adding an additional layer of disruption to the word.

As was the case with *From Trinity to Trinity*, this chapter will also apply queer analytics. Queerness in this chapter is being applied to three different areas: intergenerational nuclear family, bodies and reproduction, and the queer hacking of cyberspace. While queerness is imagined within the context of disruption and resistance in both chapters, there are three operations of queerness happening within *Trinity, Trinity, Trinity* that I make clear. In section one, Intergenerational Kinship and Nuclear Family, queerness is being defined as a disruption of historical nuclear narratives by including a family of women within the male-dominated timeline of nuclear history. Additionally, the temporal narrative style of the novel emphasizes this disruption. Section two, Nuclear Bodies and Nonreproductive Futurity, includes an analysis of bodies and reproduction, bringing into question, as did Hayashi, a human/nature divide that queers normalized categorizations as well as representations of not only irradiated bodies, but elderly bodies. The last section, Queer Hacking Trinity, uses the term "queer hacking," developed by Allegro Wang, to do a close reading of the use of cyberspace within the novel, which rewrites Trinity into a multi-referential site of sexuality and deviance.

Intergenerational Kinship and Nuclear Family

In "Gendered Bodies in *Tokusatsu:* Monsters and Aliens as the Atomic Bomb Victims," Yuki Miyamoto explores the monstrous and gendered portrayals of *hibakusha* bodies within *tokusatsu* media. She argues that there exists a gendered discrimination within *tokusatsu* media that, while providing visibility to male irradiated bodies that was not commonly present in other areas such as atomic bomb literature, "the irradiated male bodies are projected onto monsters and aliens that are ultimately destroyed, so as to allow audiences to detach from them and the nuclear concerns they represent." Women, on the other hand, serve as the ones "to restore the health of the injured male body," thus "relegating procreative responsibilities to women" (Miyamoto

1089). Miyamoto discusses a *kaijū,* or monster, trading card in the 1970's that was titled *hibaku seijin*, which featured monster/alien covered in keloid scars. *Hibaku* is a word meaning to have suffered from an explosion, *hibakusha* being the term for atomic bomb survivors. *Seijin* is a word that means alien. To use irradiated bodies in a portrayal of a monster/alien sparked massive controversy and debate during its circulation. Miyamoto, alongside others at the time, viewed the card as reinforcing discrimination against *hibakusha* bodies,

Irradiated bodies have historically been cast to the margins of society, deemed abject, monstrous, and undesirable, taking on a gendered element either due to normative beauty standards deeming scarred women undeserving of marriage and partnership, or invisible elements such as adverse effects to reproduction. As was the case with the narrative in *From Trinity to Trinity*, where Hayashi felt invisible in the museum space as she witnessed the revisionist and glorified histories within the exhibits, irradiated bodies are often deemed invisible due to the non-normative spaces they occupy. While Hayashi populated the New Mexican terrain with living and nonliving *hibakusha* bodies, *Trinity, Trinity, Trinity* subverts these narratives by populating the novel with three generations of women with proximity to radiation: a grandmother, a mother, and a daughter. The novel's portrayal of these women in this maternal line rejects the histories of discrimination attached to *hibakusha* bodies through a queering of nuclear legacies and alternative imaginings for irradiated bodies. Just as Hayashi amplifies and honors the voices of those who have been harmed by nuclear violence, Kobayashi does the same.

Following three generations of women, the novel begins with a prologue of the grandmother in a state of confusion: "I look around. All that's visible through the window is sky. Where is this place? Who am I? I seem to have forgotten. I seem to have been asleep for quite a long time. It also seems like quite a long time since I woke up" (Kobayashi 2-3). As the scene

continues in this first-person narration, we meet her granddaughter and her daughter as they tend to her after they hear her fall out of bed, the grandmother only knowing who they are when the granddaughter calls her "grandma" and her daughter calls her "mother." For the remainder of the scene the grandmother remains unsure of who she is. In this prologue we are not given any answers; we remain in confusion alongside the grandmother. The prologue is then followed with the first chapter, titled 8:00, the perspective shifting to that of the mother taking care of her own incapacitated mother, which we know is the grandmother from the prologue. As we follow the mother, we learn that she has a daughter and a sister, and we follow aspects of their family life, such as their selling of the family home and their moving into an apartment. In the background of these family affairs is the spreading of Trinity disease, which the characters learn about from television. As the disease progresses, the grandmother becomes infected with the Trinity disease and disappears, which sets off a series of events where the mother is racing to find her.

I am reading this intergenerational kinship in two ways: through the disruption of the nuclear family and simultaneous inhabitance within the nuclear, and the novel's cyclicality. To begin with the nuclear family, we can first examine the historical importance nuclear family formations in Japan had for the progress of imperialism and capitalist modernity. The term "good wife, wise mother" (*ryōsai kenbo,* 良妻賢母*)* was popularized with the emergence of the modern Japanese state during the Meiji Restoration. While men enlisted in the Japanese Imperial Army and held roles of power in the construction of the modern state, women were cast to the space of the home, becoming machines to produce comfortable, efficient homes and reproduce patriotic, strong children. In *Ryousai Kenbo: The Educational Ideal of 'Good Wife, Wise Mother' in Modern Japan*, Shizuko Koyama writes: "The more value was given to women's role as mothers, the higher their position in society tended to be valued. One might say that women used their

identity as mothers to improve their position in society... On the other hand... this still meant valuing women not as individuals, but only through their function as mothers." (Koyama 29). While women in a more contemporary context can exist outside of this restricting category, there remain sexist structures in place that reproduce a good wife, wise mother ideology. For instance, one of the most pressing concerns in Japan now is the declining birth rate, with politicians urging for social changes that encourage women to have children, placing the production of a thriving nation-state on women once again. In *Women and Family in Contemporary Japan*, Susan D. Holloway writes: "In 1947 the average Japanese woman could be counted on to have 4.5 children in her lifetime. Just over 60 years later, the number has dropped to 1.3... The country's population, now 127 million people, is projected to drop to 90 million by 2055" (Holloway 3). She writes further that "Conservatives have criticized women who opt for a career instead of homemaking, calling them selfish and unpatriotic." (Holloway 4). The family of women in *Trinity, Trinity, Trinity* are existing within this contemporary moment of declining birth rates, while also living within a society whose foundations are that of a good wife, wise mother ideology.

While this maternal family is only possible through having children, I read their family dynamic as disrupting a nuclear family formation. There is no husband present in the story, nor a grandfather; the mother and sister are the ones who handle the family affairs and head their households. The sister temporarily lives with the mother who does not have children of her own and is not married. Their dynamic disrupts the space of the home, one that is absent of men, and one that is maintained through their own careers. While Kobayashi does not describe her characters as hyper-feminine, it is compelling to read the gendering of the daughter alongside the gendering of another character that will be introduced in a later section, referred to in the novel

as Re:. The daughter is described as wearing dark clothing and listening to a band called DEATH BE NOT PROUD, stylized in all caps. The heavy theme of their music is reflected through the lyrics included in the novel: “You are slave to Fate, / To Chance, to Kings / To Desperate Men. / You dwell with Poison, / War, and Sickness” (Kobayashi 50). The novel places the daughter within a non-feminine space that contrasts with the hyper-femininity of Re:. The character Re: is described as wearing colorful, feminine clothing, and her writing style is formatted with hearts and bubbly language. Alongside her femininity there is an artistic depth to her online blog where she shares her insights and her artwork. Often femininity is conflated with less intelligence, however, the novel does not attribute differences in gendered appearances and personalities between these two girls as differences in intelligence or depth. Both girls are placed in proximity with heavy themes and are shown to have a multi-faceted reality not dictated by feminine appearances, which I believe disrupts the gender roles and expectations that are often placed on girls and women in the home. Without the presence of a male figure for both characters in their respective homes, though we do not see much into the home of Re: but a male figure is never mentioned, a patriarchal hierarchy of power does not dominate how gender operates.

Alongside the subversion of patriarchal hierarchies of power and rejection of nuclear family formations, there is a complication of temporality through the narrative's cyclical structure. The novel is split into three main parts: Sunrise, Daytime, and Sunset. Within each of these sections are chapter titles that follow the passing of time within a day, beginning with 8:00, each subsequent chapter thirty minutes or an hour later, reaching all the way to 17:30 by the last chapter. However, straying from time as a title of the chapter, the concluding chapter of the novel is titled “Three-Person’d God,” a reference to the poem by John Donne “Batter my heart, three-Person'd God” that inspired the naming of the Trinity Site. We are introduced to this

concluding chapter with the same lines that opened the novel in the prologue: “Lately, even when it was light outside, I found I couldn’t tell if it was morning or evening. When I forced my eyelids apart to check, all I saw was a wide plane of sky the color of burning.” (Kobayashi 1, 208). As the chapter moves forward, there is a slight difference in the word choices, but the general format is the same: an elderly woman is waking up in an empty room, confused by who and where she is. Similar to the prologue, a young girl rushes into the room after hearing a crash, the crash being the elderly woman attempting to get out of bed but falling. It is at this moment that the girl interjects with “Grandma are you okay?” We learn that the woman in the room is, again, the grandmother, but it becomes clear in the last chapter that the grandmother now is the mother that we had been following throughout the whole novel, having now, in the future, succumbed to the Trinity disease. This narrative structure invokes a nuclear futurity in which events and bodily harm are continuously repeated. This serves as an indictment of nuclear progress and disrupts the advancement towards a new and improved future that nuclear policies promise. *Trinity, Trinity, Trinity* provides a glimpse into a future that is identical to the one that opened the novel, suggesting that the harm wrought by nuclear violence throughout history will continue to repeat itself if the same paths of nuclear dominance are followed. By structuring the novel in this cyclical way, Kobayashi is queering how nuclear narratives are organized, and is providing a space that contains compelling narrative possibilities for engaging with nuclear history that are not required to align with linear colonial structures of nuclear power.

There is also an additional element of biological complications caused by radiation poisoning being passed down between mother and children. While the women in the novel can reproduce without complications, there seems to be a symbolic inheritance of radiation in the family, turning their family into a “nuclear” family. For instance, the father had a collection of

stones, including a collection of glass and vases made of fluorescent green irradiated materials, which we learn about through flashbacks as the mother reflects on her past. The mother and her sister are tasked with cleaning out these items as they prepare to sell the family home, also finding a wristwatch gifted by the grandmother to the father, which was also made with irradiated materials. Also found during the cleanup was the *thaler*, or dollar coin made from mined silver in Saint Joachim's Valley, that was gifted by the grandmother to her daughters after making a trip to the valley in her younger years, the same place where the accursed stones were mined. Radioactive materials were passed down and inherited throughout these three generations of women, mimicking the ways in which radiation is biologically passed down through maternal lines. By connecting these historical items to this family, Kobayashi is further capturing a global nuclear conversation in which nuclear violence cannot be isolated to a single place, but rather, can be connected across borders and across generations. This allows for a spatial and temporal reordering of nuclear history that, through these innumerable connections, shows the falsity of nuclear colonialism that relies upon ideologies of isolation and repression of information to maintain its colonial order.

Nuclear Bodies and Nonreproductive Futurity

In "Transnatural Ethics: Revisiting the Nuclear Cleanup of Rocky Flats, CO, Through the Queer Ecology of Nuclia Waste," Shiloh Krupar analyzes the binaries of a waste/nature divide in the Rocky Flats through the drag queen Nuclia Waste who dons "a full head of green glowing hair" and makes the Rocky Flats "her own private Plutonium Palace" (Krupar 304). Nuclia Waste is a useful figure for thinking through the connection between bodies and nuclearism because her physical embodiment and performance of nuclear legacies mirrors a similar embodiment of nuclearism by the Trinities. Krupar writes: "... employing Nuclia Waste might

provide potential resources for bodies; her performance practices… visibilizing the porosity of body and environment and the ways humans and nonhumans have been irrevocably altered by nuclear projects" (Krupar 315). Nuclia Waste transforms her body into a vessel for nuclear commentary, using mutant drag as a means to subvert how we can think about irradiated bodies in relationship with nuclear colonialism, and how those bodies are received in the public eye.

Much like the Hiroshima Maidens mentioned in the previous chapter, whose scars and disfigurements were spectacles for the American mass media, I read the public displays by Trinities in the novel as a spectacle of elderly bodies. Given that the Trinity disease specifically affects elderly people in the novel, the televised scenes of their bodies provide compelling commentary on how irradiated bodies are consumed in the public eye, while also providing a visibility for aging bodies forgotten in society. One Trinity patient, Kiyoko Himeno, while on a tour at the Fukushima Daiichi Nuclear Power Plant, succumbs to the control of the accursed stones. She breaks away from the group and attempts to break into the power station. During her escapade, a security livestream captures her movements and is followed online by the public, including the mother who watches this stream with her colleagues at the office. As the ninety-one-year-old Kiyoko Himeno runs away from authorities in the livestream, comments such as "'This lady should qualify to join the Olympics'" spread amongst the office, the elderly woman's evasion of the men after her bringing in additional comments of "'She's strong too– let's sign her up for the shot put as well!'" (Kobayashi 95). Her physical strength not matching her age transformed her into a spectacle, her performance a result of the Trinity disease propelling her towards nuclear power.

Her superhuman movements are startling to the viewers; curiosity and surprise transfixes them to the screens. The commentary about the Olympics is interesting in that the viewers

suggest she be a representative of their country, the Olympics being a highly nationalistic event. So long as the woman is on the screen and not a threat to the viewers, her body becomes a spectacle to be consumed, and it is the shocking entertainment that she provides that would make her participation in the Olympics alluring, bringing in more global viewers and capital to Japan. At the same time, however, I suggest that this scene provides additional commentary on the visibility of bodies. If not for the combination of her impossible strength alongside her aging body, her body is not one that would be highly televised. The Trinity disease provided her with the ability to run away from authorities. Without that strength she would not have created a chaotic scene that stole the public's attention. Through the combination of the Trinity disease and her age, how irradiated bodies are interacted with, how they are visible, and what those bodies should look like is revised. I read this as a critique of how irradiated bodies and age are shared and received in the public eye. If Kiyoko Himeno was a ninety-one-year-old *hibakusha* woman without superhuman strength, the public would not have tuned into the livestream while at work, gathering around their devices as if watching a sports finale. The elderly bodies of the Trinities make visible the prolonged histories of nuclear violence. Their age is evidence of how long nuclear colonialism has dominated society, and by using elderly Trinity bodies to make this commentary visible, Kobayashi is providing a purpose and visibility to elderly *hibakusha* bodies often left behind by the progress of time.

Additionally, the accursed stones that are spreading the Trinity disease reveal subversive connections between radiation and bodies, a connection I read as engaging the relationships between humans and the natural world, both of which have been exploited and violated by nuclear projects. Kennichi Tani, one of the first Trinities to be broadcasted on television, is publicly arrested after handing out bills in front of the National Diet Building, which were

discovered to contain radioactive material. He believes he was from Saint Joachim's Valley, what is now present-day Jachymov:

> *I was in a deep dark hole beneath the soil,* he reportedly said. *But one day, someone dug me out, and I was brought into the light… I was dug out of the ground with the silver, then discarded. I was merely a shiny black stone, after all. Soon, I was the only stone that emerged anymore, no silver, just me: shiny, black, worthless… They began to despise me, call me* pitchblende. *Accursed stone. Accursed.* (Kobayashi 63-64)

In this passage Kennichi speaks as if he is the accursed stone that was mined for radioactive materials decades before. He, alongside other Trinities, becomes a vessel for nuclear history, and a voice for the suffering the stones continue to experience. The stones speak of rejection by the human miners, of not being as valuable as the silver that was mined alongside it, and of now being considered dangerous due to safety protocols around radioactive materials that did not exist when radium was first discovered. Their purpose in spreading the Trinity disease is to make their suffering known and to get revenge. A common phrase that is voiced by the Trinities and is also the phrase quoted at the beginning of this chapter, is "This is the beginning of the revenge of the invisible" (Kobayashi 69). The stones seek to make their histories known and refuse the continuation of their silence. Their need to voice their pain can be read as irradiated land fighting back against the humans who destroyed it.

While the stones are tethered to the human bodies they meld with, they also possess agency and consciousness on their own, conveying feelings of worthlessness and being able to retain and access memories. As stones, they are not restricted to human mortality and possess the memories of the harm done to the land from which they were mined, which I read as commentary on the environmental harm caused by nuclear colonialism. I also read this fusion of human and stone as a queering of *hibakusha* subjectivities. Kiyoko Himeno and Kennichi Tani are both examples of a hybrid human form: they maintain their human form; however, their

actions and memories are flooded by the will of the stones. One way to approach this fusion is by examining it as a queering of *hibakusha* visibility and how it confronts the discriminatory history attached to irradiated bodies. By making the elderly Trinities servants to the accursed stones, Kobayashi is displaying how *hibakusha* bodies have been marginalized, and how elderly bodies have been forgotten. That is, the Trinities highlight how *hibakusha* bodies are turned into spectacles while facing simultaneous exclusion due to visible and invisible radiation poisoning. We examined how these bodies were televised, however, the stones add an additional dimension by transforming their bodies into a nonhuman vessel. By creating a figure that is behaving in uniform with other Trinities, without a will of their own, and is dominated by their disease, I suggest that histories of discrimination against *hibakusha* identities are being revealed.

To continue this discussion of bodies, I investigate the role of nonreproductive futurity in the novel. Scenes of menstruation and sexuality occur often with the mother, bringing to question the role of reproduction. Given the cyclicality of the novel examined in an earlier section and its implications for the future, I place reproduction in conversation with futurity. Sarah Ensor's article "Spinster Ecology: Rachel Carson, Sarah Orne Jewett, and Nonreproductive Futurity" examines the figure of the spinster through a queer ecocritical lens. She writes about the spinster woman that "She *becomes* a spinster only once it has been determined that she likely has no marriageable future; when that happens, however, she also comes to have no past—or at least no past in which a future, or the desire for one, ever existed" (Ensor 414). She writes further that "... the spinster aunt challenges the notion of the future as a readily reachable and readily identifiable realm out there, as an entity that can straightforwardly appear and arrive" (Ensor 417).

It is useful to contextualize the mother of the novel within the spinster figure and examine the role reproduction plays within her identity and her orientation towards the future. In

one particular scene as the mother finishes up in the bathroom, she has a visceral reaction to her menstrual blood: “Looking down at it, I saw myself in the blood-drenched eggs my ovaries had created just to shed, saw my day-to-day life, my existence itself, as so much empty waste, flowing forth to be flushed away, to disappear completely, meaninglessly, creating nothing, being nothing” (Kobayashi 34). Here the mother projects her own internal world onto the menstrual blood, seeing her own existence as comparably meaningless to the shed eggs. Having such a despondent outlook on her own existence, the menstrual blood comes to symbolize the mother’s relationship with her own reproductive body. The eggs are nothingness to her, not even the beginnings of potential future life. Instead, futurity is conferred to the future generations to come: “I imagined the single thread connecting me to my daughter and her daughter and to all the daughters to come, a thread connecting the past to the future that bound us together...” (Kobayashi 34). Her past and future are populated through daughters, not sons, queering the dominance of paternal lines within Japan. I consider this a nonreproductive futurity in that it rejects heteronormative, nuclear family formations and imagines a future realm populated by women and girls, completely absent of men. However, what is or is not being produced must be clarified as the mother has produced children, and we know that her daughter goes on to produce children as well. I suggest that the novel creates a multifaceted space in which reproduction and nonreproduction must be imagined in alternative ways. The futurity that the novel presents is rooted in a cyclicality of girls and women, of menstruation, and of nuclear violence. I argue, however, that the futurity of this cyclicality is inherently nonreproductive in that it repeats these cycles over and over and imagines a relationship to reproduction outside of nuclear family formations and patriarchal structures. The notion of futurity is subverted through a redefined reproductive narrative, which, when connected with histories of radiation poisoning, negotiates

with reproduction and childbirth within irradiated bodies. The bodies of the women in this narrative can produce children, removing the stigma attached to bodies associated with radiation. The cycle of the novel mimics the cycle of menstruation and reproduction, and as nuclear legacies linger in the background, the novel creates an alternative vision for nuclear history outside of colonial structures. The cycle is not necessarily portrayed as something productive; I suggest that the narrative is pointing towards the dangers of the cycle, however, it also redefines how families and women exist within a nuclear future. If nuclearism still exists, in Kobayashi's world, it will be one populated by generations of women.

Queer Hacking Trinity

Cyberspace in the form of livestreams, social media, cybersex websites, and blogging structure the narrative in *Trinity, Trinity, Trinity*, and they serve as, to borrow a term from Paul Preciado and Allegro Wang, a *hacking* of cyberspace, transforming it into a realm that disrupts nuclear narratives. "Gender hacking" is a term coined by Paul Preciado in *Testo Junkie* that looks at the use of hormones as a hacking of gender and sexual binaries. Allegro Wang in their article "(Im)possible Futures: Gender Hacking as Queer and Racial Futurity" introduces the term queer hacking within their analysis of Preciado, expanding the interpretation and usage of the original term. Wang defines hacking as "a tactic of subversion, a counterpoint to how the state and other institutions of power code social, political, and economic norms into society" (Wang 306). Coding here refers to systems of oppression as well as how bodies and identity are coded in relation to these systems. Wang views queer hacking as a form of resistance and a form of community-making, writing: "Queer hacking… situates the disruption of social codes in relation to the creation of micropolitical spheres of community and autonomy external to the Western sociopolitical landscapes…" (Wang 317).

Applying this concept of queer hacking to *Trinity, Trinity, Trinity,* we can look to the cybersex website Trinity as a coded point of analysis. Trinity is a cybersex site that the mother frequents throughout the novel, interacting with a user named Cerberus with whom she has an online sexual relationship. Trinity is differentiated from other cybersex websites "that add all sorts of things– photos, videos, voice-enabled communication..." and so on, emphasizing that "Trinity's special quality was its avoidance of those things. There was nothing besides the chat…" (Kobayashi 30). There are explicit sex scenes where the novel provides the chat logs of the mother's sexting with Cerberus. The site allows the mother to express her sexuality without judgment, as the only communication the site allows is through text. Behind the chat logs the mother can remain faceless as she negotiates with her own aging body:

> With other guys I'd been chatting with, they'd been the ones intent on meeting as soon as possible, but when it came time to actually do it, they'd suddenly send a rude message like *How could I get it up for an old lady like you?* And break off contact... I'd certainly never considered myself an "old lady"-- an elderly woman!-- before. (Kobayashi 33)

For the mother, her sexual experiences as a woman have been marked by hypercriticism around her body, but the Trinity site provides her with a sense of anonymity that removes social pressures and beauty standards from her pleasure. She says of Cerberus that "I didn't care what he might look like. He could be fat or bald or even old—it didn't matter at all" (Kobayashi 33). The anonymity of the Trinity site removes a focus on bodies, which I suggest criticizes the hyperfocus placed on irradiated bodies. By being a face behind a screen, *hibakusha* identities can be defined outside of the bodily harm of radiation poisoning. Given the historical exclusion of *hibakusha* women from realms of marriage and family, the Trinity site is powerful in providing a space for women's sexuality and pleasure outside of bodily appearances, functions, or social pressures to reproduce.

Using Trinity as a name for this cybersex website serves as a queer hacking of nuclear narratives, stripping the name Trinity from its nuclear connections and transforming it into a site for a woman's pleasure and sexuality. We can read the site as decentering male domination of nuclear spaces and centering the mother who not only uses the cybersex site of Trinity, but uses the term as a path towards answers about her own deteriorating mother in a scene where she uses the internet to decipher whether her own mother is becoming a Trinity:

> I entered the characters into the window again and again like the words of a prayer. *Trinity, Trinity, Trinity*. In Christianity, there are the three divine persons of God: Father, Son, and Holy Ghost. But Google was no God and offered me no solace for my troubles. *Trinity*. The name of the testing site at White Sands, New Mexico, where the first nuclear bomb was detonated. *Trinity*. And then, finally, after traveling the internet looking at all these different Trinities, I found myself looking at one in particular. A cybersex site. *Trinity*. (Kobayashi 111)

Here we see Trinity mapped out onto cyberspace in its various iterations that the mother can travel between. Trinity is transformed outside of its fixed nuclear narrative of progress and victory and becomes a multi-referential site within cyberspace that complicates who and what is remembered within nuclear legacies.

There is an additional layer of queer hacking within the cyberworld when a twist at the end of the novel reveals that the mother's daughter was Cerberus all along. I am reading the deviance of this plot point as the legacy of Trinity continuing to destabilize generations of families. While the bombing at the Trinity site happened nearly a century ago, the event has propelled society into relying on nuclear technology in the name of progress which has created devastating circumstances for those exposed to radiation. The mother finding out that not only was her daughter on a cybersex website, but that the person the mother was having a sexual relationship with was her daughter all along, all under the name of Trinity, points to the inescapable harm caused by nuclear legacies. The mother believed she knew her daughter, but

Trinity transforms their relationship into a deviant, incestuous one, tainting the kinship tie she had to her.

A blogging website is an additional cyberspace that complicates how nuclear legacies are remembered. A blog written by a user named Re: is frequented by the mother in the novel. However, the blog becomes a space of public outrage after Re:'s grandmother is revealed to be Kiyoko Himeno, the Trinity patient who attempted to break into the Fukushima Daiichi Nuclear Power Plant, who the public named the Radium Princess. The interface of Re:'s blog is filled with stars and emotes and the tone of her writing is bubbly and personable. Her appearance is also hyper-feminine, "wearing a puff-sleeved blouse patterned with stars and a black miniskirt" also wearing "a neon-pink band in her hair" (Kobayashi 116). She uses her blog as a space to document her experiences and art, one post relaying her visit to the Fukushima plant where she was fascinated by the landscape. Her narration of the cafeteria, for instance, is written in an excitable tone: "We ate our lunch all together in the prefab building's cafeteria. The building was where the workers decommissioning the nuclear facility took their breaks, so there were always lots of people there. ♡ There were so many young handsome guys ♡" (Kobayashi 90). While Re:'s tone can indicate a dismissal of or even ignorance towards the severity of the situation at the nuclear facility, I am reading her recognition of the factory workers as handsome as queering the nuclear narratives that deem nuclear clean-up laborers as invisible. Here Re: not only notices their presence but views them as desirable, creating a queer and anti-nuclear rejection of hegemonic nuclear narratives.

Re:'s fascination with the landscape of Fukushima and the Forest of Wild Birds leads her to post a series of artworks that she calls *Landscape 1F.* The Forest of Wild Birds, or *yachō no mori,* refers to what used to be a thriving natural space around the Fukushima Daiichi nuclear

plant. After the 3/11 meltdown, however, the plant life had to be cut down and cemented due to processes of decontamination. The artwork made by Re: in the novel refers to the artwork created by Kobayashi Erika in which she covered up a series of paintings of plant life found in the Forest of Wild Birds with silver paint and wrote the names of the plants on top. Re: explains that "All the things we saw– they really existed. And that we also saw them– that's also a fact. But I noticed something. I noticed that the one thing we didn't see was radiation" (Kobayashi 118). Re:, as well as Kobayashi, is making a powerful intervention into how nuclear narratives are remembered and how we engage with them. By posting them on her blog she transforms her corner of cyberspace into a space where nuclear legacies become visible. After browsing her paintings, the mother notices public comments on Re:'s blog calling her a "radiation idiot. A rad-iot!" (Kobayashi 117). The mother herself begins to feel disdain towards Re:, feeding into the aggressive public opinion that is forming around Trinities and anyone or anything associated with them. The aggressive cyber-bullying results in Re:'s real life apartment being burned down, killing an elderly couple that lived near her, and severely injuring Re: herself: "Bathed in flames, her skin was surely a mass of keloid scars– but still, she'd live on. Perhaps for years to come. This string of incidents– like the Olympics, like the World's Fair, like everything– would slide into the past, until there was no one left to remember them. But for now, Re: would live, her skin exposed, telling its story" (Kobayashi 138). Being compared to *hibakusha* who, like Re:, live with scars on their bodies, and are evidence of a nuclear past, Re: is labeled as a victim of nuclear colonialism. However, while the scars on her skin will tell her story as long as she lives, I argue that the queer corner of cyberspace that she created will outlive her and those who harmed her. Her hyper-feminine, sincere blog posts and innovative art pieces will continue to exist in an alternative temporal plane not dictated by human mortality. This queer hacking of cyberspace, of

bending its use to the user's will, speaks to how nuclear narratives can be mapped, documented, and engaged with in ways that aid us in understanding the legacies that nuclear colonialism has left, and continues to leave, behind.

Conclusion

"This is the beginning of the revenge of the invisible" is the collective cry connecting the Trinities as they grapple with their transformed bodies at the hands of the accursed stones. The notion that the revenge is only "the beginning" is a powerful statement that illuminates the ongoing violence enacted by nuclear colonialism. Cultural productions such as *Trinity, Trinity, Trinity* are unique in their discussions of nuclear legacies in both temporal and spatial contexts. I have examined the role of intergenerational kinship, nuclear bodies and nonreproductive futurity, and queer cyberspace as evidence of nuclear narratives as rewritten and redefined. Kobayashi's novel facilitates a global conversation around nuclear legacies, connecting the past to the present moment where nuclear technology continues to dominate our sociopolitical world. What began at the Trinity Site in 1945 has led to numerous nuclear disasters since, and those early years of nuclear testing have been debated as the beginning of a new geological age, the Anthropocene. Kobayashi successfully highlights the urgency of this issue as one that is global. By making these global connections the intricacies of these nuclear legacies become visible, making space for knowledge production that rejects Western nuclear modernity and provides alternative narratives that reveal the falsity of nuclear power.

Conclusion

From the River to the Sea, Palestine Will Be Free

In a video poem titled "Anointed" written by Kathy-Jetnil-Kijiner and directed by Dan Lin, Jetnil-Kijiner walks upon Runit Dome, a concrete shell located on Runit Island housing nuclear waste from US testing in the Marshall Islands. It is also known as "the tomb." She breathes remembrance and Marshallese stories into her poem as she directly addresses the island, reflecting on the loss that her people and land have experienced, asking "How shall we remember you? You were a whole island, once" (Jetnil-Kijiner 1:00-1:06). She walks upon the irradiated dome throughout the video, barefoot, her embodied physical connection to the dome an attempt at re/connection with the land. It can also be read as a political act of enacting an Indigenous kinship with the nuclear waste, committing to community and restoration and refusing Western history as the only narrative. In "The Pacific Proving Grounds and the Proliferation of Settler Environmentalism," Aimee Bahng examines this poem, writing, "...there can be healing to remember beyond death and to revisit the stories of life, especially as, in the context of nuclear imperialism, the act of remembering works against the strategies of erasure that structure settler environmentalism" (Bahng 62). As Jetnil-Kijiner stands upon this tomb, she concludes her poem with the following lines: "My belly is a crater empty of stories and answers. Only questions. Hard as concrete. Who gave them this power? Who anointed them with the power to burn?" (Jetnil-Kijiner 4:17-4:45). I quoted those last two lines at the start of the introduction to set a critical tone for the thesis, but upon further analysis there is an additional connection I would like to explore, and that is the religious connotation of the term "anointed" as well as the term "trinity."

The Trinity Site was named by J. Robert Oppenheimer after the poet John Donne, specifically referencing his poem "Batter my heart, three-person'd God," the title being the first line of the poem, and the line referring to the Holy Trinity. Additionally, he recited scripture from the Bhagavad Gita in a now famous recording after the detonation of the bomb at the Trinity Site: "Now I am become death, destroyer of worlds." The evocations of religion alongside the development of deadly nuclear weapons reflects an ethical and existential dilemma that, while spying in the background of nuclear development, was not enough to stop the United States from continuing its nuclear violence. In the chapters that I presented, I highlighted the transformation of the Trinity Site by both authors, Kobayashi in particular applying a range of meanings to the term trinity: as a cybersex site, as a disease, and as nuclear history. A connection that I did not make in the chapters, however, was the religious meaning behind the term. While Hayashi and Kobayashi do not present strong religious themes in their texts, a consideration of religion alongside queer analytics reveals another set of layers if placed in the historical context of white Christianity and settler colonialism.

In "Settler Colonialism, Ecology, and Environmental Injustice," Kyle Whyte explores how US settler colonialism undermined the interdependence of Indigenous communities. He defines interdependence as "... a sense of identity associated with the environment and a sense of responsibility to care for the environment" (Whyte 127). He cites patriarchy as a US settler colonial system that "involve low levels of society-wide trust and consent..." that reduce the "transferability of knowledge and skills" and where "diverse and nonbinary genders are denied opportunities to excel at their talents and gifts" (Whyte 133). He describes Anishinaabe traditions around gender roles as ones that "...do not emphasize a binary gender system, but rather embrace gender diversity and fluidity." Whyte further writes "...Anishinaabe and broader Algonquian

gender and kinship relationships for women as focused less around obligations confined to roles in patriarchal marriages and focused more around multifarious and diverse responsibilities..." (Whyte 128). The enforcement of gender binaries by white settler colonizers and white Christian ideals was a violent disruption of traditional Indigenous kinship that includes kinship with the land. To evoke a term like trinity, and a term like anointed, within texts that seek to not only engage with nuclear colonial histories, but to challenge the narratives they spin, is a queering of white Christian histories that are embroiled within white settler histories such as Manifest Destiny. While an analysis of religion was not included in the main chapters, I wanted to briefly suggest the potential of a religious analysis within an anti-nuclear space-time framework, and the layers that appear when placed in conversation with Hayashi and Kobayashi.

While a religious lens was not part of my chapter analyses, I argued for themes of gender, sexuality, futurity, and global connectivity, hoping to make clear how an anti-nuclear space-time framework can be applied to literary texts. Using a close reading method on *From Trinity to Trinity* by Hayashi Kyōko, and *Trinity, Trinity, Trinity* by Kobayashi Erika, I examined the queering by both authors of nuclear colonial histories. With a decolonization of American nuclear power in Chapter 2, to a broader analysis of Western nuclear power in Chapter 3, I hope to have readers arrive at this conclusion with a wide understanding of the nuclear colonial order as well as the threads that connect those affected by nuclear violence. I am not suggesting that we reject localized understandings of nuclear violence in favor of a broad perspective, but rather, I encourage a situation of localized contexts within broader conversations. As was discussed in the introduction alongside Elizabeth DeLoughrey's article on "The Myth of Isolates," isolation was a tactic used by the American military to justify the bombings in the Marshall Islands. To reject an ideology of isolation, and to strive for connectivity is a part of the process of

decolonizing nuclear knowledge. While my focus in this thesis was on Japanese literary texts, I do envision this framework as finding space within texts and other cultural productions outside of a Japanese context. As I stated before, I had several reasons for wanting to root this project within a Japanese context, one of the main ones being the queer intervention into Japanese literary studies. However, I can imagine this framework being applied to other forms of art within other regions. In fact, I do not want this framework to remain within a Japanese context. I believe it will be most useful to expand to other histories and other cultural productions. I also believe there are powerful connections that can be made between anti-nuclear and other environmental movements. There are also larger conversations to consider regarding settler colonial violence and Indigenous sovereignty that I believe are relevant to an anti-nuclear space-time reading. However, I also do not want to stretch the framework so broadly that it becomes difficult to understand its purpose. I would like to spend the next few sections exploring possible connections between anti-nuclear resistance and Palestinian liberation.

In *From the River to the Sea: Essays for a Free Palestine*, edited by Sai Englert, Michael Schatz, and Rosie Warren, and published in the final months of 2023 during the ongoing genocide in Gaza by the Zionist entity known as Israel, the term trinity is evoked as an explanatory model for the oppression of Palestinians. In their chapter titled "The enemy trinity," Jamie Allinson and Sai Englert introduce a Palestinian Marxist named Ghassan Kanafani, who, in the 1930's, marked three enemies as the powers behind the denial of Palestinian liberation: Western powers, local ruling classes, and the Zionist entity of Israel. This is what he labeled as "the enemy trinity," the term trinity once again being stripped of its religious connotations and being used to describe histories of violence. They write of Kanafani that "The 'enemy trinity,' Kanafani argued, was not only present in the 1930s but remained relevant in the 1970s" (Allison

and Englert 134). As we witness the genocide continuing to unfold today, the enemy trinity remains a relevant model, especially as the United States government, capitalist corporations, and American universities actively fund the weapons and technology that Israel uses to bomb Gaza. On April 29th, 2024, student organizers with Students for Justice in Palestine, the Working Committee of Grads for Palestine, UO Young Democratic Socialists, and the University of Oregon Jewish Voice for Peace created the Popular University for Gaza encampment in Memorial Quad here at the University of Oregon. This came as a response to the hundreds of encampments that students around the country and around the world began to organize on their campuses, as well as a response to the complicity of the University of Oregon in the ongoing genocide in Gaza.

Since October 7th, 2023, over 40,000 Palestinian people have been killed in the Gaza Strip, however an accurate number remains unclear given the number of bodies trapped under building rubble, and approximately 1.4 million people have been displaced. University students around the United States, as well as around the world, have organized a global movement of solidarity with Palestine, refusing to disperse their encampment on university property until their demands are met. These demands include divestment from the Israeli war machine, dissolving of academic relationships and programs with Israeli universities, denouncing the genocide, creating protections for Jewish, Muslim, Arab, and Palestinian students, as well as declaring amnesty for any student participating in the encampments and the protests and those who speak out in support of Palestine. University leadership across the country has taken a repressive, violent, and unethical approach to these encampments over the past few weeks, relying upon militarized police forces to remove, brutalize, and arrest participants, and refusing to meet the demands of the students, including universities such as UC Los Angeles, Columbia University, Emerson

College, the University of Virginia, the University of Minnesota, and UC San Diego to name a few. Since the encampments began, thousands of students have been arrested across American university campuses, and hundreds have faced additional academic disciplinary action in the form of suspension, expulsion, and eviction. On May 22nd, after twenty-five days of camping, the University of Oregon Popular University for Gaza camp and the administration reached an agreement due to the tireless efforts by camp organizers and faculty and staff allies. This agreement included a statement in support of a ceasefire by President Scholz, five full-ride scholarships to displaced Palestinian students from Gaza, an inter-institutional exchange partnership with Birzeit University in the West Bank, the creation of a Southwest Asian/North African Cultural Center on campus, ending contracts with Sabra hummus, amongst other agreements. Although the University of Oregon did not escalate circumstances with police presence, President Scholz and university administration weaponized anti-semitism as they repressed pro-Palestine speech and action on campus. This agreement is not the end of the fight at the University of Oregon, but is representative of the power of the people. "Who's university?!"

This movement, while protesting the ongoing genocide and the complicity of the United States government and American universities, is part of a larger movement for Palestinian liberation. The Nakba[6] in 1948 displaced hundreds of thousands of Palestinians and marked the creation of the state of Israel. For 76 years Israel has expanded its rule through state violence, pushing Palestinians into open-air prisons, only two territories now remaining: the Gaza Strip and the West Bank. Despite the 76-year time gap between 1948 and 2024, the Nakba is

6 In Arabic, nakba translates to catastrophe, and refers to the mass displacement of Palestinians and dispossession of land by Israeli state forces.

considered an ongoing process. In the introduction to *Light in Gaza: Writings Born of Fire*, Jehad Abusalim writes:

> For Palestinians, the Nakba is not just an event that occurred in the past; it is a process that continues to shape life in Palestine in general, and in Gaza in particular. The centrality of the Nakba to the Palestinian experience is not just about the commemoration of a tragic event from the past. It is about understanding how injustice and discrimination were produced between the Jordan River and the Mediterranean Sea, and how they continue today. (Abusalim 15)

I present this discussion of Palestinian history and liberation to capture and make visible the current encampment movement unfolding alongside the writing of this thesis, as well as to document the ongoing genocide of the Palestinian people that the University of Oregon funds. Although a connection between Palestinian liberation and anti-nuclear space-time may not seem like a logical one, I argue that there are relevant connections between anti-nuclear movements and Palestinian liberation movements, both of which are movements for Indigenous sovereignty. I situate this pairing within the knowledge that all universities in Gaza have been destroyed as of January 2024, the destruction of which the University of Oregon remains complicit despite the dedication to educational growth and values it purports to protect.

In the introduction I situated my use of an anti-nuclear space-time framework within the larger discourse of nuclear global violence. I also imagine this framework as related to broader, non-nuclear settler colonial violence, and would like to briefly attempt to make connections to other settler environmental contexts, to use Aimee Bahng's term. Her term, "settler environmentalism," refers to the racialized, settler colonial project of regulation, containment, exploitation, and extraction of land, which she uses to discuss the transformation of the Marshall Islands by the US government into a scientific laboratory. I view this term as a useful framework

through which to view global connectivity across movements, looking at the settler environmental abandonment of areas such as Flint, of Palestine, and of the Marshall Islands.

A common phrase that is shared amongst liberation movements is "No one is free until everyone is free." An anti-nuclear movement, I argue, cannot be separated from Palestinian liberation or any other global liberation struggle. I have shown how two authors, Hayashi Kyōko and Kobayashi Erika, embodied this framework, and pointed us towards a global, connected perspective of nuclear violence. In *From Trinity to Trinity*, Hayashi forges connections with the New Mexican landscapes, populating the terrain with nuclear remembrance. She puts in conversation American nuclear history with Japanese nuclear history, beginning a transnational connection that Kobayashi's work then builds upon. Kobayashi connects not only places but times, setting on the temporal plane of the novel nuclear events from across history, such as the discovery of radium, the bombing at the Trinity Site, and the Fukushima nuclear meltdown. I would like to push these illuminating interventions made by both authors a step further and envision how this framework can be connected to larger contexts of settler colonial violence. Settler colonialism is a project of erasure enacted through state violence, sanctioned by hegemonic structures of power, and headed by political and economic colonial empires. We see these projects manifest through nuclear waste dumping on Indigenous lands, through the neglect of cities such as Flint, Michigan, and the genocide of Palestinians in Gaza. In "Flint, Environmental Racism, and Racial Capitalism," Laura Pulido marks the poisoning of water in Flint, Michigan as both a project of environmental racism and racial capitalism. She uses the term "politics of abandonment" to clarify that "The decision to neglect infrastructure so that it becomes toxic must be seen as a form of violence against those who are considered disposable" (Pulido 5). Despite there also being white residents within Flint, the abandonment of the town,

Pulido asserts, is because "...the entire city is racialized as Black" (Pulido 2). In the introduction of this thesis, I quoted a few stanzas from the poem "History Project" by Kathy Jetnil-Kijiner. In this same poem, Jetnil-Kijiner writes:

> I weave through book after article after website
> all on how the U.S. military once used
> my island home
> for nuclear testing
> I sift through political jargon
> tables of nuclear weapons
> with names like Operation Bravo
> crossroads
> and Ivy
> quotes from american leaders like
>
> *90,000 people are out there. Who*
> *gives a damn?*
>
> (Jetnil-Kijiner 20)

Just as Flint residents were disposed of by city officials, Marshallese communities were considered disposable by the American government, which allowed them to enact their nuclear violence. To them, nobody would have cared. The islands were racialized as "uncivilized." As discussed earlier in this conclusion, nuclear waste lives and leaks under a cracking dome within the Marshall Islands, abandoned there by the United States government. Many areas of the Marshall Islands remain highly radioactive and will be for centuries to come, with little to no redress for Marshallese communities. With lack of access to food, water, shelter, and medicine, people in Gaza are currently facing an extreme humanitarian crisis that has erased family lines and decimated the land, the endless bombings causing irreparable damage to the soil, to water, and to agricultural infrastructure. As human lives continue to be violently extinguished in Gaza,

the land itself continues to be stripped of its memory, and of its vitality, the generations to come, not yet born, future inheritors of this genocide. As Palestinians are Indigenous to the land that is now occupied by Israel, there is an environmental kinship that must be considered when reflecting upon the degree of loss being experienced in Palestine today. We see the ways in which governments and educational institutions continue to abandon the people in Gaza, but we also see the ways in which people continue to fight in solidarity with Gaza. Anti-nuclear space-time, while focused on anti-nuclear resistance, cannot be disentangled from Palestinian liberation, from Marshallese liberation, or from justice for Black residents in Flint. Each of these areas is structured by both settler environmentalism and politics of abandonment. To remember these places, to connect them, to envision solidarity between them challenges the colonial ideology of isolation. No one is free until everyone is free. In honor of Refaat Alareer and his family, whom the formerly named Johnson Hall was dedicated to during the UO encampment, now known as Alareer Hall, I conclude with his poem "If I must die" posted to his social media before his murder by the Zionist entity in December 2023:

> If I must die
> you must live
> to tell my story
> to sell my things
> to buy a piece of cloth
> and some strings,
> (make it white with a long tail)
> so that a child, somewhere in Gaza
> while looking heaven in the eye
> awaiting his dad who left in a blaze–
> and bid no one farewell

not even to his flesh

not even to himself–

sees the kite, my kite you made, flying up

above

and thinks for a moment an angel is there

bringing back love

If I must die

let it bring hope

let it be a tale

References

Chapter One

Avenell, Simon. “Pacific Solidarity and Atomic Aggression.” *Transnational Japan in the Global Environmental Movement*, University of Hawai’i Press, 2017, pp. 148–76. *JSTOR*, http://www.jstor.org/stable/j.ctt1wn0qwk.10.

Bakhtin, M. M. (Mikhail Mikhaĭlovich), and Michael Holquist. *The Dialogic Imagination: Four Essays*. 1st ed., University of Texas Press, 1981.

Bensaude-Vincent, Bernadette. “Framing a Nuclear Order of Time.” *Living in a Nuclear World: From Fukushima to Hiroshima,* edited by Bernadette Bensaude-Vincent, Soraya Boudia, and Kyoko Sato. Routledge, 2022. pp. 261-278.

DeLoughrey, Elizabeth M. “The Myth of Isolates: Ecosystem Ecologies in the Nuclear Pacific.” *Cultural Geographies*, vol. 20, no. 2, 2013, pp. 167–84, https://doi.org/10.1177/1474474012463664.

Hauʻofa, Epeli. “Our Sea of Islands.” *Lagoonscapes*, vol. 3, no. 2, 2023, https://www.jstor.org/stable/23701593.

Hayashi, Kyōko, and Eiko Otake. *From Trinity to Trinity*. Station Hill of Barrytown, 2010.

Jetñil-Kijiner, Kathy. “Dear Matafele Peinam.” *Iep Jāltok: Poems from a Marshallese Daughter*. The University of Arizona Press, 2017, pp. 70-73.

Jetñil-Kijiner, Kathy. “History Project.” *Iep Jāltok: Poems from a Marshallese Daughter*. The University of Arizona Press, 2017, pp. 20-23.

Johnston, Barbara Rose. “Nuclear Disaster: The Marshall Islands Experience and Lessons for a Post-Fukushima World.” *Global Ecologies and the Environmental Humanities:Postcolonial Approaches,* edited by Elizabeth DeLoughrey, et al. Routledge, Taylor & Francis Group, 2015, pp. 140-161

Keown, Michelle. “Waves of Destruction: Nuclear Imperialism and Anti-Nuclear Protest in the Indigenous Literatures of the Pacific.” *Journal of Postcolonial Writing*, vol. 54, no. 5, 2018, pp. 585–600, https://doi.org/10.1080/17449855.2018.1538660.

Kobayashi, Erika. *Trinity Trinity Trinity A Novel*. Translated by Brian Bergstrom, First edition, Astra House, 2022.

Kolbert, Elizabeth. "The Anthropocene Debate: Marking Humanity's Impact." *Yale Environment 360*, 17 May 2010, https://e360.yale.edu/features/the_anthropocene_debate__marking_humanitys_impact.

Pegues, Juliana. *Space-Time Colonialism: Alaska's Indigenous and Asian Entanglements*. The University of North Carolina Press, 2021.

Salesa, Damon. "The Pacific in Indigenous Time." *Pacific Histories: Ocean, Land, People,* edited by David Armitage and Alison Bashford. Palgrave Macmillan, 2014. pp. 31-52.

Seymour, Nicole. "Queer Ecology." *Companion to Environmental Studies,* edited by Noel Castree, et al., Routledge, 2018. pp. 448-453.

Vincent, J. Keith. "Queer Reading and Modern Japanese Literature." *Routledge Handbook of Modern Japanese Literature*, Routledge, 2016, pp. 69–81, https://doi.org/10.4324/9781315762210-13.

Chapter Two

Alaimo, Stacy, and Susan J. Hekman."Trans-corporeal Feminisms and the Ethical Space of Nature," *Material Feminisms*. Indiana University Press, 2008, pp. 237-264.

Beck, John. "Without Form and Void: The American Desert as Trope and Terrain." *Nepantla*, vol. 2, no. 1, 2001, pp. 63–83.

Hayashi, Kyōko, and Eiko Otake. *From Trinity to Trinity*. Station Hill of Barrytown, 2010.

Jacobs, Robert A. *Nuclear Bodies: The Global Hibakusha*. Yale University Press, 2022.

Jacobs, Robert. "Reconstructing the Perpetrator's Soul by Reconstructing the Victim's Body: The Portrayal of the 'Hiroshima Maidens' by the Mainstream Media in the United States." *Intersections (Perth, W.A.)*, vol. 24, no. 24, 2010, p. 31–.

Kuletz, Valerie. *The Tainted Desert: Environmental Ruin in the American West*. Routledge, 1998.

Nakamura, Masako. "'Miss Atom Bomb' Contests in Nagasaki and Nevada: The Politics of Beauty, Memory, and the Cold War." *U.S.-Japan Women's Journal (2003)*, no. 37, 2009, pp. 117–43.

Chapter 3

Ensor, Sarah. "Spinster Ecology: Rachel Carson, Sarah Orne Jewett, and Nonreproductive Futurity." *American Literature*, vol. 84, no. 2, 2012, pp. 409–35, https://doi.org/10.1215/00029831-1587395.

Holloway, Susan D. *Women and Family in Contemporary Japan.* Cambridge University Press, 2010.

Kobayashi, Erika. *Sunrise: Radiant Stories*. Translated by Brian Bergstrom, First edition., Astra House, 2023.

Kobayashi, Erika. *Trinity, Trinity, Trinity: A Novel*. Translated by Brian Bergstrom, First edition., Astra House, 2022.

Krupar, Shiloh R. "Transnatural Ethics: Revisiting the Nuclear Cleanup of Rocky Flats, CO, through the Queer Ecology of Nuclia Waste." *Cultural Geographies*, vol. 19, no. 3, 2012, pp. 303–27, https://doi.org/10.1177/1474474011433756.

Miyamoto, Yuki. "Gendered Bodies in Tokusatsu: Monsters and Aliens as the Atomic Bomb Victims." *Journal of Popular Culture*, vol. 49, no. 5, 2016, pp. 1086–106, https://doi.org/10.1111/jpcu.12467.

Shizuko, Koyama. *Ryosai Kenbo the Educational Ideal of "Good Wife, Wise Mother" in Modern Japan*. Brill, 2013.

Wang, Allegro. "(Im)possible Futures: Gender Hacking as Queer and Racial Futurity." *GLQ: A Journal of Lesbian and Gay Studies*, vol. 29 no. 3, 2023, p. 305-327. *Project MUSE* muse.jhu.edu/article/901759.

Conclusion

Abusalim, Jehad, et al., editors. *Light in Gaza: Writings Born of Fire*. Haymarket Books, 2022.

Allinson, Jamie and Sai Englert. "The empty trinity." edited by Sai Englert, Michael Schatz, and Rosie Warren. *From the River to the Sea: Essays for a Free Palestine*. Verso Books and Haymarket Books, 2023, pp. 134-146.

Bahng, Aimee. "The Pacific Proving Grounds and the Proliferation of Settler Environmentalism." *Journal of Transnational American Studies*, vol. 11, no. 2, 2020, https://doi.org/10.5070/T8112049580.

Jetñil-Kijiner, Kathy. "Anointed (w/ Subtitles) - by Dan Lin & Kathy Jetnil-Kijiner." *Youtube*, uploaded by Pacific Storytellers Cooperative, 15 April 2018, https://www.youtube.com/watch?v=hEVpExaY2Fs&t=59s&ab_channel=PacificStorytellersCooperative

Jetñil-Kijiner, Kathy. "History Project." *Iep Jāltok : Poems from a Marshallese Daughter*. The University of Arizona Press, 2017, pp. 20-23.

Pulido, Laura. "Flint, Environmental Racism, and Racial Capitalism." *Capitalism, Nature, Socialism*, vol. 27, no. 3, 2016, pp. 1–16, https://doi.org/10.1080/10455752.2016.1213013.

Whyte, Kyle. "Settler Colonialism, Ecology, and Environmental Injustice." *Environment and Society*, vol. 9, 2018, pp. 125–44. *JSTOR*, https://www.jstor.org/stable/26879582.