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Technologies of the Cold War Human:
Race, Science, and U.S. Militarism in Asia and the Pacific

A Dissertation submitted in partial satisfaction of the requirements
for the degree Doctor of Philosophy

in

Ethnic Studies

by

Keva X. Bui

Committee in charge:

Professor Shelley Streeby, Chair
Professor Erin Suzuki, Co-Chair
Professor Aimee Bahng
Professor Yen Le Espiritu
Professor Simeon Man
Professor Daphne Taylor-Garcia

2022

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The Dissertation of Keva X. Bui is approved, and it is acceptable in quality and form for publication on microfilm and electronically.

University of California San Diego

2022

Table of Contents

Dissertation Approval Page iii
List of Figures v
Acknowledgements vi
Vita xii
Abstract of the Dissertation xiii
Introduction: Racial Science and the Making of the Cold War Human 1
The Frontier of Containment 12
Towards a Cold War Racial Science 19
(Un)making the Archive of Cold War Science 30
Chapter 1: Terrains of the Experimental War 38
Structures of Forgetting in the Cold War 45
Yellow Rain and Cold War Knowledge-Making 52
More-than-Human Terrain 58
Experimental Poetics, Experimental War 67
Chapter 2: Nuclear Experiments in Racial Matter 75
Racial Matters of the Cold War Human 83
The Nuclear Corpus 95
Against a Universal Nuclearism 100
Chapter 3: Eugenic Ecologies of Chemical Warfare 109
Contextualizing Herbicidal Warfare 115
Constructing the "Weed" in Southeast Asia 118
Reproducing Life in a Contaminated World 128
Queer Ecological Relationalities in the Afterlives of War 136
Chapter 4: Infrastructures of Race in America's Napalm 147
"Back into the Stone Ages": Infrastructural Warfare in the Vietnam War 154
America's Napalm 163
Napalm's Stickiness and Other Sensations 170
Coda: Cold War Remains 182
References 189

LIST OF FIGURES

Figure 1.1: Scans from “Composition 4,” Mai Der Vang 53

Figure 1.2: “Please! / One Day the Soldiers Discovered,” Don Mee Choi 72

Figure 2.1: “Raining Warheads,” OEB Archives 83

Figure 2.2: “War is an autoimmune disease of humanity,” OEB Archives 101

Figure 2.3: *(See Reverse Side.)*, Jane Chang Mi 105

Figure 3.1: *Pure Land*, Dinh Q. Lê 131

Figure 3.2: Porcelain sculptures from *Pure Land*, Dinh Q. Lê 133

Figure 3.3: *Physicality*, Tuan Mami 136

Figure 3.4: *Immortality,* Binh Danh 138

Figure 3.5: *Let it grows up on,* Tuan Mami 140

Figure 4.1: *Bad Soda / Soft Drunk,* Nicolas Lobo 171

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Man's resolute commitment to demilitarization and abolition has inspired my work in so many ways, and I am forever grateful to have learned alongside him in charting pathways forward for our shared worlds and movements. And of course, special gratitude must go to Aimee Bahng, who, ever since I first met her in my undergraduate years at Dartmouth College, has never failed to model the type of scholar, teacher, activist, and person I aspire toward. She introduced me to the world of critical ethnic and feminist science studies, and always challenged my thinking in ways that prioritized intellectual rigor, political commitments, and an ethical desire to think alongside communities from which I come and whom I am in solidarity with. Her care and mentorship have always exceeded the boundaries of the university. In 2016, I wrote these words about Aimee—and they could never be truer: "Aimee Bahng holds such a special place in my heart. She is my mentor, my advisor, my role model, my idol, and most of all my inspiration. Before I met her, I was completely lost. I was struggling to find my place in the world, to find my path as a queer person of color struggling with Asian American identity. Her inspiration, her aura of brilliance, and her caring support changed my life. For the first time in my life, I had confidence in the person I am." Thank you, Aimee.

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ABSTRACT OF THE DISSERTATION

Technologies of the Cold War Human:
Race, Science, and U.S. Militarism in Asia and the Pacific

by

Keva X. Bui

Doctor of Philosophy in Ethnic Studies

University of California San Diego, 2022

Professor Shelley Streeby, Chair
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Technologies of the Cold War Human examines the scientific apparatus of the U.S. Cold War military-industrial complex as a racial-meaning making project that deploys race as the raw material of liberal capitalist securitization across Asia and the Pacific. As a global formation of interlocked material and ideological conflicts that binds multiple geographies and histories, the Cold War, I contend, is an episteme that defines the "human" as an abstract universalism predicated on the entwined expendability and malleability of Asian and Pacific

Islander life. Analyzing central case studies of the nuclear bomb, Agent Orange, and napalm, this dissertation argues that this dialectic of the Cold War human transforms Asian and Pacific Islander human and nonhuman bodies into malleable matter to be destroyed, and remade, in service of imperial expansion.

Through literary, visual, and historical analysis, this project revises how we approach the archive of Cold War military science by situating it within longer genealogies of U.S. racial science. I approach an array of cultural texts—including works by Quan Barry, Mai Der Vang, Don Mee Choi, Octavia E. Butler, Kathy Jetñil-Kijiner, Jane Chang Mi, Dinh Q. Le, and Ocean Vuong—as political critiques of war's imbrication within circuits of knowledge that consolidate racial meaning. While racial science has long been associated with its epistemological work in defining racial hierarchies through biological inferiority, this dissertation argues that Cold War science trafficks in race's utility in constructing both expendable and assimilable bodies in the consolidation of U.S. global capitalism. In a moment when fantasies of racial liberalism and decolonization across the United States, Asia, and the Pacific begin to take shape, I suggest that a reassessment of the conditions of Cold War science reveals racial logics that inhere across human, ecological, and molecular scales of militarization. In doing so, this dissertation charts U.S. militarism not only through its empire of bases and battlegrounds, but through material and metaphorical laboratories of race- and war-making that proliferate across zones of occupation and war in Asia and the Pacific.

INTRODUCTION: RACIAL SCIENCE AND THE MAKING OF THE COLD WAR HUMAN

> That time Tet fell in the year of the snake. As in reptilian. As in
> no turning back. As in when I became
> a child of containment. As in how like a monetary policy
>
> I was loosed to an existence feral as a raised bayonet. As in
> what the serpent might say: knowledge for knowledge's sake
> is both industrial and complex.
>
> —"Child of the Enemy," Quan Barry, *Asylum* (2001)

> It's hard for me to imagine curiosity as anything more than a
> pretext for colonialism.
>
> —Tommy Pico, *Nature Poem* (2017)

In her nine-part poem, "Child of the Enemy," Quan Barry muses on her ancestry as a child of a Black American soldier and Vietnamese civilian. The epigraph of the poem opens with a quote from an American veteran from who remarks on the "identity problems" of Amerasian children of U.S. soldiers and Vietnamese women, who proliferate streets of Vietnam as "prostitutes plying their mothers' trade."[1] Ascribing this ill-discipline as a "racial thing here, something genetic," the epigraph alludes to the dissonant convergence of racial mixture, a reproductive process borne from violence that inherently produces deviance. Confronting these histories of violence that comes to bear on racial mixture, "Child of the Enemy" reframes the category of "war baby," a moniker that Laura Kina and Wei Ming Dariotis describe as representations of "children at war, at war with themselves" that "symbolize the subjugation of Asian people to U.S. and European power."[2] Instead, representing the child of a Black U.S. soldier in contrast to the more commonplace representation of Amerasians as children of white

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[1] Quan Barry, *Asylum* (Pittsburgh, PA: University of Pittsburgh Press, 2001): 2; also see G.B. Tran, *Vietnamerica: A Family's Journey* (New York: Villard, 2001)
[2] Laura Kina and Wei Ming Dariotis, *War Baby / Love Child: Mixed Race Asian American Art* ed. Laura Kina and Wei Ming Dariotis (Seattle, WA: University of Washington Press, 2013), 12

soldiers, Barry's poetry ponders the intimate and global legacies of race and war that reflect the convergence of two expendable populations in the Vietnam War: Black men disproportionately positioned on the front lines of military battlegrounds and Vietnamese women oftentimes sexually violated and murdered on warring terrains.[3]

Describing the Amerasian subject as a child of both the "enemy" and "containment," the poem disrupts genealogical understandings of reproduction that privilege a teleology of genetic ancestry, instead emphasizing the *political* conditions of the poet's conception. In contrast to its etymology in the Latin transitive verb *continere*, or to "enclose," embedded in Cold War doctrines that sought to contain communist influence,[4] the poem mobilizes *containment* as a reproductive technology. Containment's putative focus on the figure of the *enemy*—the communist in need of eradication—belies the process by which containment also functions as an ideological process that also *produces* new subjects of U.S. empire, such as the poem's narrator in "an existence feral as a raised bayonet." Referencing a once-commonplace, but now seemingly archaic, weapon of war, the poem collapses the subject and weapon into an equivalence—one that reveals a network of material entanglements fashioned through an ideological apparatus of war oriented around "knowledge for knowledge's sake [as] both industrial and complex," a gesture toward the consolidation of the military-industrial complex in the post-World War II as a central site of race-making.

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[3] For a pre-Vietnam War history of Black men's conscription and enslavement into U.S. military interventions abroad, see Khary Oronde Polk, *Contagions of Empire: Scientific Racism, Sexuality, and Black Military Workers Abroad, 1898-1948* (Chapel Hill, NC: University of North Carolina Press, 2020). There has also been much scholarship detailing the gendered and sexualized violence of war, both in Vietnam and elsewhere, see Katherine H.S. Moon, *Sex Among Allies: Military Prostitution in U.S.-Korea Relations* (New York: Columbia University Press, 1997); Jin-kyung Lee, "Surrogate Military, Subimperialism, and Masculinity: South Korea in the Vietnam War, 1965-73," *positions: east asia cultures critique* 17, no. 3 (2009): 655-682; Le Ly Hayslip, *When Heaven and Earth Changed Places* (New York: Doubleday, 1989).
[4] For more on "containment" as an apparatus of U.S. Cold War foreign policy, see Christina Klein, *Cold War Orientalism: Asia in the Middlebrow Imagination, 1945-1961* (Berkeley, CA: University of California Press, 2003).

The closing entry in Barry's nine-part poem is titled "Napalm," an imaginative contemplation on the mutual constitution of the poet's raced body in conjunction with napalm, an infamous technology of militarized destruction used across U.S. wars in Asia and the Pacific, but most famously associated with the Vietnam War.

> I have come to realize the body is its own pyre, that degree
> rises from within, the fatty acids a kind of kindling.
> Like a scientist in a lab, this much I have established, blood jelled
> like gasoline, the years spread before me like a map
> pinned with targets, where I'm raging even now.
> It works both ways. Clear the forests to see your enemies
> and your enemies see you clearly.
> Like all effective incendiaries,
> I won't only bloom where I'm planted.[5]

As with the rest of the poem, Barry employs the lyric "I" to conjoin her own subjectivity with napalm's objecthood, coalescing the two phenomena into simultaneity. Her body melds with the gelled incendiary that set Asia ablaze throughout much of the Cold War, a destructive fire characterized by both its destruction as it "clear[s] the forests" as well as its promiscuous creation of conditions of new, largely capitalist, conditions of life where it "bloom[s]." Poignantly, Barry again connects her own conception in the violence of warfare to the development of technologies of warfare in the space of the laboratory, where, just as napalm gel consolidated its viscous structure, her blood mixture consolidates her racial subjectivity. Napalm, like many other technologies of war, emerges out of a military laboratory working in concert with the establishment of the military-industrial complex, wherein the championing of scientific freedom for the intellectual pursuit of "pure" knowledge facilitated military occupation and intervention in the Global South. As Barry demonstrates, these laboratories produce not only

[5] Barry, *Asylum*, 13

technologies of warfare, but also the industrial manufacturing of race as a product of political and ideological conditions at the heart of Cold War militarism.

Technologies of the Cold War Human situates the scientific apparatus of the U.S. war machine as a *racial-meaning making project*, one that deploys race as the very raw material of liberal capitalist securitization across Asia and the Pacific. As Sunny Xiang argues, we often take for granted war's meaning, as the intuitive understanding of war as a singular event with a defined start and end point replete with physical violence fails to capture the totality of war's perpetual presence.[6] Particularly since the end of World War II, war has increasingly occupied a structural, more mundane position within society—a condition of "total war," wherein "*all* significant sectors of society are mobilized for the purposes of defending a nation."[7] Asian Americanist investigations of U.S. militarism have powerfully examined a range of processes embedded in the total war state, from military labor infrastructures[8] and tourist economies[9] to humanitarian refugee passages[10] and postwar memory work.[11] Drawing from Kuan-Hsing Chen's conceptual framework of "de-cold war," which describes the anti-colonial and anti-

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[6] See Sunny Xiang, *Tonal Intelligence: The Aesthetics of Asian Inscrutability During the Long Cold War* (New York: Columbia University Press, 2020)
[7] Jennifer Terry, *Attachments to War: Biomedical Logics and Violence in Twenty-First Century America* (Durham, NC: Duke University Press, 2017): 30 (emphasis mine)
[8] See Simeon Man, *Soldiering Through Empire: Race and the Making of the Decolonizing Pacific* (Berkeley, CA: University of California Press, 2018); Man, Paik, and Pappademos, "Violent Entanglements: Militarism and Capitalism"; and Patrick Chung, "From Korea to Vietnam: Local Labor, Multinational Capital, and the Evolution of US Military Logistics, 1950-97," *Radical History Review*, no. 133 (2019): 31-55
[9] See Vernadette Vicuña Gonzalez, *Securing Paradise: Tourism and Militarism in Hawai'i and the Philippines* (Durham, NC: Duke Univeristy Press, 2013); Teresia K. Teaiwa, "bikinies and other s/pacific n/oceans," *The Contemporary Pacific* 6, no. 1 (1994): 87-109; and Michelle N. Huang, "Matériel Culture: The Militourist Aesthetic of Mary McCarthy's Vietnam War Reportage," *Contemporary Literature* 61, no. 2 (2020): 162-193
[10] See Yen Le Espiritu, *Body Counts: The Vietnam War and Militarized Refugees* (Berkeley, CA: University of California Press, 2014); Mimi Thi Nguyen, *The Gift of Freedom: War, Debt, and Other Refugee Passages* (Durham, NC: Duke University Press, 2012); Evyn Le Espiritu Gandhi, *Archipelago of Resettlement: Vietnamese Refugee Settlers and Decolonization across Guam and Israel-Palestine* (Berkeley, CA: University of California Press, 2022); and Ma Vang, *History on the Run: Secrecy, Fugitivity, and Hmong Refugee Epistemologies* (Durham, NC: Duke University Press, 2021)
[11] Crystal Mun-hye Baik, *Reencounters: On the Korean War and Diasporic Memory Critique* (Philadelphia, PA: Temple University Press, 2019); Viet Thanh Nguyen, *Nothing Ever Dies: Vietnam and the Memory of War* (Cambridge, MA: Harvard University Press, 2017)

imperial movements to combat the epistemological and psychic effects of the Cold War, Xiang describes this robust body of scholarship as "de-cold war studies."[12] De-cold war studies, in this respect, tracks the multi-modal formations that the Cold War exerts within the fabric of social life; as Xiang writes, "waged at the scale of norms and values, the cold war, as a total war, was an effort to defend, define, and disseminate 'the American way of life'—to turn *war* into a whole arrangement of everyday habits, relationships, feelings, and institutions."[13] War, in this respect, functions in conjunction with *race*, inhering not merely in the prototypical arenas of the battlefield and human body, but in the social formations that perpetually surround us.

Building from Jodi Kim's assertion of the Cold War as not merely a historical period, but an "epistemology and production of knowledge,"[14] this dissertation takes particular interest in U.S. empire's concoction of what I call the "Cold War human." The Cold War human, I contend, functions as a racialized episteme that marks the expendability of Asian and Pacific Islander life as the precondition of scientific advancement and capitalist modernization in pursuit of establishing a universal humanity anchored in liberal progress. Seeking to uphold liberal democracy and global capitalism against the expansion of communism, the Cold War geopolitical order, as Jodi Melamed attests, reconfigures racial capitalism under a liberal regime, tethering racial justice to "the growth and development of U.S.-led transnational capitalist development, or, in period parlance, 'the victory of the free world.'"[15] Thus, coalescing liberalism's fixation on abstract notions of individual rights and freedoms and racial capitalism's exploitation of racial, gender, and national difference in the generation of economic surplus and

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[12] Xiang, *Tonal Intelligence*, 15-16; Also see Kuan-Hsing Chen, *Asia as Method: Toward Deimperialization* (Durham, NC: Duke University Press, 2010)
[13] Xiang, *Tonal Intelligence*, 4
[14] Jodi Kim, *Ends of Empire: Asian American Critique and the Cold War* (Minneapolis, MN: University of Minnesota Press, 2010), 3
[15] Jodi Melamed, *Represent and Destroy: Rationalizing Violence in the New Racial Capitalism* (Minneapolis, MN: University of Minnesota Press, 2011), 55

land extraction,[16] the Cold War logic of liberal capitalism materializes through the militarized securitization of Asia and the Pacific. In this sense, capitalist development and liberal democratic freedoms become entwined in the U.S. imperial vision for a decolonizing Asia and the Pacific after the dismantling of Japanese empire at the end of World War II, as the U.S. expressed a belief in a "free Asia for Asians," with freedom indexing the securitization of Asia against communist expansion.[17] Mired within controversies highlighting the injustices of formal colonialism exhibited previous iterations of Japanese colonial rule in Asia and the Pacific, the U.S. post-World War II imperial project involved ideological and economic enmeshments with the colonial metropole rather than formal occupation.[18] The Cold War racial calculus, then, amounted toward developing a strategy for incorporating Asia—and eventually, Asian Americans—into its informal empire amidst decolonization.

While race may not seem like the most salient category through which to understand the geopolitical ordering of the Cold War in Asia—a war that consisted of multiple civil wars wherein Asian subjects found themselves on both sides of the boundary between liberal capitalism and communism—Simeon Man argues that racial liberalism is undergirded by "an ongoing war against a new enemy, a communist menace that was also a racial menace."[19] The specter of communist expansion engendered new logics of racialization through which the Asiatic menace was funneled, wherein "'bad' Asians were the targets of seemingly endless war,

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[16] For a long historical context of liberalism's deep entanglements with racial capitalism and globalized circuits of economic power, see Lisa Lowe *The Intimacies of Four Continents* (Durham, NC: Duke University Press, 2015)
[17] See Man, *Soldiering through Empire*
[18] While this paradigm characterizes much of the imperial expansion of U.S. empire across Asia in particular, it is important to note that forms of military and colonial occupation were still central to different parts of U.S. projects of military expansion, particularly in sites of the Pacific such as Guam and Hawai'i.; see Ibid.; also, see Erin Suzuki, *Ocean Passages: Navigating Pacific Islander and Asian American Literatures* (Philadelphia, PA: Temple University Press, 2021)
[19] Man, *Soldiering through Empire*, 3

[and] the 'good' ones served a similarly utilitarian purpose…channeled into the military."[20] In this respect, the Cold War human is defined by *malleability*, which, at times, requires the expendability of racialized life that accrues value through its subjugation and death, while, at other times, racialized life is necessary to incorporate into the liberal human in order to demonstrate the inherent possibilities of freedom attached to capitalist regimes of racial liberalism. Indeed, while racialized life in arenas of war has often been characterized as collateral damage to index its sacrificial expendability in pursuit of larger ideological goals, *collateral* also gestures toward something pledged as security for the repayment of a loan or investment. In this respect, Asian and Pacific Islander life is *collateral life*, immanently disposable in the securitization of abstract ideals privileged over life itself, yet those who live remain necessary for securing liberal capitalism as a Cold War global economic and political system. Racialized life is expendable in the arena of war, but always possesses the capacity to be remade into the useful raw material of capitalist development and scientific innovation.

In theorizing the epistemological formation of the Cold War human, I argue for an engagement with Cold War military science within a longer genealogy of U.S. *racial science*, redefining the terms of race in an era of racial liberalism's desire for a "post-race" world. Scholars of critical race and feminist science studies such as Britt Rusert, Kyla Schuller, and Megan H. Glick have remarked on 19th century racial science's capacity to define raced bodies on the basis of a supposed lower-order of intelligence and impressibility, an incapacity to respond to the social order to ascend to civilized liberal humanity.[21] However, Cold War racial

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[20] Ibid.

[21] See Britt Rusert, *Fugitive Science: Empiricism and Freedom in Early African American Culture* (New York: New York University Press, 2017); Kyla Schuller, *The Biopolitics of Feeling: Race, Sex, and Science in the Nineteenth Century*; Megan H. Glick, *Infrahumanisms: Science, Culture, and the Making of Modern Non/personhood* (Durham, NC: Duke University Press, 2018)

science is organized around its capacity to define the *utility* of racialized life—human and nonhuman bodies—as the raw material of liberal capitalist securitization, terrain that can be destroyed, and *remade*, in service of imperial expansion. Scientific knowledge production, as it is carried out under the auspices of the military-industrial complex both in times of war and peace, functions as an *organizing logic* of race in the Cold War that reveals the imperial conditions undergirding the Cold War human. War transformed into a material site of knowledge production, as it was war itself that fueled the economic machinations of scientific innovation. These innovations gendered not merely the technologies of mass destruction discussed in this dissertation—such as the nuclear bomb, Agent Orange, and napalm—but also the very racial logics that consolidated Asian and Pacific Islander life as simultaneously expendable matter and assimilable subjects in the securitization of the universal liberal human. Drawing from feminist science studies and new materialist frameworks, I situate these technologies of warfare within a network of political agencies, taking seriously how "inanimate objects and nonhuman animals participate in the regimes of life (making live) and coerced death (killing)."[22] Scientific innovation is deeply conditioned by the geopolitical circumstances of its production, an entanglement of the military-industrial complex that imbues its technologies with the capacity to rewrite the logics of race as the U.S. war machine unfolds its power across Asia and the Pacific.[23]

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[22] Mel Chen, *Animacies: Biopolitics, Racial Mattering, and Queer Affect* (Durham, NC: Duke University Press, 2012), 6

[23] In a similar vein, Antoine Bousquet argues that the history of technoscientific warfare can be understood through four key machinic metaphors, new technologies that shift the global landscape of war itself: mechanistic warfare and the clock throughout the 17th and 18th centuries; thermodynamic warfare and the engine in the 19th century period of mass industrialization; cybernetic warfare and the computer in the Cold War era of information; and chaoplex warfare and the network in the contemporary moment of decentralized, anti-terror warfare. These "machinic metaphors" describe technologies that not only become central to the material operations of military tactics and strategies, but also orient how life in these eras become transformed through technological innovation. In other words, these technologies function as organizing epistemes of political life around methods of warfare. See Antoine

It is the very capacity for raced matter to enter the terrain of the liberal human that defines the flexibility of the Cold War human as an epistemological structure. In this respect, this dissertation draws from and advances a body of critical race and feminist scholarship invested in the relationships between a range of subjects and objects in a more-than-human world, emphasizing the urgency of tracking racial formations beyond the scale of the contained human body in developing a theory of the Cold War human. As Kyla Wazana Tompkins asserts, feminist new materialisms are concerned with material and more-than-human relationality, as the field is "interested in relations between things, objects, phenomena, materialities, and physical bodies, as well as the relations between those things (things with each other) and humans (humans with things)."[24] New materialist philosophy, though, has rightfully garnered critique for its oftentimes evacuation of critical analyses of race, gender, and imperialism in situating objects as material forms cleaved from these sociopolitical forces. However, I find utility in drawing from feminist and queer of color engagements with the field that both observe the "political ecology" of material objects, as well as attend to the conditions of animacy that are "shaped by what or who counts as human, and what or who does not."[25] As Heidi Amin-Hong and I write elsewhere, "the relation between matter and aesthetics [is] inherently political, charged with a material and affective force that reveals layers of compounded histories in soil, water, plants, and racialized human bodies."[26]

By charting the logics of race beyond the scale of the human, this dissertation analyzes racialization in a more-than-human landscape not merely as a process of *dehumanization* for

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Bousquet, *The Scientific War of Warfare: Order and Chaos on the Battlefields of Modernity* (London, UKK: Husrt, 2009)

[24] Kyla Wazana Tompkins, "On the Limits and Promise of New Materialist Philosophy," *Lateral* 5, no. 1 (2016)

[25] See Jane Bennet, *Vibrant Matter: A Political Ecology of Things* (Durham, NC: Duke University Press, 2010) and Mel Chen, *Animacies*, 30

[26] Heidi Amin-Hong and Keva X. Bui, "Materialities of Empire in a More-than-Human World," *Verge Studies in Global Asias* 8, no. 2 (forthcoming 2022): 65

local and native populations, but a mobilization of human/nonhuman interconnectedness into apparatuses of militarization.[27] Thus, the Cold War human offers a dialectical proposition to thinking about the hermeneutics of race; it tracks the material and epistemological scales through which racialized matter becomes inculcated into imperial regimes. Indeed, the advancement of what Christine Hong calls "lethal knowledge" hinges on the experimental expendability of racialized life across Asia and the Pacific, as "harnessed toward life that mattered, lives subjected to Cold War experimental predation were *sacrificial* lives."[28] Despite its supposed evacuation from the realm of politics, U.S. Cold War science nonetheless trafficked in a discourse of communist containment as a *universalized* structure of knowing, one that established the logics of liberalism as a universal condition of the human to be secured through the material disposability of racialized life across the Global South.

In developing this theory of the Cold War human, *Technologies of the Cold War Human* examines Asian/American[29] literature and culture as a mode of critique that unearths the narrative operations of race-making conceived in the ideological laboratory of the U.S. military-industrial complex. With its emphasis on formal and discursive analyses, Asian/American

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[27] In this respect, I draw from and build on the work of Zakiyyah Iman Jackson, who argues that the ontological construction of the "human" has been overdetermined in binary opposition to the construction of the "animal," to the extent that we fail to recognize that "race" and "species" are not separate demarcations but rather "have coevolved and are actually *mutually reinforcing* terms" (12). In this respect, "dehumanization" is not always a useful for metric for tracking racialization, because it tends to occlude the ways that race adopts flexible orientations. See Zakiyyah Iman Jackson, *Becoming Human: Matter and Meaning in an Antiblack World* (New York: New York University Press, 2020)

[28] Christine Hong, *A Violent Peace: Race, U.S. Militarism, and Cultures of Democratization in Cold War Asia and the Pacific* (Palo Alto, CA: Stanford University Press, 2020), 129

[29] Here, and throughout this dissertation, I utilize the term "Asian/American" following the work of David Palumbo-Liu, who argues that the slash "signals those instances in which a liaison between 'Asian' and 'American,' a sliding *over* between two seemingly separate terms, is constituted" (1). In this respect, rather than employ "Asian" as an adjectival modifier for the human subject "American," I utilize "Asian/American" to signal the mutual constitution of the two terms across transnational currents of racial-meaning making, logics consolidated through crossings of empire, militarism, and immigration that construct contemporary Asian/America as a historical and political formation. See David Palumbo-Liu, *Asian/American: Historical Crossings of a Racial Frontier* (Palo Alto, CA: Stanford University Press, 1999).

culture, according to Rachel Lee, exceeds the immutability of biologically essentialist definitions of race, "emphasizing biological personhood not as fixed or singular but as multiform and distributed across time spans and spatial ecologies."[30] Indeed, while Asian/American cultural studies has previously eschewed critical engagement with the *biological* as a fruitful terrain to theorize questions of citizenship, trauma, and exclusion that have long remained pertinent to the field, work by scholars such as Michelle N. Huang, Mel Chen, Aimee Bahng, Banu Subramaniam, and Karen Cardozo have powerfully examined how "Asian/America" coheres across dispersed ecologies of human and nonhuman denizens in deconstructing race as the subject of identity.[31] Thus, with its focus on what Kandice Chuh productively calls "subjectless critique,"[32] Asian/American culture possesses the capacity to unmask racial logics that emerge outside of putatively contained liberal subjectivity, and inhere in material and political relations amongst a range of subjects and objects. By analyzing the aesthetic strategies of Asian/American artists and writers and other Cold War political thinkers, this dissertation highlights the constructedness of Asian/America as racialized matter, a malleable form that both aids and resists the gravitational force of militarized expansion.

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[30] Rachel Lee, *The Exquisite Corpse of Asian America: Biopolitics, Biosociality, and Posthuman Ecologies* (New York: New York University Press, 2014), 15

[31] See Michelle N. Huang, "Ecologies of Entanglement in the Great Pacific Garbage Patch," *Journal of Asian American Studies* 20, no. 1 (2017): 95-117; Chen, *Animacies*; Aimee Bahng, *Migrant Futures: Decolonizing Speculation in Financial Times* (Durham, NC: Duke University Press, 2018); Karen Cardozo and Banu Subramaniam, "Assembling Asian/American Naturecultures: Orientalism and Invited Invasions," *Journal of Asian American Studies* 16, no. 1 (2013): 1-23. I am particularly drawn to Subramaniam and Cardozo's call to imagine Asian/America "as a multispecies formation transcending the animate world in a constantly (re)assembling global form" (3). As a touchstone for Asian Americanist inquiries into feminist science studies, this work reimagines the emphasis on the individual Asian human as the de facto subject of analysis in Asian/American studies, and treats race as an ecological form consistent of multiple distributed agencies and beings. Good note.

[32] Kandice Chuh describes "subjectless" as a "conceptual tool" that illuminates the "need to manufacture 'Asian American' situationally" (10). In other words, Chuh articulates the need for Asian Americanist inquiry to adopt methods of critique that does not privilege the Asian American "subject" as its preeminent figure, but instead think relationally in terms of how the "subject" is constructed vis-à-vis discourses, ideologies, and narrative structures of imperial and colonial power. Subjectless critique, in this regard, unsettles the fixity and essentialism of Asian American racial identity, arguing that it only coheres in the political conditions of its making. Kandice Chuh, *Imagine Otherwise: On Asian Americanist Critique* (Durham, NC: Duke University Press, 2003)

The Frontier of Containment

Gaining popularity after President Dwight D. Eisenhower warned of its potential consequences in his 1961 Farewell Address, the term *military-industrial complex* refers to the material and ideological entanglements between the U.S. military and defense industry, indexing a dangerous alliance between global capitalism and military imperialism.[33] These entanglements embolden one another, as the conjoinment of militarism and capitalism in the post-World War II era "generates a multitude of intricate relationships, where militarism avails its considerable resources to suppress anticapitalist movements globally, and where the military-industrial complex stabilizes capitalist activity."[34] This symbiotic relationship between two structures of global power sustains the U.S. imperial project of containing communist expansion in the Cold War era, as the postwar infrastructure of the military-industrial complex establishes a paradigm of militarization wherein participation in ongoing perpetual warfare fuels economic prosperity, and, in turn, militarism successfully functions *only* within the confines of capitalist and technological modernity.

Invoking "laboratories," "testing fields," "the free university," and the "captive power of "a scientific-technological elite," Eisenhower's warning is also a signal to the distributed agency of knowledge production within the military-industrial complex. No longer enthralled with the fantasy of individual brilliance, scientific knowledge production is characterized by *collaboration*—as, he notes, "Today, the solitary inventor, tinkering in his shop, has been overshadowed by task forces of scientists."[35] These scientists occupy networks of relation

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[33] It is also important to note that in early drafts of this speech, Eisenhower referred to the military-industrial-*academic* complex, highlighting the embroilment of the university within Cold War regimes of producing militarized knowledge and technologies.
[34] Simeon Man, A. Naomi Paik, and Melina Pappademos, "Violent Entanglements: Militarism and Capitalism," *Radical History Review*, no. 133 (2019): 1
[35] Dwight. D. Eisenhower, "Farewell Address" (1961)

between laboratories, universities, and industrial corporations buoyed by the ever-expanding resources of government investment in the military-industrial complex. Indeed, these resources displace intellectual "curiosity" as the driving force for scientific knowledge production, which, as Indigenous Kumeyaay poet Tommy Pico notes in the epigraph to this chapter, often serves as the pretext for colonial conquest. Thus, while curious exploration of the natural world drove early pioneering westward in projects of Manifest Destiny that sought to enclose all of Turtle Island within U.S. imperial governance, it is a new era of scientific exploration—defined by the age of the military-industrial complex—that coalesces colonial ventures abroad with the racial logics of containment in the interests of liberal capitalist securitization.

In 1946, diplomat George Kennan penned his famous "Long Telegram," a sensational account of the dangers of Soviet communist expansion that is considered a touchstone of President Harry S. Truman's doctrine of containment that characterized much of U.S. Cold War foreign policy. Divided into five core parts—context of postwar Soviet outlook, background of this outlook, its ramifications for policy at an *official* level, its enactments on an *unofficial* level, and practical solutions from the standpoint of U.S. foreign policy—Kennan's telegram articulates the dimensions of Soviet society beset with a "neurotic view of world affairs [and] traditional and instinctive Russian sense of insecurity."[36] As Jodi Kim argues, the "Long Telegram" should be read not merely as an authoritative historical document that *describes* Cold War foreign policy, but as an *epistemology* of Cold War geopolitical knowledge that conjures the Soviet Union as a racialized and gendered specter infected with "the historically persistent conjoined discourses of oriental primitivism and inscrutability."[37] Racializing Soviet communist

[36] George F. Kennan, "Long Telegram," in *Foreign Relations of the United States (FRUS), 1946, 696-709* (Washington D.C.: Government Printing Office, 1969)
[37] Kim, *Ends of Empire*, 43

expansion as itself an Asiatic form akin to the viral spread of infectious disease, the "Long Telegram" warns of the susceptibility of newly decolonizing "backward or dependent peoples" to "Communist Soviet penetration," employing a masculinist metaphor of sexual violence to describe the feminized mutability of Asian bodies in the face of the ideological spread of Soviet communism.[38] The global imaginary of containment as a military strategy of quelling communist expansion was closely aligned with what Christina Klein describes as a global imaginary of integration, wherein "relationships of 'cooperation' replaced those of conflict, 'mutuality' replaced enmity, and 'collective security,' 'common bonds,' and 'community' became the preferred terms for representing the relationship between the United States and the noncommunist world."[39] In Klein's description, integration facilitated a policy of relationality between U.S. empire and the decolonizing world, a desire to incorporate newly freed peoples into the auspices of liberal humanity in an effort to forge a united front against communist expansion. While *war* became the preeminent specter that governed relations between the U.S. and its communist enemies, empire's integration offered a pathway to modernity, and in turn, entryway into the political terrain of the Cold War human.

Against the supposed primitivity of Soviets who were "impervious to the logic of reason," U.S. responses to the problem of communist expansion, Kennan argues, must approach their political movements "with [the] same courage, detachment, objectivity, and same determination not to be emotionally provoked or unseated by it."[40] This emotional detachment equated the Cold War human with *rationality*, an intuitive orientation laced with capitalist

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[38] Kennan, "Long Telegram"
[39] Klein, *Cold War Orientalism*, 31. Klein cites several speeches given by President Dwight D. Eisenhower, see Dwight D. Eisenhower, "State of the Union Address," *DSB* (1953): 208; Eisenhower, "Principles of U.S. Foreign Policy," *DSB* (1954): 360; as well as, John Foster Dulles, "Challenge and Response in United States Policy," *DSB* (1957): 571
[40] Kennan, "Long Telegram"

imbrications that entwined the production of knowledge with liberal freedoms abstracted into the domain of ideation. Indeed, Cold War rationality allied itself with contemporaneous discourses of scientific objectivity, wherein knowledge "bears no trace of the knower…unmarked by prejudice or skill, fantasy or judgment, wishing or striving."[41] Objectivity, in this manner, aspires towards intellectual purity—knowledge cleaved from the subjective human self. As opposed to the Soviet Union's strict state control over scientific research, historian of science Audra Wolfe argues, "the American notion of scientific freedom suggested that knowledge should operate in a frictionless environment, without regard to party dogma, political affiliation, or national borders."[42] Thus, Cold War objectivity sought to evacuate knowledge of its subjectivity in order to attach it to imaginaries of liberal freedom—the freedom to pursue knowledge for the sake of expanding the bounds of the human itself—in a democratic world, knowledge severed from the political conditions of its making. The U.S. Cold War approach to knowledge production adopted an ideal of liberal freedom that shirked geopolitical entrapments—ironically offering the *de*politicization of knowledge production as the very condition of possibility for policies of containment that sought to limit the Soviet sphere of influence across the Global South.

In the same year as Kennan's "Long Telegram," Vannevar Bush—the first director of the U.S. government's Office of Scientific Research and Development (OSRD)—published his famous *Science, The Endless Frontier*, another document that significantly shaped Cold War foreign and domestic policy. Responding to questions about the transferability of World War II-era scientific development to future governmental programs for scientific research in a supposed era of peacetime, Bush's letter was addressed to President Truman to advocate for a nationalized

[41] Lorraine Daston and Peter Galison, *Objectivity* (New York: Zone Books, 2007), 17
[42] Audra Wolfe, *Freedom's Laboratory: The Cold War Struggle for the Soul of Science* (Baltimore, MD: Johns Hopkins University Press, 2020), 8

research program lead by *scientific experts* rather than politicians. After the end of World War II, many U.S.-based political and intellectual leaders attributed their victory to advancements in science and technology emerging from a new structured coordination among the U.S. military, individual scientists, universities, and private industrial corporations.[43] In *Science, The Endless Frontier*, Bush proposed the establishment of a new governmental scientific research program to support innovative intellectual work outside of the explicit temporal confines of wartime; as he writes, "it is essential that civilian scientists continue in peacetime some portion of these contributions to national security which they have made so effectively during the war."[44] Continuous funding and resources for scientific research, even in moments of peace, Bush asserted, was paramount to the progression of democratic society into a new era of technological and humanistic greatness.

While Kennan's telegram inspired a doctrine of *containment* that sought to limit the Soviet sphere of influence through militarized enactments of U.S. foreign policy, Bush's letter instigated the expansion of knowledge production into the *endless frontier* of possibility through entwining scientific policy with a growing military-industrial complex whose primary objective is securing the future of global power in the interests of liberal capitalist modernity. Bush writes:

> The pioneer spirit is still vigorous within this nation. Science offers a largely unexplored hinterland for the pioneer who has the tools for his task. The rewards of such exploration both for the Nation and the individual are great. Scientific progress is one essential key to our security as a nation, to our better health, to more jobs, to a higher standard of living, and to our cultural progress.[45]

[43] See Audra Wolfe, *Competing with the Soviets: Science, Technology, and the State in Cold War America* (Baltimore, MD: Johns Hopkins University Press, 2012), 23

[44] Vannevar Bush, *Science, The Endless Frontier: A Report to the President on a Program for Postwar Scientific Research* (Washington, D.C.: U.S. Government Printing Office, 1945)

[45] Ibid.

Imbued with the freedom of boundless knowledge production, the frontier operates as a *technology of containment*, wherein the imperial expansion of U.S. empire into Asia and the Pacific functions as a bulwark to Soviet communist expansion during the Cold War. Bush's language of the "pioneer spirit" is instructive, in that it indexes the unquenching colonial desire for expansion into "unexplored" landscapes in search of human progress. As Evyn Le Espiritu Gandhi argues, the language of the frontier facilitated U.S. settler colonial ventures into Asia and the Pacific during the Cold War, extending the same historical violence that displaced Native Americans in Turtle Island to the project of U.S. military intervention and occupation abroad through deploying a "paradigmatic Indianness" that reenacts settler colonial genocide.[46] Thus, the Cold War unfolded not just as an ideological project waged between twin dichotomies of liberal capitalism and authoritarian communism, but a material contestation "for settler imperial domination over the very air, land, and sea"[47] in which scientific enterprises offered bountiful tools for the project of imperial expansion.

The Cold War expression of the frontier extended U.S. colonial rule across the Pacific and into Asia, compounding settler and military build-up across the transpacific. Scholars across Indigenous Pacific and transpacific studies have emphasized how this military expansion constituted a project of conquest over nonhuman environments, with Erin Suzuki reminding us that "the [U.S.] government's intent to cultivate the Pacific Ocean itself as a militarily useful, and potentially profitable, site of extraction served to inaugurate the postwar Pacific as simultaneously a resource and threat."[48] Incorporating not only Asian and Pacific Islander raced

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[46] Evyn Le Espiritu Gandhi, *Archipelago of Resettlement: Vietnamese Refugee Settlers and Decolonization across Guam and Israel-Palestine* (Berkeley, CA: University of California Press, 2022), 53; also see Jodi Byrd, *The Transit of Empire: Indigenous Critiques of Colonialism* (Minneapolis, MN: University of Minnesota Press, 2011)
[47] Gandhi, *Archipelago of Resettlement*, 55
[48] Suzuki, *Ocean Passages,* 25; also see Candace Fujikane, *Mapping Abundance for a Planetary Future: Kanaka Maoli and Critical Settler Cartographies in Hawai'i* (Durham, NC: Duke University Press, 2021); Craig Santos Perez, "Transterritorial Currents and the Imperial Terripelago," *American Quarterly* 67, no. 3 (2015): 619-624;

human bodies into the project of imperial expansion, U.S. Cold War empire took particular interest in racialized matter as the raw material for the Cold War human—as liberal human subject, extracted matter, experimental fodder, decimated ecologies, and strategic environments. Indexing both the malleability and fungibility of race in shaping capitalist modernity, the settler militarist[49] conquest of Asia and the Pacific relied on a logic of racialization that collapses the "human" into racialized terrains and environments, positing interrelations between human and nonhuman animacy as valuable insofar as they can contribute to the military state's counterinsurgent operations.

As a reigning episteme of U.S. militarism, the Cold War human dictates how distinctions between *life*—at the level of both race and species—demarcate the bounds of knowledge production organized around imperial conquest and expansion. At the core of its intellectual project, science has always been concerned with the ontological divide between human and nonhuman worlds, designating the former as empirical observer and the latter as the object of study. As Denise Ferreira da Silva argues, race is a product of this system of knowledge emerging from the pursuit of universal knowledge and reason, wherein "the productive weapons of reason, the tools of science and history, institute both man and his others as global historical beings," and the racialized other—human and nonhuman—as the very object of observation.[50] In the second-half of the twentieth century, this paradigm highlights what Elizabeth DeLoughrey

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Heidi Amin-Hong, "Craig Santos Perez's Poetics of Multispecies Kinship: Challenging Militarism and Extinction in the Pacific," *Atlantic Studies: Global Currents* (forthcoming 2022)

[49] Juliet Nebolon describes *settler militarism* as the "dynamics, through which, in Hawai'i, settler colonialism and militarization have simultaneously perpetuated, legitimated, and concealed one another" (25). In doing so, Nebolon gives language to the entangled phenomenon of settler colonialism and militarism as it compounds across the Pacific Islands and Ocean, inviting frames of analyses that view these joint processes as a multivalent, coherent structure of violence that subsumes colonies into an imperial regime of securitization. See Juliet Nebolon, "'Life Given Straight from the Heart': Settler Militarism, Biopolitics, and Public Health in Hawai'i during World War II," *American Quarterly* 69, no. 1 (2017): 23-45

[50] Denise Ferreira da Silva, *Toward a Global Idea of Race* (Minneapolis, MN: University of Minnesota Press, 2008), xix

refers to as “the paradox of how Cold War science was utilized to both destroy and conserve nature,” as its orientation towards nonhuman ecologies engendered overlapping laboratories of scientific knowledge production and battlegrounds of military conflict.[51] While previous iterations of racial science relied on science’s capacity to define and sediment immutable human biological difference and inferiority as the basis for racial hierarchy, this dissertation suggests that it is science’s fundamental interest in the nonhuman that enables its pervasiveness as a structuring logic of race in the context of Cold War racial liberalism. These investments in the nonhuman world—as evidenced in fields such as physics, chemistry, and botany—cleave scientific knowledge from its darker history in racial science and eugenics, allowing it to maintain a guise of objectivity and rationality while still trafficking in posthuman calibrations of race.

Towards a Cold War Racial Science

While Kennan’s “Long Telegram” and Bush’s *Science, The Endless Frontier* articulate the geopolitical entrapments through which scientific innovation expresses military and imperial policies of containment, *Technologies of the Cold War Human* presses at an equally urgent polemic: to what extent do these scientific projects redefine the logics of race itself? In 1950, the United Nations Educational, Scientific, and Cultural Organization (UNESCO) convened to release a momentous statement, “The Race Question,” that sought to clarify an international definition of race in the aftermath of the Nazi eugenics project. In the introduction to the statement, the committee remarks on the urgency of addressing such questions as racism

[51] Elizabeth M. DeLoughrey, “The Myth of Isolates: Ecosystem Ecologies in the Nuclear Pacific,” *Cultural Geographies* 20, no. 2 (2012): 168

proliferates in our social world, stating, "For, like war, the problem of race which directly affects millions of human lives and cause conflicts has its roots 'in the minds of men.'"[52] Race, like war, emerges through material conditions of violence; locating race as "not so much a biological phenomenon as a *social myth*,"[53] the UNESCO statement highlights that biological differences among races, physical features induced by climactic and geographical stimuli of natural evolution, possess little tangible reality in establishing racial hierarchies. Thus, such hierarchies are *invented* by humankind. Evacuating racial difference from the realm of the biological in order to emphasize its socially constructed nature, the UNESCO statement instead highlighted the "unity of mankind" as a species in a postracial, liberal order that followed the end of World War II.[54] UNESCO's statement on race at the onset of the Cold War begs the question: what is the continued salience of race as a category of analysis during the seemingly postracial order of the Cold War? How do civil conflicts between Asian peoples that materialized competing desires for capitalist and communist governance mobilize *race* as a logic of difference?

Of course, the postracial order of the Cold War is purely a fantasy of liberalism; one that, as Jodi Melamed reminds us, "explained (away) the inequalities of a still-racialized capitalism."[55] Liberal capitalism, within this paradigm, reorders hierarchies of racial capitalism that promised possibilities of freedom for subjects of color, while still requiring the maintenance of an exploitable class of laborers and raw material for the production of economic surplus. To that end, this dissertation argues that a rapprochement with *racial science* is necessary to investigate how the postracial order of Cold War military science redefines the logics through

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[52] UNESCO, "The Race Question," *UNESDOC Digital Library* (1950). https://unesdoc.unesco.org/ark:/48223/pf0000128291
[53] Ibid. (emphasis mine)
[54] Ibid.; Also, see Dorothy Roberts, *Fatal Invention: How Science, Politics, and Big Business Re-create Race in the Twenty-First Century* (New York: New Press, 2011), 43-49
[55] Jodi Melamed, *Represent and Destroy: Rationalizing Violence in the New Racial Capitalism* (Minneapolis, MN: University of Minnesota Press, 2011), 9

which race materialized, not as merely an object of difference, but rather as an object of *utility* in the securitization of liberal capitalism in Asia and the Pacific. Race has been a salient question for scientific discourse across the Atlantic for several centuries, as racial science adopts an epistemological orientation that attributed racial difference to embodied and biological difference, a reigning belief that extended from the early years of chattel slavery in the Americas to the defeat of Nazi eugenicists in World War II. Across these histories of U.S. empire, racial science serves a flexible capacity, wherein "the function race serves as a political classification system has remained the same, but scientists have discovered new ways of identifying, justifying, and proving race as a biological category."[56]

The UNESCO statement defined racism in terms of these historical hierarchies, as the "belief in the *innate* and *absolute* superiority of an arbitrarily defined human group over other equally arbitrarily defined groups."[57] This definition of racism organized the logic of 19th and early 20th century racial science, wherein taxonomical classifications of different races based on skin color and geographical origin solidified rigid hierarchies based in comparative anatomy, engendering polygenetic theories of the "separate and unequal evolution of the races."[58] Thus, UNESCO's attempt to redefine race not as biologically innate—indeed, they clarify a preference for "ethnic" groups instead of racial groups to define human difference—but as arbitrarily constructed preceded several milestones in racial progress, particularly in the United States: the *Brown v. Board of Education* case in 1954, the Civil Rights Act of 1964, and the Immigration Act of 1965. Codifying legal scriptures that slowly undid the established racial order of the U.S. nation-state, these landmark pieces of legislation instantiated what Melamed calls an "official,

[56] Roberts, *Fatal Invention*, 26
[57] UNESCO, "The Race Question."
[58] Britt Rusert, *Fugitive Science: Empiricism and Freedom in Early African American Culture* (New York: New York University Press, 2017), 9

state-recognized antiracism into U.S. governmentality,"[59] a strategy of propaganda to combat Soviet claims of U.S. imperialism and racism inherent to liberal democratic governance. At the same time racism became evacuated from the public sphere as an overt technique of state governmentality, racial science increasingly detached the scientific study of race from larger structures of societal racism, wherein "the imaginary wall [that] more liberal-minded scientists erected, separating *racial science* from *racial politics*, became critical to the scientific validation of race in a post-civil rights culture that espouses racial equality."[60]

During the Cold War, natural sciences such as physics, chemistry, botany, and ecosystems ecologies contributed to producing some of the most horrific weapons of warfare, and yet, these developments are largely understood as distortions of ostensibly pure and objective forms of scientific knowledge production, distinct from the overt techniques of racial science that explicitly define the terms of racial inferiority. *Technologies of the Cold War Human* reassesses this historical analysis, extending the genealogy of racial science to encompass Cold War military science not merely as an instrument of the U.S. war machine's vast apparatus, but as an organizing logic of race itself. In doing so, I argue that military science cannot solely be understood through a framework that emphasizes how the U.S. military misappropriated science for its own ends; instead, I contend with how racial science evolved alongside postracial definitions of race. While conventional iterations of racial science emphasize its work in constructing racial difference through biological inferiority, I argue that Cold War racial science

[59] Melamed, *Represent and Destroy*, x

[60] It is also important to note that this detachment of "racial science" from "racial politics" failed to undo the salience of race in scientific study, as many scientists, particularly in genomics and biomedicine, continued to assert the need to study human biology in terms of ethnic and racial difference to perfect outcomes tailored to different bodies and communities. Under the guise of liberalist desires to *improve* the quality of life for humankind, genomic science thus continues to masquerade the biological fixity of race; even as they imagine it as detached from the social sphere, it continues to manifest in a misunderstanding of how racial difference inheres in societal structures. See Roberts, *Fatal Invention*, 47

is a *deracinating* project, one that evacuates visible racial difference but nonetheless employs race's utility in service of the U.S. war machine. Deracination, as Michelle N. Huang proposes, "denote[s] the erasure of race itself," wherein postracial fantasies of a world beyond racial difference "sanctions—rather than curbs—structural racism."[61] In the wake of the international denouncement of Nazi racial science projects that overtly attempted to define the racial inferiority of Jewish populations, U.S. racial science has increasingly disappeared from the public spotlight, giving way to a new, postracial scientific order. Yet, as Huang elucidates, this shift from race's biological essentialist ontology might unmark racial difference from the body, but it does not reduce the salience of race itself; instead, what is necessary is an investigation of not the *quality* of race—or, what *is* race—but instead the *function* of racialization—"what it *does* and how it is *utilized*."[62] In the Cold War era of racial liberalism, racial science is articulated not through defining racial inferiority, but employing race's utility in generating new paradigms of Cold War militarized knowledge. Instead of defining raced bodies in terms of explicit *hierarchies*, Cold War racial science established a framework of *expendability* through which raced bodies accrued value through their fungibility.

Writing about plantation slavery's development of a mode of biopolitical governmentality reliant on expendable, racialized life, Achille Mbembe notes:

> As an instrument of labor, the slave has a price. As a property, the slave has a value. The slave's labor is needed and used, so he is therefore kept alive, but in a *state of injury*, in a phantom-like world of horrors and intense cruelty and profanity. The violent tenor of the slave's life is manifested through the overseer's disposition to behave in a cruel and intemperate manner, as well as in the spectacle of pain inflicted on the slave's body…Slave life, in many ways, is a form of death-in-life.[63]

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[61] Michelle N. Huang, "Racial Disintegration: Biomedical Futurity at the Environmental Limit," *American Literature* 93, no. 3 (2021): 500
[62] Michelle N. Huang, "The Posthuman Subject in/of Asian American Literature" in *Oxford Research Encyclopedia of Literature* (2019): 13
[63] Achille Mbembe, *Necropolitics* (Durham, NC: Duke University Press, 2019), 75

Under the violent conditions of racial capitalism, the slave accrues value as a laboring body—one that produces surplus value while being maintained in a sub-human status. Employing violence to maintain this racial-social order, chattel slavery transforms life through a logic of fungibility, a process that transformed human life into expendable commodity.[64] Thus, for Mbembe, the characterization of race is not through the forcible imposition of an inferior status for the raced body, but rather the function of expendability that the raced body offers as an instrument of labor, continuously producing value for the U.S. colonial-death machine in the extraction of life itself. In this regard, the raced body's capacity to withstand the rigors of perilous labor conditions and warring terrains made their bodies *essential* to projects of empire, serving a useful function across new world slavery to regimes of military occupation at the turn of the 20th century.[65]

Racial science has long defined the raced body, and in particular the black body's, capacity to endure pain as justification for its fungible role in scientific experimentation. In describing J. Marion Sim's early experimentation on Black female slaves' bodies in the development of techniques of modern gynecology, C. Riley Snorton remarks that it was Blackness' collective status as "test subjects that were immanently analgesic or congenitally impervious to pain, and, by the very condition of slavery, inexhaustibly available through their interchangeability" that facilitated the expendability of Black bodies in experiments of racial science.[66] Similarly, Khary Oronde Polk remarks that scientific theories of Black immunity to

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[64] For more on the process of slavery's transformation of human life into human commodities, see Stephanie Smallwood, *Saltwater Slavery: A Middle Passage from Africa to American Diaspora* (Cambridge, MA: Harvard University Press, 2008)
[65] See Polk, *Contagions of Empire*; specifically chapter 1, "'We Don't Need Another Hero: Death, Honor, and the Archive of American Militarism."
[66] C. Riley Snorton, *Black on Both Sides: A Racial History of Trans Identity* (Minneapolis, MN: University of Minnesota Press, 2017), 24

tropical diseases—inherited from the laboring conditions of plantation slavery—equipped Black bodies for the front lines of military work at the turn of the 20th century, wherein an "endorsement of biological difference became a harbinger of how American militarism would continue to conscript and delimit African Americans through a logic of inferiority."[67] Across these wide histories, the logic of Black plasticity—or what Zakiyyah Jackson describes as "infinitely malleable lexical and biological matter, such that blackness is produced as sub/super/human at once"[68]—toggles between racialized definitions of blackness as biologically inferior and/or superior to the white body, allowing it to adopt flexible forms of fungibility in pursuit of knowledge production designed ultimately to protect whiteness from its innate vulnerability to danger. Race, thus, is defined by its utility in producing expendable matter scaffolded into the project of developing knowledge in service of a universalized notion of the human.

Even amidst the Cold War order of racial liberalism, the U.S. military still employed this history of Black fungibility; in 1968, the U.S. Army Medical Command deployed a "Field Dermatology Research Team" to the Mekong Delta during the Vietnam War amidst several outbreaks of skin diseases for U.S. soldiers stationed in the tropical region. These scientists were tasked with determining the source of these diseases, which curiously affected white soldiers at disproportionately higher rates than Black or Asian soldiers. In contrast to the official stance on race taken up by sociopolitical institutions within the United States as well as that of UNESCO more broadly, the Field Team's experiments in the Mekong Delta, as Thuy Linh Tu suggests, reinscribed the biological reality of race rooted in white vulnerability. As she writes, "white

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[67] Khary Oronde Polk, *Contagions of Empire: Scientific Racism, Sexuality, and Black Military Workers Abroad, 1898-1948* (Chapel Hill, University of North Carolina Press, 2020), 6
[68] Jackson, *Becoming Human*, 3

soldiers required attention, care, protection, and other benefits not because they were socially privileged but, conversely, because they were *biologically disadvantaged*."[69] In contrast to previous iterations of racial science that continually cast Black, Indigenous, and Asian bodies as biologically inferior through innate characteristics of primitivity and lower levels of intelligence,[70] The Field Team established a paradigm of racial science that constructed raced bodies as, biologically speaking, "better bodies"—useful for their immunity to the environmental stressors of tropical warfare. In doing so, these scientists reinscribed a racial order in a moment wherein science was attempting to cleave itself from darker histories of racial science, but rather than establish racial inferiority, they proffered the *utility* of "certain bodies as open to experimentation and intervention, and rationalized any pain and violence as a necessary condition for the advancement of knowledge and security of all."[71]

In this regard, Cold War racial science espoused a necropolitical logic of racialization that has long organized the integration of nonwhite bodies into the apparatus of the U.S. war machine, what Takashi Fujitani calls the "total war logic of manpower utility," in which the U.S. military state was "faced with the need to mobilize all human and material resources to wage war."[72] Yet, in developing a theory of racial difference rooted in the contrasting relationships that white, Black, and Asian bodies inhabited in relation to the jungle terrain of Southeast Asia, the

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[69] Thuy Linh Nguyen Tu, *Experiments in Skin: Race and Beauty in the Shadows of Vietnam* (Durham, NC: Duke University Press, 2021), 121 (emphasis mine)

[70] For perhaps the touchstone text for racial science's casting of Black, Indigenous, and people of color as biologically inferior through lower levels of intelligence and civility, see Stephen Jay Gould, *The Mismeasure of Man* (New York: W.W. Norton & Company, 1981)

[71] Ibid., 106. In an earlier chapter, Tu also discusses how military affiliated scientists conducted hundreds of experiments on captive prisoners—predominantly Black populations—at Holmesburgh Prison near Philadelphia. The prison served as one of the largest laboratories in the history of medicine in the 20th century, engendering dermatological discoveries and innovation that fundamentally shaped the skin-care industry across the United States, as well as aiding the U.S. war effort in Southeast Asia. For more on the Holmesburgh Prison experiments, also see Allen Hornblum, *Acres of Skin: Human Experiments at Holmesburgh Prison* (New York: Routledge, 1998)

[72] Takashi Fujitani, *Race for Empire: Koreans as Japanese and Japanese as Americans during World War II* (Berkeley, CA: University of California Press, 2011), 81

Field Team highlighted the porosity of racialization even as it attempted to reinscribe a biologically essentialist racial order. While the Field Team demonstrated the desires of "the institutions of medicine and military [to keep] the idea of race alive by re-rooting it in black and Asian bodies,"[73] their discovery of the biological differences that made differently raced bodies susceptible to environmental diseases relocates the phenomenon of race itself; here, it inheres not within individually raced bodies, but within their porous relationships to the natural environment.[74] Thus, while Tu importantly uncovers the explicit work of racial science that reinscribes biological essentialism as the foundation of racial hierarchy, and in particular rooting Blackness' embodied sub-/super-humanity within histories of Cold War scientific experimentation, this dissertation grapples with the differential processes through which Asian and Pacific Islander bodies become enmeshed as malleable matter in service of the U.S. war machine.

Across the histories of technologies of warfare such as the nuclear bomb, Agent Orange, and napalm implicated within expansive histories of U.S. military intervention in the Marshall Islands, Korea, and Southeast Asia examined in this dissertation, I am interested not only in the human and environmental decimation enacted by these violent weapons of mass destruction, but also in how the political and racial logics that coalesce around their development are shaped by the legacy of racial expendability. The work of military scientists, as Tu emphasizes, "reminds us that war and militarism are not just the technologies through which we *enact racial animus*—

[73] Tu, *Experiments in Skin*, 131
[74] Here, I draw from Michelle N. Huang's important work describing race not as an atomized identity attached to individual bodies, but *ecological* and *infrastructural*—inhering in sets of political relations between humans and their built and natural environments within which they are enmeshed. See Michelle N. Huang, "Ecologies of Entanglement in the Great Pacific Garbage Patch," *Journal of Asian American Studies* 20, no. 1 (2017): 95-117; and "Racial Disintegration: Biomedical Futurity at the Environmental Limit," *American Literature* 93, no. 3 (2021): 497-523

through which we fight 'just wars' against dehumanized others, or use military tactics to police racial others—but by which we *make race* [itself]."[75] Thus, while these technologies enact mass death, this dissertation uncovers how they also remake the logics of race in an era of Cold War liberal capitalism. Racial science, as both institutional knowledge production and cultural rhetoric, has historically cast Asian bodies in the vein of "yellow peril," diseased, mechanical, and incapable of assuming human status.[76] During the Cold War, the Asian American racial subject seemingly transcends its historical status, achieving "model minority" status that elevates Asiatic racial form to the pinnacle of minoritized status, an elite racial subject capable of exceeding structural racism through the hard work of assimilation.[77] This racial dichotomy of Asian/American racialization is mapped onto Cold War geographies of war, wherein Asian racialization manifested as "a raced minority divided into *friends* and *enemies* [and] made to see—and feel—political operations by the state."[78] Yet, as I argue, this dichotomous racialization of Asian and Pacific Islander bodies—as *useful* or *expendable*—materializes beyond the scale of the human in the reduction of life into malleable matter that serves the U.S. war machine both in its death and assimilation.

Perhaps most overtly in the case of the nuclear tests in and around the Marshall Islands—which serves as the primary case study for Chapter 2 of this dissertation—wherein the seizure of several islands and atolls for radioactive testing relied on a settler logic of dispossession justified

[75] Tu, *Experiments in Skin*, 13 (emphasis mine)
[76] For more on this history of Asian racialization through narratives of disease and yellow peril, see Lee, *The Exquisite Corpse of Asian America*; Nayan Shah, *Contagious Divides: Epidemics and Race in San Francisco's Chinatown* (Berkeley, CA: University of California Press, 2001); Eric Hayot, "Chinese Bodies, Chinese Futures: Nationalism and its Discontents," *Representations* 99, no. 1 (2008): 99-129; Huang, "The Posthuman Subject of Asian American Literature."
[77] For more on the history of the model minority, see Ellen Wu, *The Color of Success: Asian Americans and the Origins of the Model Minority* (Princeton, NJ: Princeton University Press, 2013) and Huan He, "The Racial Interface: The Computational Origins of Minority Modeling," *Media-N* 18, no. 1 (2022): 31-52
[78] Josephine Nock-Hee Park, *Cold War Friendships: Korea, Vietnam, and Asian American Literature* (Oxford, UK: Oxford University Press, 2016), 15

through the scientific narrative of innovation "for the good of mankind,"[79] Cold War racial science defined the utility of racial matter as its capacity to generate knowledge in service of securitization in Asia and the Pacific. While Black bodies in the military were rendered useful for their *bodily capacity*, Indigenous Pacific bodily matter's utility lies in its sacrificial expendability, a racial project that designated an entire archipelagic ecosystem to be consistent of fungible matter in the pursuit of nuclear knowledge. This expendability is embedded in the very process of settler occupation of U.S. militarism in the Pacific, as Christine Hong notes, "with no nonmilitary interests in the Marshall Islands, the United States left infamously unrehabilitated those areas it devastated."[80] Contrastingly, as the case studies of herbicidal and infrastructural warfare in chapters 3 and 4 reveal, Asian matter assumed utilitarian futures in projects of liberal capitalist development in both Korea and Southeast Asia; thus, Asian matter functions as raw material that can be destroyed, but crucially *remade*, into the bare matter of liberal capitalist securitization that transforms Asia into an outpost of U.S. Cold War regimes of liberal democracy and empire. The differential utility of racial matter under the auspices of Cold War racial science, I argue, consolidates in technologies of warfare that proliferate in zones of occupation and war that shape the racial lives of inhabitants across geographies of Cold War empire.

Thus, while the post-World War II moment largely reduced the problem of racial science to a question of genomic science,[81] *Technologies of the Cold War Human* argues for a more

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[79] See DeLoughrey, "Myth of Isolates,"; Teaiwa, "bikinis and other s/pacific n/oceans,"; Aimee Bahng, "The Pacific Proving Grounds and the Proliferation of Settler Environmentalism," *Journal of Transnational American Studies* 11, no. 2 (2020): 45-73

[80] Hong, *A Violent Peace*, 124

[81] Dorothy Roberts describes this new era of racial science as a move towards evolving definitions of race that located it not through exterior differences, but "genetic differences that lay beneath the skin" (47). Particularly as the state continues to pride itself on its postracial order, the increase in race-based genomics attempts to usher in an order of knowledge production wherein race is cleaved from its sociopolitical dimensions—biological fact rather than social reality. As Roberts remarks of this orientation of contemporary racial science, "Race is becoming more

capacious definition of Cold War racial science, one that persists with frames of analysis that examine how military science defines racial difference as a global episteme of necropolitical expendability. The shift I make from racial science's mobilization of biological inferiority toward material utility, then, offers a postracial analytic of racial science that exceeds explicit racial identification in favor of race's function as a biopolitical mode of governmentality, one that marks expendability rather than inferiority as the militarized regime through which science constructs racial meaning. Yet, *expendability* is perpetually attached to *utility*, and it is through this process that the encodings of liberal capitalism's aspirations of racial justice shroud the pernicious machinations of racial violence; wherein the incorporation of "good" Asian subjects belies the material fungibility of other racial matters.

(Un)making the Archive of Cold War Science

In order to define and theorize the Cold War human as an expansive terrain of U.S. militarized knowledge production predicated on ideological attachments to liberal capitalism, *Technologies of the Cold War Human* turns to the work of Asian/American, Pacific Islander, and other anti-war writers whose aesthetic ventures uncover the racial logics embedded in the archive of Cold War science. This body of artists and writers—including Quan Barry, Mai Der Vang, Don Mee Choi, Octavia E. Butler, Jane Chang Mi, Kathy Jetñil-Kijiner, Dinh Q. Le, Tuan Mami, and Ocean Vuong—engage what Kandice Chuh productively calls an "illiberal humanities," wherein "relationality and entanglement rather than individuality and authocthony as the grounds

significant at the molecular level precisely as it appears less significant in society" (287). See Roberts, *Fatal Invention*; for more on genomic racial science and its limitations vis-à-vis race and Indigeneity, see Alondra Nelson, *The Social Life of DNA: Race, Reparations, and Reconciliation After the Genome* (Boston, MA: Beacon Press, 2016); Kim TallBear, *Native American DNA: Tribal Belonging and the False Promise of Genetic Science* (Minneapolis, MN: University of Minnesota Press, 2013); and Ruha Benjamin, *People's Science: Bodies and Rights on the Stem Cell Frontier* (Palo Alto, CA: Stanford University Press, 2013)

of human ontology come to the fore."[82] By prioritizing relationality rather than mastery in their orientation to more-than-human worlds, these artists unsettle the dominant feature of Cold War objectivity by embracing a form of unknowability that facilitates reciprocal and ecological ways of knowing in conjunction with more-than-human ways of being. Endeavoring for relations beyond the human, "these aesthetic and political projects foreground a decolonial imaginary within geographies of war, racial capitalism, and settler colonialism that necessitate critical reorientations of human and nonhuman relationships."[83]

This dissertation excavates the Cold War human as both an epistemic dialectic that governs the ideological and social forces of U.S. militarism and imperialism, as well as a site of aesthetic intervention and reimagination to unsettle the archive of Cold War science. In doing so, I renew focus on Asian/Americanist inquiry that divests from liberal subjectivity under global capitalism in search of fashioning more just worlds commensurate with understanding knowledge as a relational and ecological political formation. Toggling between the archives of military science and aesthetic remappings of Cold War knowledge production, I am guided by Aimee Bahng's insights into science as a cultural form that functions to predict and securitize the future in the vein of speculative fiction.[84] These political and cultural texts, then, must be understood as ideological projects of both U.S. empire and its decolonial forces of resistance, wherein scientific knowledge production is cleaved from its imagined adherence to pure objectivity or rationality and is fundamentally imbricated within Cold War racial, (anti-)imperial, and (anti-)capitalist logics. In doing so, I take seriously Donna Haraway's insistence on reading scientific knowledge as fundamentally situated within specific historical and cultural contexts

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[82] Kandice Chuh, *The Difference Aesthetics Makes: On the Humanities "After Man"* (Durham, NC: Duke University Press, 2019), 5
[83] Amin-Hong and Bui, "Materialities of Empire in a More-than-Human World,"
[84] See Bahng, *Migrant Futures*

that shape the results and ramifications of its "empirical" observations.[85] This project is not merely an attempt to historicize the function of Cold War science, but rather it theorizes Cold War science as an epistemological and ideological apparatus of U.S. liberal capitalism.

In its theoretical framework and methodology, this dissertation largely draws from the field of queer and feminist science studies. One of the principal guiding frameworks that queer and feminist science studies offers is a "constitutive capaciousness," wherein the field itself "grounds and unsettles, offering no fixed archive nor method, but a qualifier—'queer'—that promises to unsettle some of our cherished givens."[86] Queer, as adjectival modifier, promises to unseat the conditions of knowledge rooted in presupposed objectivity, mastery, and individuality cherished by colonial epistemologies, and instead reveals "the co-implication and radical relationality of seemingly disparate racial formations" that collide in the terrain of Cold War imperialism and militarism.[87] Following these openings in queer and feminist theory, this dissertation is not unilaterally attached to a singular methodology, instead pursuing a promiscuous and interdisciplinary archive of historical phenomena and cultural objects in order to narrate the long story of Cold War science. Indeed, feminist new materialisms—a persistent guiding analytic for this project—are not organized around "objects of study," but rather "the phenomena that create and bind them."[88] Bound by the material and epistemological circulations of *phenomena*, this reading practices emphasizes the need to read across imprecise disciplinary boundaries between literary, cultural, scientific, and historical methods of textual analysis, as

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[85] See Donna Haraway, "Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective," in *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991)

[86] Cyd Cipolla, Kristina Gupta, David A. Rubin, and Angela Willey ed., *Queer Feminist Science Studies: A Reader* (Seattle, WA: University of Washington Press, 2017), 5

[87] Gayatri Gopinath, *Unruly Visions: The Aesthetic Practices of Queer Diaspora* (Durham, NC: Duke University Press, 2018), 4

[88] Huang, "Ecologies of Entanglement," 98

well as engage the coproduction of history, science, and culture as epistemic forms of empire. Ideological knowledge is fundamentally promiscuous and relational; it traverses diasporas and borders as its function within U.S. imperialism has never been contained within a singular domain of thought. Thus, the "objects of study" within each chapter are not the cultural texts themselves, but epistemological phenomena—experimentation, transpacific nuclearism, herbicides, and napalm—that bind them across disparate temporalities, geographies, and genealogies.

Traversing scientists' writings, institution and governmental archives, biographical narratives, fiction, poetry, and visual culture, this project's reading practice is rooted in the need to develop a capacious understanding of the various forms inhabited by "science" as an ideological and epistemological form. Following the work of Susan Merill Squier, I highlight the narratorial power of scientific knowledge, "provid[ing] an alternative to the impossible attempt to distinguish nature from culture, science from society, a site where we can productively consider their mutual imbrication and cogeneration."[89] Indeed, the academic taxonomy of knowledge production positions science at a distance from the arts, humanities, and, to a lesser extent, the social sciences; this disciplinary divide distinguishes scholarly inquiry invested in the "natural" world from those invested in the "human" and "culture," hailing science as a knowledge form cleaved from the biases of human subjectivity and interpretation. However, as I demonstrate, Cold War science's——as all histories of racial sciences——interest in the "natural" is inextricably bound with the desire to securitize human culture within the confines of Western governmental and economic modes of liberal democracy and capitalism. Like the

[89] Susan Merill Squier, *Liminal Lives: Imagining the Human at the Frontiers of Biomedicine* (Durham, NC: Duke University Press, 2004), 16

planetary relations explored across the various aesthetic works examined in this dissertation, the subjects and objects of scientific study are porous and fundamentally unsettle the static exclusivity of disciplinary knowledge production. *Technologies of the Cold War Human* takes up the mutual imbrication of science and culture, a shared heuristic process that "frame[s] and shape[s] our understanding of things of this world."[90] Reading scientific knowledge production as a cultural form orients us away from statues of mastery and objectivity in conceptualizing the material world; situating science as a cultural project rather than established law of nature reveals its political orientation.

Chapter Overview

Technologies of the Cold War Human adopts a transnational and relational approach to reassess the logics of Cold War imperial knowledge production that shape material legacies of violence across Asia and the Pacific. Chapter 1, "Terrains of the Experimental War," narrates the Cold War not as a series of disparate proxy wars across Asia, but a process of *experimentation*, wherein tactics of warfare become developed over time and across multiple geographies to consolidate the counterinsurgent operations of the U.S. war machine. Reading two experimental poetry collections from Asian/American authors—Mai Der Vang's *Yellow Rain* (2021) and Don Mee Choi's *Hardly War* (2017)—I juxtapose the Secret War in Laos and the Korean War as often sidelined, and rarely thought together, historical processes that consolidate the material conditions of knowledge production for the U.S. war machine. These *terrains* of warfare, I suggest, serve an experimental role in developing the tactics and technologies of U.S. militarism, inaugurating counterinsurgent modes of governmentality that coalesce across regimes of U.S.

[90] Ibid., 30

counterinsurgency. In doing so, I develop a theoretical analytic attuned to understanding war not just as armed conflict, but as a modality of scientific and ideological experimentation that transforms military battlegrounds into living laboratories of imperial knowledge production.

Chapter 2, "Nuclear Experiments in Racial Matter," turns to the archive of Black feminist science fiction author Octavia E. Butler, who was deeply concerned with how Cold War era nuclear proliferation and experimentation shaped U.S. empire's conceptualization of humanity as a universal abstraction. Bringing Butler's archival notes and writing on nuclearism as a universal catastrophe into conversation with place-based art and poetry embedded in Indigenous histories of the Marshall Islands by Jane Chang Mi and Kathy Jetñil-Kijiner, this chapter examines how Cold War medical experiments across the United States and the Marshall Islands in the aftermath of multiple nuclear tests offered a blueprint for emerging biomedical constructions of the "human" generated through the fungibility of racial matter. As not only a precursor to the Human Genome Project, but also a prominent case of transforming Indigenous environments into military testing grounds, the nuclear tests in the Marshall Islands offer an important site of analysis for the entanglement of the Cold War military-industrial complex and the abstraction of the "laboratory" as a scientific space that generates racial knowledges.

Chapter 3, "Eugenic Ecologies of Chemical Warfare," examines scientific, environmentalist, and aesthetic responses to the controversial deployment of herbicidal chemicals across agricultural capitalism and U.S. militarized intervention both domestically and in Southeast Asia. Herbicides are "weed-killers," and by analyzing the social production of the "weed" as politically expendable life across racial capitalist and militarized geographies, I situate the history of herbicidal warfare within a discourse of eugenics. Eugenics, as a politically inflected ideology of preserving value life at the expense of devalued life, provides an important

optic for understanding how militarized necropolitics consign different forms of human and nonhuman life as expendable. In contrast, artists Dinh Q. Le and Tuan Mami engage in refugee and queer of color perspectives in the afterlives of contamination in Southeast Asia, necessitating different modes of ecological relationship that contend with shared vulnerabilities to toxic exposure. These aesthetic projects rethink war-induced disability from a problem in need of reparative solutions into an opening to forge anti-capitalist possibilities borne out of multispecies ecological kinships.

The final chapter, "Infrastructures of Race in America's Napalm," examines the scientific and political history of napalm alongside the chemical substance's representation in Ocean Vuong's *On Earth We're Briefly Gorgeous* and several shorter works to theorize napalm as an epistemology of Cold War liberal humanism. This chapter suggests that napalm's infamy as an affective symbol of the Vietnam War's brutality and *in*humanity across multiple cultural discourses offers a reparative narrative of postwar redress that fails to address the interior logics of napalm's deployment to decimate infrastructural systems that sustain Vietnamese life. Vuong's and other artists' attention to the entanglement of napalm's physical effects with its political consequences reveals how infrastructural warfare functions not only as a strategy of unilateral destruction, but also as a technology of transforming decimated landscapes into the bedrock of future capitalist development and modernity. In doing so, I also attend to the materiality of napalm—a sticky, sensuous substance—that reveals the racial logics of Asian/America as a political formation in constant flux, offering modes of subjectivity that might be purposed towards decolonial and demilitarized ends.

By bringing together militarized narratives of collateral damage with the experimental geographies of U.S. militarism in Asia and the Pacific, *Technologies of the Cold War Human*

ultimately argues that the expendability of more-than-human life across the transpacific region constitutes not only a regime of militarized death-dealing, but an epistemic blueprint that opens future horizons for the emergence of the Cold War liberal human. The Cold War human is not a temporally bound figure, but a structural legacy that shapes the conditions of race, science, and warfare that persist in the present day. It also demands that we shift our metrics for critical race studies from "who" is included in the category of human towards epistemological questions of "how" racialized and subjugated populations are oriented *in relation* to nonhuman and more-than human ecologies. Excavating the story of Cold War science, thus, entails not only investigating the history of science, but also the power of political and cultural narratives that shape the ideological contours of nation and empire. The notion of science's political neutrality has always been a social fiction, and it is this very fiction that upholds the universalism of the Cold War human. By focusing on scientific discourses that traffick in the transnational crosscurrents of militarism and imperialism, this project elucidates Cold War science's imbrication within the long genealogy of U.S. racial science to illuminate the complex and entangled processes of ideology, epistemology, and materiality in the construction of Asian/American racial formation and the Cold War human.

Chapter 1: Terrains of the Experimental War

> My father was hardly himself during the war, then I was born during the era that hardly existed, and, therefore, I hardly existed without DDT. Beauty is pleasure regarded as quality of a thing. I prefer a paper closet with real paper dresses in it. To be born hardly, hardly after the hardliest of wars, is a matter of debate. Still going forward. We are, that is. Napalm again. This is the BIG PICTURE. War and its masses. War and its men. War and its machines. Together we form THE BIG PICTURE.
>
> —"Woe Are You?" Don Mee Choi, *Hardly War* (2016)

In *Hardly War* (2016), Korean American poet and translator Don Mee Choi reflects on her own birth in the "hardliest of wars," emphasizing her own emergence out of a war consistently forgotten within the global imaginary—a war *hardly* existing, much less remembered. The recurring question across multiple poems in Choi's collection is: what is the *nation*? Reverberating in the aftermath of multiple wars across Asia, Choi repeatedly employs the rhetorical gesture of the *equals-sign* (=) to draw equivalence between the "nation" and markers of political, social, and embodied difference—such as "race," "beauty," "ugly," and "gook." In her opening prose, Choi articulates how her upbringing in South Korea ingrained in her a sense of "race = nation," wherein "she think[s] race as nation and of nation as race."[1] Thus, she draws attention to the nationalization of South Korea in the immediate aftermath of Japanese decolonization as not only an amalgamation of a collective identity around a shared sense of being "Korean" as ethnic collective, but also a racialized, geopolitical Cold War project that attaches markers of social difference that implicate "Korea" in its own race-making project. Whereas conventional accounts of race in U.S. frameworks of ethnic studies default to its

[1] Don Mee Choi, *Hardly War* (Seattle, WA: Wave Books, 2016), 3

condition as a sociopolitical and legal construction within an ostensibly liberal multiculturalist nation-state, recent work in the field often cites Ruth Wilson Gilmore's powerful definition of racism to articulate its necropolitical dimensions: "the state-sanctioned or extralegal production and exploitation of group-differentiated vulnerability to premature death."[2] Choi's poetic description of South Korea, then, hinges upon this "group-differentiated vulnerability" as itself a product of nation-state formation in the militarized schematics of the Cold War, wherein the nation itself operates as a racialized marker of difference that designates an entire nation slated for expendability in the operations of the U.S. war machine.

Elucidating the machinations of race during the Korean War—and the Cold War in Asia more broadly—is a complex endeavor, precisely because the mappings of racialization onto these political geographies do not fit neatly into pre-existing categories of race. Specifically with regards to the construction of the "Oriental" figure across Cold War contexts, Sunny Xiang notes that "this figure became overdetermined during the cold war in the specific sense that it produced a glut of conjectural thinking and truth claims based on the competing exigencies of ideological affiliation and racial filiation."[3] In other words, the "Oriental" is produced through Western anxieties surrounding the expansion of communism, and their *ideological difference* marks racial difference in conjuring the specter of enmity with conventional schematics of war as a heroic encounter between "good" and "bad" Asians. This dichotomy, as Simeon Man alludes, is expressed through Asian *utility* to the project of capitalist modernity, as he writes:

> As the United States sought to uphold liberal democracy and defeat communism, Asians became cast as either "good" or "bad," those whose lives were deemed worthy and productive under capitalism and those cast as its perpetual others. These "bad" Asians—the communists, political agitators, labor radicals, and "Viet

[2] Ruth Wilson Gilmore, *Golden Gulag: Prisons, Surplus, and Opposition in Globalizing California* (Berkeley, CA: University of California Press, 2007), 28
[3] Sunny Xiang, *Tonal Intelligence: The Aesthetics of Asian Inscrutability During the Long Cold War* (New York: Columbia University Press, 2020), 33

> Cong"—were monitored, jailed, tortured, or killed. Undergirding racial liberalism and its mandate of national inclusion, then, was an ongoing war against a new enemy, a communist menace that was also a racial menace, whose differentiation and expulsion from the national community was achieved in tandem through state violence.[4]

In this regard, Asians *useful* to the project of capitalist expansion—the soldiers, combat medics, diplomats, scientists, and other collaborators with U.S. empire—were granted the elusive promise of inclusion, and incorporation into the imperial regime that buttressed the racialized specter of communist advancement. The "new enemy" that Man writes of, then, is that of the racialized enemy impeding the march of progress towards the haven of liberal capitalism, the communist that, in turn, must be eradicated. Race, as a structural form, inheres not through external markers of the skin, but through ideological allegiances that construct those slated for premature death, and those incorporated into empire. Yet, this dichotomy elides the construction of a third category of Asian bodies: what do we make of Asian bodies that perform a *useful* function for the U.S. war machine, but are not laborers, or human, at all? How do we grapple with the Asian body whose *death* materializes utility for the war machine, one who accrues value through its expendable disposability in larger pursuits of abstract notions of freedom, liberty, and knowledge?

This chapter theorizes the Cold War as a series of *experimental knowledge projects*, developing an account of war that contends with the role of war as a *generative* project, one that begets new forms of knowledge (as capital) that expands the limits of the human in perfecting the operations of the war machine. Writing about developments in biomedicine that emerge out of a national, affective attachment to total war, Jennifer Terry suggests that while "war is horrible…it is also an occasion, site, or cause for great innovations and advances of medical

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[4] Simeon Man, *Soldiering through Empire: Race and the Making of the Decolonizing Pacific* (Berkeley, CA: University of California Press, 2018), 3

knowledge for devising more human ways to fight wars."[5] In this political economy of total war, the racialized expendability of people in the Global South serve a vital purpose—their deaths ensure the liveliness of future worlds embedded in global capitalism, as their bodies function as experimental fodder in formulating new conditions of the human from which they are excluded. This destruction, in turn, also debilitates alternative epistemologies that threaten the hegemony of knowledge projects created by militarized science, consolidating the liberal human as a universal episteme that governs the logics of freedom across the Global South during, and long after, the perpetual Cold War.

Born from the "hardliest of wars," Choi's poetry articulates the dimensions through which contemporary South Korea is itself a nation produced through the material ramifications of warfare. In her poem "Woe Are You?" that serves as this chapter's epigraph, she references two technologies integral to the militarization of the South Korean peninsula—DDT, an insecticide used to control unruly ecologies along the De-Militarized Zone (DMZ) that separated North and South Korea in the aftermath of the armistice agreement, and napalm, an incendiary substance used largely in infrastructural warfare. Technologies of mass death—for both humans and nonhumans—come to be the condition of possibility for the emergence of both Choi and South Korea as subjects of history, products of the transformation of the Korean Peninsula into what Grace Cho calls a "living laboratory for technologies of domination and as a site of contestation over the United States' fantasy of itself as a nation of saviors."[6] Writing about the U.S. military's usage of napalm in the Korean War, Cho writes:

> This was more napalm than had been used against Japan in World War II and more than would later be dropped over Vietnam. However, the use of napalm

[5] Jennifer Terry, *Attachments to War: Biomedical Logics and Violence in Twenty-First Century America* (Durham, NC: Duke University Press, 2017), 15
[6] Grace Cho, *Haunting the Korean Diaspora: Shame, Secrecy, and the Forgotten War* (Minneapolis, MN: University of Minnesota Press, 2008), 7

> would not become an issue of widespread public concern in the United States until years later, when Americans saw images of Vietnamese children being burned alive. When social protest against the Vietnam War solidified, U.S. military practices during the Forgotten War began to resonate. But between 1950 and 1953, neither did the U.S. government exhibit restraint in its deployment of "weapons of mass destruction," a term that came into common usage in military vocabulary during this period, nor did the practices of warfare become public knowledge in the United States.[7]

Here, Cho urgently addresses the "forgotten" nature of the Korean War within popular memory of the Cold War, a moniker that indexes its elision within structural practices of memory that place greater emphasis on the Vietnam War as the more visible "hot" war of the Cold War.[8] Napalm's destructive effect—which I will detail later, in the context of the Vietnam War, in chapter 4—becomes elided from cultural memories of war, for napalm is perpetually attached to the famous "napalm girl" photograph etched into the anti-war social protests of the 1970s.[9] Yet, Cho also misreports the statistic claiming that the U.S. military deployed more napalm in the Korean War than it did in the Vietnam War—the source she garnered this statistic from is GlobalSecurity.org, a website documenting background information and history regarding transnational militarization, security, and intelligence. In their entry "Napalm in War," they report that 400,000 tons of *napalm* were deployed in the Vietnam War, compared to 600,000 tons of napalm *and other bombs* in the Korean War.[10] This confusing aggregation of napalm into "and other bombs" obscures the actual statistics of napalm's usage in the Korean War, which

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[7] Ibid., 71

[8] In addition to Cho's work, for more context on the structural forgetting of the Korean War, see Daniel Y. Kim, *The Intimacies of Conflict: Cultural Memory and the Korean War*, (New York: New York University Press, 2020); Crystal Mun-hye Baik, *Reencounters: On the Korean War and Diasporic Memory Critique* (Philadelphia, PA: Temple University Press, 2019); and Bruce Cumings, *The Korean War: A History* (New York: Modern Library, 2010)

[9] See Nick Ut's Pulitzer Prize winning photograph "The Terror of War," depicting a nine-year-old girl struck by a napalm bomb in the village of Trang Bang. The history of this girl, Phan Thi Kim Phuc, is also documented in Denise Chong's biographical account, see Denise Chong, *The Girl in the Picture: The Story of Kim Phuc, the Photograph, and the Vietnam War* (Toronto: Penguin Canada, 2006), 362

[10] "GlobalSecurity.org, "Napalm in War," https://www.globalsecurity.org/military/systems/munitions/napalm-war.htm (accessed 5/18/2022). Cited in Cho, *Haunting the Korean Diaspora*, 214 n57

historian of napalm Robert Neer and others have amounted to approximately 32,357 tons over the span of three years.[11]

I recount this statistical mishap not to invalidate Cho's urgent claim to rethink how we remember the Korean War, but rather to emphasize a reorientation in *how* we consider this historiography—instead of acquiescing to an urge to remember wars in a comparative framework that treats war as distinct events in a linear progressive timeline, I argue for the necessity of understanding the Korean War within the larger Cold War as a set of *experimental processes* that inhere across time and space. Rather than attempting to emphasize the importance of the Korean War by animating its death counts and levels of material destruction in *comparison* to the Vietnam War, it is urgently necessary that we think relationally in terms of how material destruction in the Korean Peninsula is very much the condition of possibility for future violence to come in Vietnam. Through the transformation of Korea into a *laboratory* of experimentation, the U.S. military came to see the *utilitarian value* of napalm as a weapon of mass destruction—which, in turn, facilitated its increasing deployment in the war in Southeast Asia. Thus, a relational historiography between Southeast Asia and Korea compels an analysis that grapples with the transformation of differently racialized Asian bodies as expendable fodder in the living laboratory of war, shaping the form of the U.S. war machine for generations to come.

This chapter examines Don Mee Choi's poetry alongside the work of Hmong American poet Mai Der Vang in order to develop a genealogy of war that connects Korea and Southeast Asia as Cold War geographies and political sites of struggle that generate imperial knowledge formations through military discourses of experimentation. I develop an account of the *experimental war*, a moniker that does not attempt to rename the "Cold War," but rather situates

[11] Robert Neer, *Napalm: An American Biography* (Cambridge, MA: Harvard University Press, 2015), 111

the genealogy of multiple "hot" wars in the Cold War era as a set of experiments that develop knowledge for future wars to come. In doing so, I attempt to disrupt dominant historiographies that bifurcate Korea and Southeast Asia as distinct sites of militarized violence. Indeed, the very naming conventions of U.S. military intervention in Asia and the Pacific illustrate this very historiography. The Korean and Vietnam Wars are named through positioning the split nations of Korea and Vietnam as adjectival modifiers for the term "war," privileging the site of the nation and battlefield as premier sites for waging war. For the Vietnam War in particular, Khatharya Um argues, "semantically locating it in Vietnam also has the effect of reducing the conflict to a singular theatre."[12] While Um is drawing attention to the elision of Cambodia and Laos as significant theaters of war in Southeast Asia, her claim about the limited naming of the "Vietnam War" also indexes the epistemic disappearance of the connective tissue that binds separate wars across disparate geographies and temporalities through Cold War paradigms of knowledge production. Atomizing distinct terrains of contestation in Asia, these naming conventions cleave Cold War terrains from larger genealogies of militarized destruction that proliferate Asia and the Pacific—from sites of occupation to institutions of knowledge production.

The first part of the chapter establishes an analytical frame that understands the Secret War in Laos and Korean War in historiographical relation, drawing from racial logics of "secrecy" and "forgetting" that prototypically frame these two wars in the imaginaries of Cold War memory. In doing so, I argue for the need to think relationally across these sites of experimentation, articulating the epistemological constructions through which war comes to materially matter in the context of Cold War knowledge production. The second part of this chapter turns to Vang and Choi's engagements with *terrain* of warfare, charting a theoretical

[12] Khatharya Um, "The 'Vietnam War': What's in a Name?" *Amerasia Journal* 31, no. 2 (2005): 134-139

trajectory of how “more-than-human” terrains function as experimental sites of militarized scientific knowledge production. Engaging with accounts of “human terrain” as the anthropological extraction of knowledge from human inhabitants of enemy terrain, I expand this framework to encompass the more-than-human world that drives knowledge production in the natural sciences in service of the U.S. war machine. Thinking alongside different modes of knowledge production—historical, cultural, and scientific—this chapter offers a rumination on the formal and aesthetic processes of documenting the history of multiple wars in Asia as relational accounts of experimentation, offering new ways to interpret the archive of Cold War science.

Structures of Forgetting in the Cold War

Within Asian American studies and political discourse, the Korean War has often been dubbed either the “forgotten war” to index its elision within structural memories of the Cold War, or the “unending war” to call attention to the fact that no formal peace treaty has been signed between the United States and the Democratic People’s Republic of Korea (DPRK) calling for an official end to the war.[13] Both of these designations of war in the Korean Peninsula—as forgotten and unending—materialize the racial memory of war in the nation as a specter that disappears from national consciousness in the United States, yet becomes infrastructurally embedded in everyday life across geographies of empire as the military build-up in Asia and the Pacific is organized around a condition of perpetual war. As such, Jodi Kim articulates the Korean War “not simply as a congealed historical episode that is given narrative

[13] See Cho, *Haunting the Korean Diaspora*; Crystal Mun-Hye Baik, *Reencounters: On the Korean War and Diasporic Memory Critique* (Philadelphia, PA: Temple University Press, 2020); Monica Kim, *The Interrogation Rooms of the Korean War: The Untold History* (Princeton, NJ: Princeton University Press, 2019); Christine Hong, “The Unending Korean War,” *positions* 24, no. 4 (2015): 597-617

form after-the-event, but also as a *Cold War epistemology in the making*."[14] In other words, Kim emphasizes the need to approach the Korean War not merely as an object of historical study, but a racialized episteme that generates Cold War knowledges that consolidate the emerging blueprint for the liberal human across military occupation and intervention in Asia and the Pacific.

While framing the convergence of memories and epistemologies of wars in Korea and Southeast Asia offers occasion for articulating the complex geopolitical formations of knowledge production in the Cold War writ large, it is simultaneously true that the Korean War has been rarely, until relatively recently, approached on its own terms. With the Vietnam War reigning dominant within the collective national consciousness in the U.S. as a war of failed masculinity, Grace Cho wonders if the urge to frame memories of the Korean War "through Vietnam" surfaces only "because a history of conflict between South Korea and the United States is unintelligible on its own?"[15] To approach the Korean War's epistemic erasure, then, is neither to treat it as "another Vietnam" nor to restore it to intelligibility within national discourses of militarized memory, but to engage its genealogical dispersals that exceed the boundaries of the Korean nation-state and contaminate the very structure of *war* as a political project and structure of feeling that we know and live. As Crystal Mun-hye Baik articulates, the Korean War "generates *diasporic excesses*, or recalcitrant formations that refuse to be easily deciphered or tamed by the nation-state."[16] These *excesses* conjure a genealogy of war in the Korean peninsula that cannot be accurately captured solely through a historiography that privileges the confined temporality of battlefield conflict in 1950-1953, and instead necessitate temporal registers of

[14] Jodi Kim, *Ends of Empire: Asian American Critique and the Cold War* (Minneapolis, MN: University of Minnesota Press, 2010), 145 (emphasis mine)
[15] Cho, *Haunting the Korean Diaspora*, 58
[16] Baik, *Reencounters*, 25-26

memory that engage war "as a temperament rather than a timeline."[17] Not just "another Vietnam," the Korean War is a global formation that has resonances beyond its temporal and geographical frames that give language to articulating the racialized and gendered geopolitics of Cold War knowledge production.

Don Mee Choi's *Hardly War*, I argue, demonstrates poetry's illegibility to nationalist articulations of war as a spectacular event of territorial conquest and battlefield conflict; instead, her explorations of war as a perennial structure of feeling reveal how war conditions racialized subjects into the epistemic organization of the Cold War human. *Hardly War*, I suggest, reveals how Korea functions as an early incubator for experimenting on and developing the racial logics of the Cold War human, that position Asian bodies as vital to the project of capitalist modernization through both their assimilation and expendability. Choi was born in Seoul, Korea during the Park Chung Hee military dictatorship in a "tiny, traditional, tile-roofed house," property acquired with "award money [her father] received for his photographs of the April 19, 1960 Revolution."[18] A material receptacle of memory, Choi's childhood home bears the affective legacy of revolutionary possibility against the U.S.-installed government of Syngman Rhee—it is this memory of demilitarization that Choi still returns to: "It is [her] psychic base, a site of perpetual farewell and return, a site of [her] political act—translation and writing."[19] Both of these political projects hinge on a logic of legibility—with translation's prerogative to make the foreign subject legible within English-language spheres and poetry's aesthetic capacity to render diasporic subjects *il*legible within Western national frameworks. As Sunny Xiang argues, Cold War frames of knowledge seek to translate the "inscrutability" of the Oriental subject into forms

[17] Xiang, *Tonal Intelligence*, 6
[18] Don Mee Choi, *Hardly War* (Seattle, WA: Wave Books, 2016), 3
[19] Ibid.

of "racial intelligence" crucial "neither [just] for containing Oriental enemies nor promoting Asian friends, but distinguishing one from the other."[20] Thus, even as Choi's work carries an implicit promise to make the Korean War legible to U.S.-based audiences through the act of translation, her poetry's refusal to adopt teleological account of the war belies the incorporation of Korean diasporic subjectivity into postwar, self-representational narratives of national reconstruction in favor of the demilitarization of the peninsula.

Choi herself employs a lens of Southeast Asia for understanding the Korean War; as she notes, her father's career as a wartime photographer saw him stationed primarily within war zones in Laos, Cambodia, and Vietnam during her upbringing, and as a result "[she] saw more of [her] father's photographs than [her] father."[21] While elsewhere I have discussed the role of wartime photojournalism in producing collective consciousness around militarized brutality and (in)humanity,[22] for Choi these photographs of war became a focal point of developing familial kinship with her father—a genealogical memory inherited through images of war and militarization generated through wartime separation. U.S. military intervention in both Korea and Southeast Asia, then, operates as a material force that binds Choi's memory across generations, bringing the two wars together into temporal consonance that highlight their shared genealogies. Dispensing with the prototypical naming conventions of "Korean" and "Vietnam" that privilege Cold War battlefields, Choi adopts another modifier—*hardly*—which materializes war as a palimpsestic presence that is continually felt and waged across everyday life in multiple geographies simultaneously. *Hardly*, denoting both "barely" and "violently," articulates the dispersal of war's material and epistemological manifestations across temporal and spatial

[20] Xiang, *Tonal Intelligence,* 36
[21] Choi, *Hardly War*, 4
[22] See Keva X. Bui, "Objects of Warfare: Infrastructures of Napalm in the Vietnam War," *Amerasia Journal* (2022). An expanded version of this article also appears in Chapter 4 of this dissertation.

geographies; as Xiang notes, "this formulation thematizes war's lack of origin and resolution."[23] It is this cacophony of war's perpetual presence that refuses the atomization of distinct terrains of contestation across Asia and the Pacific.

However, to understand the Korean War within a longer genealogy of the *experimental war*, it is also important to note that while the Korean War functions as a pivotal node in the network of U.S. Cold War geopolitical containment, it is first and foremost a *civil* political conflict between contesting ideologies of governance and economies of power in the Korean peninsula emanating from Japanese colonization. Conventional U.S. accounts of the Korean War date its origin to 1950 when the northern Communist regime launched an offensive on South Korea—yet, this account elides the geopolitical tensions and skirmishes that long preceded this invasion.[24] The impulse to frame the Korean War as principally as Cold War conflict compels a vision of U.S. humanitarian benevolence that works to quell the expansion of communist spheres of influence. Yet, as Bruce Cumings asserts, the DPRK arose primarily in response to Japanese colonialism in the peninsula and its invasion in Manchuria in 1932; as he writes, "after every other characteristic attached to [the North Korean] regime—Communist, nationalist, rogue state, evil enemy—it was first of all, and above all else, an anti-Japanese entity."[25] In this regard, it is crucial to understand the Korean War as primarily a *local* war that emerges out of decades of *overlapping* formations of imperialism.[26]

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[23] Xiang, *Tonal Intelligence*, 5

[24] See Heonik Kwon, "Introduction" in *The Other Cold War* (New York: Columbia University Press, 2010)

[25] Cumings, *The Korean War*, 45

[26] In the introduction to the journal *Verge: Studies in Global Asias*, editors Tina Chen and Eric Hayot articulate the urgent project of studying Asia as an expansive network of relations, of power and otherwise, that consolidates in global imaginaries of "Asia" as an unfixed political project. Responding to the disciplinary boundaries separating Asian studies, Asian American studies, and Asian diasporic studies, Chen and Hayot frame "global Asias" as a paradigm that can bring these fields into non-alignment to reveal their mutual resonances. While other iterations of global might singularly focus on transnationalism as an abstract form, Chen and Hayot highlight that the transnational is *composed of the local*, and that the "globalization" of Asia is not merely a product of capitalist modernization, but a process of thinking relationally across local contexts and what that reveals about the social and

Within this paradigm, Korea's localized condition of "limited" war also functions as a site of experimentation for modes of liberal and colonial governance that shape the consolidation of "war" as a global condition of counterinsurgency. In the post-World War II rehabilitation of South Korea under U.S. military occupation, American officials sought to reincorporate Korean collaborators with the Japanese colonial regime in order to gain insight on counterinsurgent efforts aimed at quashing guerilla resistance. This method of counterinsurgency "was premised on using climate, terrain, and unflinchingly brutal methods to separate guerilla bodies from their peasant constituents,"[27] and translated efforts to manipulate terrain into anti-communist military projects redeployed in other terrains of the Cold War. While the United States is often understood as the primary aggressor in Cold War violence—and indeed, this historical framing is urgently necessary to underscore the scope of the U.S. military-industrial complex—the backdrop of Japan's enduring legacy of counterinsurgent experimentation in South Korea fundamentally shapes the unfolding apparatus of the U.S. war machine.

Just north of the Korean Peninsula, during the Japanese colonial regime in Manchuria, the Imperial Japanese Army established Unit 731, a covert biological and chemical warfare research and development unit that utilized prisoners as experimental subjects. These projects ranged from vivisections and frostbite experiments, to the development biological warfare agents such as plague-infected fleas. Manchuria, as an outpost of Japanese colonization, provided an ideal laboratory for experimentation in the development of these tactics.[28] At the same time, the increasing tensions of World War II in Europe accelerated the expansion of several U.S. military

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political world of "Asia." See Tina Chen and Eric Hayot, "Introducing Verge: What does It Mean to Study Global Asias?" *Verge: Studies in Global Asias* 1, no. 1 (2015): vi-xv

[27] Cumings, *The Korean War*, 49

[28] For more historical background on Unit 731, see Sheldon Harris, *Factories of Death: Japanese Biological Warfare, 1932-1945, and the American Cover-up* (New York: Routledge, 1994)

science projects, including their own biological warfare research program. Under the guise of the Chemical Warfare Service (CWS) and operating at Fort Detrick, Maryland, scientists initiated a similar research agenda to Unit 731—studying a host of bacterial agents that possessed biological warfare potential. At the end of World War II and the dismantling of Japanese empire, the United States refused to pursue charges of crimes against humanity against Japan and proceeded to participate in *covering up* the allegations of war crimes and biological weapons research in Manchuria, in exchange for the scientific data collected in the Manchurian "factory of death."[29] This form of what Lisa Yoneyama calls "victor's justice" overlooked war crimes committed by the Japanese imperial army in order to bolster the stranglehold of U.S. militarization across Asia and the Pacific, an anti-communist alliance that exchanged death of colonized peoples for the experimental processes of warmaking in the region.[30]

The U.S. military's cover-up of Unit 731 amongst other Japanese war crimes illustrates the driving logic of the Cold War war machine's expansion across Asia and the Pacific—the incessant drive to establish counterinsurgency by any means necessary. In this manner, the elision of crimes committed against colonized people in Manchuria and Korea reveals the extent to which experimentation in war functioned as a transnational process of collaboration that traded expendable, colonized life in exchange for scientific data integral to the "liberal progress" of securing capitalist modernity. Thus, as North Korea sought to establish its communist regime in the peninsula, its principal desire was the eradication of legacies of Japanese colonialism and collaboration—of which the United States was explicitly complicit within. Within this historical context, it is impossible to separate the Korean War from this experimental legacy of knowledge-

[29] Ibid., specifically "Part II: Cover-up"
[30] See Lisa Yoneyama, *Cold War Ruins: Transpacific Critique of American Justice and Japanese War Crimes* (Durham, NC: Duke University Press, 2016), 30-36

making, a paradigm that transforms racialized life into the bare matter of counterinsurgent scientific research—a project that extends across Japanese and U.S. overlapping empires in Asia, and shapes the form of war to come in the Cold War. The military's pursuit of scientific progress has always been predicated on warmaking projects that dispose of the lives of colonized peoples, from Korea to Southeast Asia, the Cold War is predicated on a Cold War knowledge project that dispenses with life in favor of universalized structures of knowledge.

***Yellow Rain* and Cold War Knowledge-Making**

Shortly after the formal withdrawal of U.S. military troops from Southeast Asia at the official culmination of the Vietnam War, allegations of chemical and biological warfare committed against Hmong refugees began to emerge. These reports documented a mysterious yellow substance dispersed from airplanes flying over jungle trails, and doctors in refugee camps in Laos and Thailand testified to treating refugees displaying unusual symptoms: including vomiting, respiratory issues, blurred eyesight, and hemorrhaging caused by a suspected chemical attack. In 1981, perhaps prematurely, U.S. secretary of state Alexander Haig Jr. proclaimed that the mysterious substance, infamously dubbed "yellow rain," was a chemical compound composed of trichothecene mycotoxins—organic toxins produced by fungi. Haig alleged that yellow rain was manufactured by the Soviet Union and supplied to communist insurgents in Laos and Vietnam to unleash onto refugees fleeing the region, constituting a potential violation of the 1972 Biological Weapons Convention agreement.[31] The controversy spurred a range of political and scientific debates contesting the authenticity of Hmong testimonies of chemical warfare:

[31] Signed in 1972 and in effect by 1975, the Biological Weapons Convention agreement is a disarmament treaty that banned biological and toxic weapons by prohibiting their development, production, and deployment in international arenas of war. Setting the standard for a more "humane" form of warfare, the BWC agreement has been signed and ratified by 183 nations, including the United States, the Soviet Union (now Russia), and the United Kingdom.

ranging from military scientists' mobilizing discourses of yellow rain to restart U.S. chemical warfare programs to Harvard biologist Matthew Meselson's popular theory that the attacks were actually just feces disseminated from mass-migrating honeybees.[32]

abundance of pollen
its presence suggested that yellow rain has
a natural origin

best of our knowledge
all the samples of the yellow material examined under the microscope have, without exception, been found to consist primarily of pollen

to discuss the evidence
Stewart Schwartzstein of the Institute for Foreign Policy Analysis
one of us (Meselson) assembled a conference in Cambridge, Mass

the feces
take the form of small, yellow, pollen-filled spots that dry to a powder

yellow rain
an accurate description of the fecal droppings of honeybees

plant taxa
identified from the pollen in yellow rain are common in Southeast Asia

more vigorous test program
large-scale field tests should be conducted to determine the effectiveness of specific BW agents under operational conditions

most attractive and profitable uses is in the field of covert operations

special agents or guerilla forces operating behind enemy lines to place small quantities of BW agents accurately where they could be most effective

distinction between this type of BW and naturally occurring outbreaks is most difficult

135

hypothesis
yellow rain is the feces of
Asian honeybees

SUBJECT: Meeting With COL Robinson, HQDA DCSOPS on 9 July 82

1. Purpose and Activity Visited: visited COL (P) Bobby Robinson, Deputy Director, Nuclear and Chemical Directorate, DCSOPS, HQDA at the Pentagon on 9 July 1982. The purpose of the meeting was to acquaint COL Robinson with the scope of LSB CBW intelligence activities

B. COL Robinson highlighted the US Army's increasing interest in CW.

(1) The level of Army emphasis is reflected in the resources allocated to the CW mission. The budget has increased from 60 million dollars to over six billion dollars for offensive CW and defensive BCW related activities over the POM years (five year program).

Stockages of chemical defensive equipment are being increased. status of the principal CW R&D laboratory, Chemical Systems Laboratory, has been increased

increased funding and involvement of all major laboratories. binary chemical munitions been partially funded. expanded research and development

Dr. Matthew Meselson, who was the first to tell me about Jerry Daniels' death, called me this past spring (1987) to again deliver bad tidings

General Robinson, a colonel at the time Bohica took place and one of the persons I had originally called to verify the mission, had allegedly committed suicide

was at that time Commander of the Pine Bluff Arsenal for Chemical and Biological Warfare

second
main figure
connected with the mission
to die mysteriously
during '81 Robinson was working on something very sensitive with a chemical warfare problem in Indochina

138

Figure 1.1: Scans from "Composition 4," Yellow Rain, Mai Der Vang, 2021. Text drawn and excerpted from declassified and congressional reports pertaining to yellow rain.

Motivated by a "need to dig," Hmong American poet Mai Der Vang waded through thousands of pages of archival documents surrounding the yellow rain controversy—redacted reports detailing the unreliability of Hmong testimonies, military reports on potential and actual incidents of chemical warfare, inconsistencies across environmental tests of afflicted matter, and

[32] For more context on the yellow rain scientific controversy in the United States, see Rebecca Katz, "Yellow Rain Revisited: Lessons Learned for the Investigation of Chemical and Biological Weapons Allegations." (Princeton University: PhD. Dissertation, 2005)

various political contestations attesting to the "true" nature of the mysterious yellow substance.[33] Contesting dominant historiographies of yellow rain that privilege supposedly objective scientific knowledge that strategically discounts Hmong narratives, Vang's poetry collection *Yellow Rain* weaves declassified reports with poetic musings, engaging what Ma Vang calls a "fugitive" refugee epistemology that unearths the secrets of the aptly named Secret War in Laos. As she writes, "these secrets do not just belong to the state, they are also kept by Hmong who bear witness to the violence and seek to tell a particular version of history."[34] In this regard, *Yellow Rain* intervenes into historical discourse surrounding the uncertainty of yellow rain's political narration to offer poetry as an experimental form to document divergent histories of what constitutes "yellow rain" not as an *authoritative* account of history, but as an *epistemology* that unearths the machinations of the U.S. imperial war machine. Remapping the conditions of knowledge production that dictate who may narrate history, Mai Der Vang situates yellow rain within a broader history of U.S. military experiments in warfare, wherein the deployment of scientific knowledge production functioned to subjugate unruly enemy terrain and suppress Hmong testimonies of history. In response, Vang's refugee poetics traverse the boundaries of geopolitical borders and ideologies to bear witness to the materiality of war as it is embedded within terrains of violence—even as that violence is dispersed across diaspora.

In her opening poem, "Guide for the Channeling," Vang muses on the methodological force of her collection, charting a new cartography for Hmong refugee storytelling that travels through, and exceeds, the archives of Cold War science shrouded in secrecy. While the, at times

[33] Mai Der Vang, "Yellow Rain: A Reckoning and Reinvestigation into the Dismissing of Hmong Allegations," *Entropy Magazine* (2021). https://entropymag.org/yellow-rain-a-reckoning-and-re-investigation-into-the-dismissing-of-hmong-allegations/

[34] Ma Vang, *History on the Run: Secrecy, Fugitivity, and Hmong Refugee Epistemologies* (Durham, NC: Duke University Press, 2021), 9

spectacular, and at other times invisible, violence of chemical warfare features viscerally throughout *Yellow Rain*, "Guide for the Channeling" turns our attention to the mundane memos and protocols lurking in the stacks of redacted reports pertaining to the Secret War. While the Korean War has been popularly termed the "forgotten war," for its structural forgetting within Cold War memory, the Secret War's naming comes from its covert status as a CIA operation to recruit Hmong and Indigenous Lao people into paramilitary operations to unsettle a region designated specifically as neutral territory by international tribunals.[35] As a result, the history of the war is shrouded in secrecy—an opaque form of knowledge production that obscures, rather than clarifies, the function of the U.S. war machine in Southeast Asia. Its secret nature also necessitates different heuristics for narrating the historical record of the Cold War precisely because the Secret War, as Ma Vang notes, itself "exists as an archive that produces knowledge about epistemic erasure and violence in its attempt to reproduce the traditional record about war and refugees."[36]

"Guide for the Channeling," imbues a sensibility of war that tracks its epistemic and material resonance across both mundane spaces of the archive and the ecological terrain of war:

> Here in sunk villages
> of the disregarded. Here
> where even the dirt of
>
> the land cannot muster
> against the threat of air.
> Biomedical, vegetation,
>
> munitions unfound, every
> footprint incarnate.

[35] For more thorough historical accounts of the Secret War in Laos, see Timothy N. Castle, *At War in the Shadow of Vietnam: United States Military Aid to the Royal Lao Government, 1955-75* (New York: Columbia University Press, 1993); Kenneth J. Conboy and James Morrison, *Shadow War: The CIA's Secret War in Laos* (Boulder, CO: Paladin Press, 1995); and Terrence M. Burke, *Stories from the Secret War—CIA Special Ops in Laos* (Durango, CO: La Plata Books, 2012)
[36] Vang, *History on the Run*, 9

Where highlands tangle

their echoes to the ground
A place no matter how
remote will always be

too near and too much
a reminder of an expired
war. Refugees not called

as people only to be
called the outcome of an
event. We are venturing

into swell beyond swelling
of paperwork and protocol
slips of memo and routing

cable and classified meeting.
Here is the talk, biological
weapon, yellow spots

apiary blame, for decades
to wane and cold
filed. Believe me as a

torch of this wandering that I
have been digging
within the origins of

redaction.[37]

Taking the reader to the "sunk villages of the disregarded" in Laos, Vang places emphasis on the material geographies transformed in the aftermath of U.S. military intervention in Southeast Asia. Littered with material waste, both chemical and metallic, of U.S. scorched earth warfare that stretched across the highland terrains of Laos to the mangrove forests of Vietnam, the legacy of aerial warfare persists within the landscape of Southeast Asia as an archival record of the

[37] Mai Der Vang, *Yellow Rain: Poems* (Minneapolis, MN: Graywolf Press, 2021), 6-7

unfolding violence of the Secret War.[38] As a guide for the pages of poetry to follow, Vang's opening poem draws attention not only to Laos' physical distance from the imperial metropole of U.S. empire in signaling its expansive reach, but to the interconnectedness of the militarized ecology—composed of an unruly assemblage of vegetation, unfound munitions, and incarnate footsteps—to the diasporic population of refugees displaced in the war's afterlives, "as people // only to be called the outcome of an event." War, however, is not merely an event, but as Thuy Linh Tu notes, a "sensibility' that "may seem out of time and out of place, but that allow[s] us to sense differently."[39] Thus, while refugee histories are mired in the red tape of bureaucratic archival documentation—military and state reports that attest to the *political* designation of the "refugee"—Vang's poetry traces the refugee's material and diasporic relations to other ecological histories of war's sensibility, invoking what Heidi Amin-Hong calls "feminist refugee memory," which "foregrounds nonhuman agency" in articulating humans and the environment as shared participants in shaping historical narratives in the wake of war and material violences of empire.[40]

Locating militarized knowledge within the archives of Cold War science, Vang's poetry collection remaps the terrains of Cold War warfare to consider the political and material effects of *epistemological* control over the interconnected ecosystems of Southeast Asia as a physical project of domination. Waged across multiple battlefields—primarily in the Global South—an instigated by world leaders invested in control over the exchange of capital, territory, and power

[38] Davorn Sisavath powerfully argues that the material waste of U.S. military intervention in Southeast Asia can be read as an archive of militarism, one that reveals the enduring legacy of militarization that exceeds the temporality of war and continually structures everyday life in war's aftermath. See Davorn Sisavath, "The US Secret War in Laos: Constructing an Archive from Military Waste," *Radical History Review*, no. 133 (2019)
[39] Thuy Linh Tu, *Experiments in Skin: Race and Beauty in the Shadows of Vietnam* (Durham, NC: Duke University Press, 2021), 19
[40] Heidi Amin-Hong, "Militarized Sustainability: Feminist Refugee Memory and Hydropower in the Mekong Delta," *Verge: Studies in Global Asias* 7, no. 1 (2021): 122

that may be gained through physical domination, war has historically dictated the shifting geopolitical boundaries of the nation that sediments globalized currents of power. It territorializes; it produces new geographies of expanding empire that condition entire cities and societies into either destruction or new paradigms of governance that drastically reshape the political atmosphere of burgeoning formations of the nation-state. As Catherine Lutz notes, the expanding reach of militarism "focuses attention on the political realm and suggests that warlike values have an independent ability to drive social change,"[41] wherein "war" functions epistemically to produce material shifts in the social world engendered not merely through physical domination, but an affective reorientation of the world reorganized around an imperial military apparatus. Indeed, war has increasingly adopted a structural, more mundane position within society shifting from its spectacularization best epitomized by the atomic bombings of Hiroshima and Nagasaki. Naming war as itself *experimental* in nature opens up questions about how sites of militarization function as laboratories of knowledge-making—knowledges core to securing governing philosophies that revolve around the twinned geopolitical forces of liberal democracy and communist containment.

More-than-Human Terrain

Throughout *Yellow Rain*, Vang refutes the archive of military science as a space of enclosure, wherein knowledge produced *about* the refugee as a static object of rescue and unreliable narrator of their own experiences and Southeast Asia as terrain to be conquered functions as official state history. Instead, by infusing the static archive with vibrant poetics of refugee and diasporic storytelling, Vang remaps understandings of knowledge production away

[41] Catherine Lutz, "Militarization," in *A Companion to the Anthropology of Politics* ed. David Nugent and Joan Vincent (New York: Blackwell, 2004), 322

from state power towards a more layered critique of science as a political apparatus of global capitalism and militarized intervention. In doing so, she turns attention to the *terrain* of Southeast Asia as an experimental site of imperial formations and epistemologies,[42] one replete with the tensions of more-than-human relations that generate both forms of demilitarized solidarity and sites of imperial knowledge-making.

While terrain conventionally refers to the physical topography of land, U.S. military strategists have often used the term "human terrain" to define ethnographic and anthropological understandings of people who inhabit zones of military operations.[43] Translating cultural knowledge about the racialized Other into vital data for counterinsurgent operations, understanding the human terrain of foreign geographies emphasizes the "volatile and highly contested role of localized academic expertise and information collection as central to the global forever war,"[44] and consolidated the formation of "area studies" as an intellectual and political formation.[45] As Christine Hong argues, intelligence garnered from human terrain was "generated not for its own sake," but rather functions in a political economy of knowledge "deployed to neutralize adversaries…both on the battlefield and in the court of global public opinion."[46]

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[42] In a different context, Elizabeth DeLoughry writes of the colonial conception of the *island*, particularly in the Pacific and the Marshall Islands, is constructed as an ecological laboratory for militarized weapons testing. While her argument specific to the island space mobilizes a "myth of isolation" that renders islands as discrete, controlled testing environments ideal for the sterilized imaginary of the laboratory, her argument that the model of system ecologies "positions laboratory space outside of history (i.e. human presence) and accountability" proves instructive for understanding how war transforms colonized environments into spaces of scientific advancement that can be pursued with impunity and without regard for life itself. In other words, the Pacific, as I will explore in more detail in chapter 2, set the stage for the colonized environment *as laboratory* in a Cold War context. See Elizabeth DeLoughrey, "The Myth of Isolates: Ecosystems Ecologies in the Nuclear Pacific," *Cultural Geographies* 20, no. 2 (2012): 173

[43] See Roberto J. Gonzalez, *American Counterinsurgency: Human Science and the Human Terrain* (Chicago, IL: Prickly Paradigm Press, 2009)

[44] Ronak Kapadia, *Insurgent Aesthetics: Security and the Queer Life of the Forever War* (Durham, NC: Duke University Press, 2019), 62

[45] For more on the consolidation of area studies within the geopolitical agenda of Cold War imperialism and capitalist securitization, see Bruce Cumings, "Boundary Displacement: Area Studies and International Studies during and after the Cold War," *Bulletin of Concerned Asian Scholars*, 29, no. 1 (1997): 6-26

[46] Christine Hong, *A Violent Peace: Race, U.S. Militarism, and Cultures of Democratization in Cold War Asia and the Pacific* (Palo Alto, CA: Stanford University Press, 2020), 140

Knowing the enemy terrain, thus, entailed a deeper understanding of the native and insurgent populations that inhabited it, shaping narratives about racialized populations in the Global South that were inevitably funneled through the ideological war machine that constructs the primitive figures of the "communist" and "terrorist" as the ultimate emblems of enmity. Terrain, here, indexes not merely the militarized space of the battlefield, but rather a site of knowledge-making that generates what Sunny Xiang calls "racial intelligence," the translation of the "inscrutable Oriental" into an object of study that offers strategic information for the operations of the imperial war machine.[47]

Indeed, the racialized terrain of the enemy is funneled through imperial knowledge formations that shape intelligence *about* the racial other, a unilateral transference of knowledge exchanged in colonial spheres. Writing about differential processes of knowledge production that shaped racialized proximities to the "human," Naoki Sakai argues that theory produced in the West is predicated on the Western human's status as "humanitas," an "insist[ence] on being determined not in terms of its characteristics as an object of knowledge, but rather in terms of subjective faculties and productivity."[48] On the other hand, the ethnic Other in the East is produced through the objective gaze as "anthropos," "wisdom could never transcend their ethnic particularity and thus reach the domain of theoretical universality."[49] In other words, while the West is predicated on the production of universal knowledge, the ethnic Other only produces knowledge in specificity as an *object of study*—thus the knowledge generated in this exchange is always anthropological precisely because of their political status designated by racialized exclusion from the human subject of knowledge production. Employed by the imperial war

[47] See Xiang, *Tonal Intelligence*, 34-49
[48] Naoki Sakai, "Theory and Asian humanity: On the Question of *Humanitas* and *Anthropos*," *Postcolonial Studies* 13, no. 4 (2010): 453
[49] Ibid., 452

machine, knowledge produced about racialized terrains simultaneously casts human and nonhuman life as objects of scientific study, consolidating *militarized* knowledge production that rearticulates local understandings of ecological relations into the transnational securitization of insurgent environments.

Even as much of the critical scholarship on human terrain has emerged from studies on the War on Terror and U.S. interventions in Afghanistan, Iraq, and Yemen, this framework proves instructive in not only understanding CIA operations that recruited Hmong and Indigenous Lao populations in its anti-communist crusade in Southeast Asia, but also the redefinition of "terrain" into an assemblage of human and nonhuman relations that generate knowledge to be manipulated in service of the U.S. imperial war machine. Indeed, this more-than-human terrain emerges in Vang's poem "Agent Orange Commando Lava," which juxtaposes the yellow rain controversy with other U.S. Cold War military operations that seek domination over nonhuman environments:

> Even the rain they think they own
> Even the rain as casualty collateral
> Price of their self-worth
>
> Rain as refugee
>
> > *test phase of Project Popeye*
> > *conducted without consultation with Lao authorities*
> > *more than fifty cloud seeding experiments*
> > *outstandingly successful*
>
> Mother Nature to labor
> On their behalf
>
> A climate in constant demise
> In anxiety of karma to be dealt
>
> > *would drastically change the weather patterns*
> > *life cycle of plants and animals may be affected*
> > *formation of fungi and growth of bacteria*

could produce serious localized flooding

If this happened then why
Not yellow rain
If these experiments then
Why not yellow rain If climatic
Repercussions resulting
From experiments
Then why
Not yellow rain[50]

Commenced in 1966, Project Popeye was a cloud seeding program deployed in Vietnam and Laos to increase rainfall to flood supply routes used by the North Vietnamese army. Interspersing excerpts of a memorandum sent to Secretary of State Dean Rusk from his deputy commenting on the potential effects of a cloud seeding program, Vang documents the consequences of Project Popeye's experiments in weather manipulation: disruption of weather patterns, destabilizing the life cycle of plants and animals, bacterial growth, and increased flooding—which was, in the end, the ultimate goal of the project labeled "outstandingly successful." The "success" of the project—measured by its capacity to exert total dominance over nonhuman terrain—underscores the vitality of nonhuman life and animacy to the operations of the U.S. war machine.

Throughout the poem, Vang complicates the relationship between human and nonhuman ecological forms. The line "rain as refugee" constitutes a rhetorical slippage that not only casts rain itself as a displaced figure by militarized science, but in highlighting rain's role as *labor* in the militarization of Laos, also recalls the history of the CIA recruiting Hmong men to serve the U.S. military in destabilizing Laos. Here, human and climate serviced U.S. ambitions to mobilize the region's more-than-human terrain in service of anti-communist, counterinsurgent operations.

[50] Vang, *Yellow Rain*, 85-86

The poem intimates that U.S. tactics of what Vang elsewhere calls "surrogate warfare"[51] not only incorporated populations into its strategic infrastructure, but also manipulated native ecologies as both property "they think they own" as well as "casualty collateral" in the pursuit of counterinsurgent military objectives. In their analysis of the incorporation of robots as surrogate humans enacting the murderous objectives of the war machine, Neda Atanasoski and Kalindi Vora emphasize that even as the nonhuman subject achieves its stated capacity as a killing machine, it also conjures fear of its manufactured autonomy—"the fear conjured by the potential for violence enacted by a nonhuman actor toward a human elicits a desire for the domestication and subsumption of that other back into subjection and servitude."[52] Thus, the more-than-human terrain functions as a surrogate for the U.S. soldier that enacts the murderous function of the military apparatus, yet also poses a threat to the nation-state as an autonomous entity that requires scientific control.

In "Agent Orange Commando Lava," Vang reverses a conventional racial form that casts Asian as dehumanized, robotic labor, instead animating the ecology itself into a working subject in service of militarized securitization—putting "Mother Nature to labor on their behalf." Indeed, as Wendy Chun argues, this dehumanization of Asian labor is essential to the production of the subject of the human, who is "constantly created through the jettisoning of the Asian/Asian American other as robot, as machine-like and not quite human."[53] In this regard, the U.S. military's incorporation not only of the Asian soldier qua robot, but the nonhuman ecological terrain of Southeast Asia, produces the Cold War human through the dispersed *in*humanity of the

[51] Vang, "Yellow Rain," *Entropy Magazine*
[52] Neda Atanasoski and Kalindi Vora, *Surrogate Humanity: Race, Robots, and the Politics of Technological Futures* (Durham, NC: Duke University Press, 2019), 136
[53] Wendy Chun, "Race and/as Technology or How to Do Things Race," in *Race After the Internet* ed. Lisa Nakamura and Peter A. Chow-White (New York: Routledge, 2011), 51

Asiatic across the assemblage of *more-than-human terrain*. As Michelle N. Huang suggests, the interior logic that produces the Asiatic laborer should not merely be refuted as a dehumanizing trope of U.S. popular culture, but as a historical and materialist account of how race inheres in specific bodies as a condition of racial capitalism. Race, in this manner, operates as a "fabricative technology" that is "syncretic in its materiality,"[54] thus transforming the environment into an assemblage, an inhuman laborer of racial capitalism that illustrates how the military-industrial complex organizes both human and nonhuman animacy in service of the U.S. war machine. These techniques of warfare developed and perfected across the experimental terrains of war in Southeast Asia, thus, illuminate the machinations of biopower that exceed liberal humanist frames of governmentality, instead emphasizing how, in the words of Mel Chen, "inanimate objects and nonhuman animals participate in the regimes of life (making live) and coerced death (killing)."[55]

While I have repeatedly emphasized an understanding of the Cold War in epistemological terms as an ideological knowledge project that exceeds the singular geography of the battlefield, here, I also want to accentuate the chemicalized and material terrain of military intervention as a crucial site of knowledge-making within the operations of the imperial war machine. Knowledge produced about and from the terrain of military intervention structure the tactics of U.S. Cold War militarism, as strategies of navigating the unruly terrains of Southeast Asia were central concerns of military scientists.[56] Indeed, as Vang's poem suggests, these militarized terrains are themselves racialized ecologies and infrastructures that serve political functions for both the U.S.

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[54] Michelle N. Huang, "The Posthuman subject in/of Asian American Literature," *Oxford Research Encyclopedia of Literature* (2019): 13
[55] Mel Chen, *Animacies: Biopolitics, Racial Mattering, and Queer Affect* (Durham, NC: Duke University Press, 2012), 6
[56] See Sarah Bridger, "Prologue: The Conscience of a Physicist" in *Scientists at War: The Ethics of Cold War Weapons Research* (Cambridge, MA: Harvard University Press, 2015)

military and its constructed enemies, producing new modes of knowledge for navigating these unruly terrains. Therefore, the capacity to manipulate the environment for tactical benefit became a central goal of the military-scientific apparatus. Although weather manipulation garnered controversy for its potential devastating effects for the emerging climate crisis, it also indicated the extent to which nonhuman ecologies became folded into Cold War military projects. Embedding capitalist logics of military labor into the very material ecologies of Southeast Asia, these military experiments transformed enemy terrain into a technology of warfare.

Thus, the operations of "more-than-human terrain" that localizes scientific knowledge *about* racialized environments of Southeast Asia coalesce with the militarized logic of "human terrain" that transform enemy territory into sites of anthropological knowledge production. Cold War logics of militarized securitization rendered interconnected ecologies as this very more-than-human terrain, geographies constructed as objects of scientific and anthropological knowledge-making that shapes how the imperial war machine confronts and navigates its racialized enemies, and by extension, landscapes. Writing about colonial and militarized encounters with the Pacific Ocean, Erin Suzuki argues that the logics of securitization aimed to transform ecological spaces to "cultivate the Pacific Ocean itself as a *militarily useful*, and potentially profitable, site of extraction" in the quest to quell communist expansion.[57] Similarly, Aimee Bahng suggests that these logics of environmental securitization during the Cold War function through what she terms "settler environmentalism, approaching ecosystems as controllable and minutely measurable properties that "operate as mythological objects of control."[58] If settler environmentalism denotes an extractive relation borne out of liberal

[57] Erin Suzuki, *Ocean Passages: Navigating Pacific Islander and Asian American Literatures* (Philadelphia, PA: Temple University Press, 2021), 25 (emphasis mine)
[58] Aimee Bahng, "The Pacific Proving Grounds and the Proliferation of Settler Environmentalism," *Journal of Transnational American Studies* 11, no. 2 (2020): 48

humanist ideologies of property ownership and Cold War securitization organizes environments around their militarized utility, then the militarization of more-than-human terrain demarcates zones of extraction through which chemical, scientific, and experimental control is exerted to both maintain the strategic upper hand across Cold War limited and local forms of warfare, and generate new forms of knowledge for subjugating racialized enemies across future wars.

At the end of "Agent Orange Commando Lava," Vang articulates both Agent Orange and yellow rain as not only instances of chemical warfare, but the manipulation of plant and human biology to "mutilate science to militarize Mother Nature."[59] While across Indigenous and feminist science studies, more-than-human life has been powerfully mobilized as a source of kinship,[60] Vang reminds us that the U.S. war machine exploits these relations and weaponizes them in service of larger military objectives. Her poetic musings dwell within the tension of multispecies relationality, articulating how "Mother Nature" is simultaneously witness to militarized violence and unwilling participant, illustrating how ecological relationality is always constituted in the specificity of the political conditions of its making. From the destruction of infrastructural systems to the ecocidal poisoning of plant and oceanic life that sustains multiple forms of being, U.S. Cold War militarism operated through a fundamental recognition of the interrelatedness of more-than-human worlds in Southeast Asia, and, in turn, deployed

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[59] Vang, *Yellow Rain*, 88

[60] For more on Indigenous forms of relationality and kinship with more-than-human life, see Kim TallBear, "Beyond the Life/Not Life Binary: A Feminist-Indigenous Reading of Cryopreservation, Interspecies Thinking and the New Materialisms," in *Cryopolitics: Frozen Life in a Melting World* eds. Joanna Radin and Emma Kowal (Cambridge, MA: Massachusetts Institute of Technology Press, 2017); Zoe Todd, "An Indigenous Feminist's Take on the Ontological Turn: 'Ontology' is just another word for colonialism," *Journal of Historical Sociology* 29, no. 1 (2016): 4-22; and Noelani Goodyear- Ka'ōpua, "Introduction," in *A Nation Rising: Hawaiian Movements for Life, Land, and Sovereignty* eds. Noelani Goodyear- Ka'ōpua, Ikaika Hussey, and Erin Kahunawaika'ala Wright (Durham, NC: Duke University Press, 2014)

environmental decimation as the condition of possibility for counterinsurgent warfare and attempted eradication of communism.

Experimental Poetics, Experimental War

Briefly returning to Vang's poem, "Agent Orange Commando Lava," the lingering question Vang lands on is that if the U.S. military so readily employed the environment for its own tactical benefit across the Secret War in Laos, then why are Hmong testimonies of yellow rain at the hands of U.S. wartime enemies so inconceivable—*why not yellow rain*? Repeated across her poem's juxtaposition of yellow rain with Agent Orange and other military science projects, the implication of Vang's rhetorical gesture is that U.S. militarism *already* violated the international conventions of warfare in manipulating the ecological terrain of Southeast Asia. As Vang notes in *Entropy Magazine*, Hmong allegations of chemical attacks at the hands of the Soviet Union were painted as a threat to the "greater well-being of all humanity," and these charges of chemical warfare would threaten the sanctity of arms control measures placed on chemical and biological weapons.[61] The suppression of Hmong testimonies, then, emerges not from a reliable body of scientific evidence that uniformly *disproves* yellow rain, but rather from science deployed in service of political agendas attempting to downplay the role of chemicals in wartime atrocities writ large. In doing so, the reigning "bee feces" theory championed by Matthew Meselson and other prominent biologists not only delegitimizes Hmong claims of chemical violence, but also eases the pressure on the history of the United States' own chemical war crimes committed across multiple incursions in Asia and the Pacific, but most prominently in Southeast Asia. This deployment of scientific "objectivity," or what Vang refers to in another

[61] Vang, "Yellow Rain," *Entropy Magazine*

poem as "a game of science jigsawed // to certify your absence,"[62] shapes Cold War narratives that elide the lived experiences of Hmong refugees—much like those of colonized peoples in Korea and Manchuria in the aftermath of Unit 71 and Japanese colonization—in forwarding a liberal notion of progress for "greater humanity" that strategically forgets the material violences of chemical warfare.

In the poem, "Declassified," Vang writes, "To keep the covert buried is not // how this story bends // The insects have always known."[63] Referencing the honeybees "accused" of spreading poison by several U.S.-based scientists, Vang emphasizes that uncovering secret histories is a multispecies endeavor. Poetry from displaced and colonized peoples, in this regard, captures the capacity to remap our material relations to land and ecology—what Indigenous theorist Mishuana Goeman calls *(re)mapping*, a geographical project embedded in "Native narratives that mediate and refuse colonial organizing of land, bodies, and social and political landscapes."[64] Ma Vang adapts this Indigenous poetic reading practice for refugee poetry, offering strategies of "decolonial cartography that includes conceptual and narrative mapping against liberal militarized regimes."[65] Indeed, while scholars of Asian American poetry such as Joseph Jeon, Timothy Yu, and Dorothy Wang have emphasized the formal aesthetics of the avant-garde as an anti-representational form that refuses incorporation into liberal subjectivity,[66] Mai Der Vang engages a practice of *docupoetics*—documentary poetry—that excavates secret histories buried in the archive of military science. Her aesthetic *experiments* with language refuse

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[62] Mai Der Vang, "Futile to Find You," *Yellow Rain*, 61
[63] Mai Der Vang, "Declassified," *Yellow Rain*, 8
[64] Mishuana Goeman, *Mark My Words: Native Women Mapping Our Nations* (Minneapolis, MN: University of Minnesota Press, 2013), 3
[65] Vang, *History on the Run*, 181
[66] See Joseph Jeon, *Racial Things, Racial Forms: Objecthood in Avant-Garde Asian American Poetry* (Iowa City, IA: University of Iowa Press, 2012); Timothy Yu, *Race and the Avant-Garde: Experimental and Asian American Poetry Since 1965* (Palo Alto, CA: Stanford University Press, 2009); Dorothy Wang, *Thinking its Presence: Form, Race, and Subjectivity in Contemporary Asian American Poetry* (Palo Alto, CA: Stanford University Press, 2013)

the scientific logic of experimentation that approach militarized terrains as unruly ecologies in need of chemical subjugation. Instead, Vang rewrites the history of Cold War secrecy through ecological knowledge, articulating humans and the environment as shared relations that bear witness to the material violences of empire.

Yet, these formal experiments with language also draw on the lexicon of "experiment" as a scientific procedure of discovery, a vital process in the exploration of new knowledge of the natural world.[67] Indeed, as poetry searches for a language to account for the unspeakable memories of militarized occupation and violence, militarization wages war in order to experiment with modes of biopolitical governmentality that constrain human and nonhuman subjectivity within the logics of capitalist modernization. Vang's formal experimentation with docupoetics engages a method of *excavation*, a process of revealing what is not immediately evident through a reckoning with the secret histories wedged within the convergences of the archive of Cold War science and Hmong refugee storytelling. Indeed, as Huan He notes, "the desire for the documentary—to bear witness and render visible—has been the primary mode in which to understand histories of colonization as well as the narratives subsequently left out,"[68] and thus, docupoetics risk succumbing to a framework of visibility and representation that upholds inclusion into the liberal human as the primary objective of Asian/American cultural production. Yet, as Heidi Amin-Hong suggests, "documentary aesthetics" harness the juxtaposition of "subjective experience with an account of historical and social structures," and

[67] Michelle N. Huang powerfully explores the consonance between "formal experimentation" and "scientific experimentation" in Asian/American literature and poetry as way of charting formations of race at molecular and nonhuman scales. This dual register of "experimentation" reveals the extent to which literature and scientific knowledge are coproduced as historical, cultural forms that shape representations of the human across scales of difference. See Michelle N. Huang, "Molecular Aesthetics: Race, Form, and Matter in Contemporary Asian American Literature" (PhD Dissertation, Pennsylvania State University, 2017)
[68] Huan He, "'On the Perpetual Motion of Search': The Transpacific Networked Poetics of Craig Santos Perez and Theresa H.K. Cha," *College Literature* 47, no. 1 (2020): 195

in doing to unravel the structures of power that coalesce around ecological crisis.[69] In this manner, Vang's poetry does not merely seek inclusion for Hmong refugee storytelling within the Cold War archive—her formal experiments employ refugee poetics to refashion the archive of scientific authority into an archive of investigation, unearthing not only the inconsistencies across denials of yellow rain's authenticity, but also the ongoing set of structures and epistemologies that constitute war's perpetual stranglehold over knowledge itself. In this manner, "poetry itself might be viewed as a 'second language' in the sense that the refugee's first language is always victimhood,"[70] infusing the refugee as an "object of rescue" with their own agency in refashioning dominant historiographies.

Vang's poetry unveils a method for reading the historiography of war in Southeast Asia as a series of experiments that generate new forms of counterinsurgent knowledge that effectively attempt to terraform the material terrains of warfare. This effect in Laos, however, is not merely physical, but also endures as a permanent legacy shaping the operations of the U.S. war machine; as Davorn Sisavath suggests, "the long-term impact of American air war and proxy war on the ground first used in Laos proved to be an appealing model for the U.S. military in later conflicts."[71] Yet, in a genealogy of the experimental war, these methods of counterinsurgency are not new, but are developed and perfected over a series of interventions across the Cold War that sharpened the U.S. military tactical apparatus—tactics of war, in this manner, become *superimposed* on top of other terrains of battle. The superimposition becomes the formal aesthetic of Don Mee Choi's poem, "Please / One Day the Soldier Discovered," that

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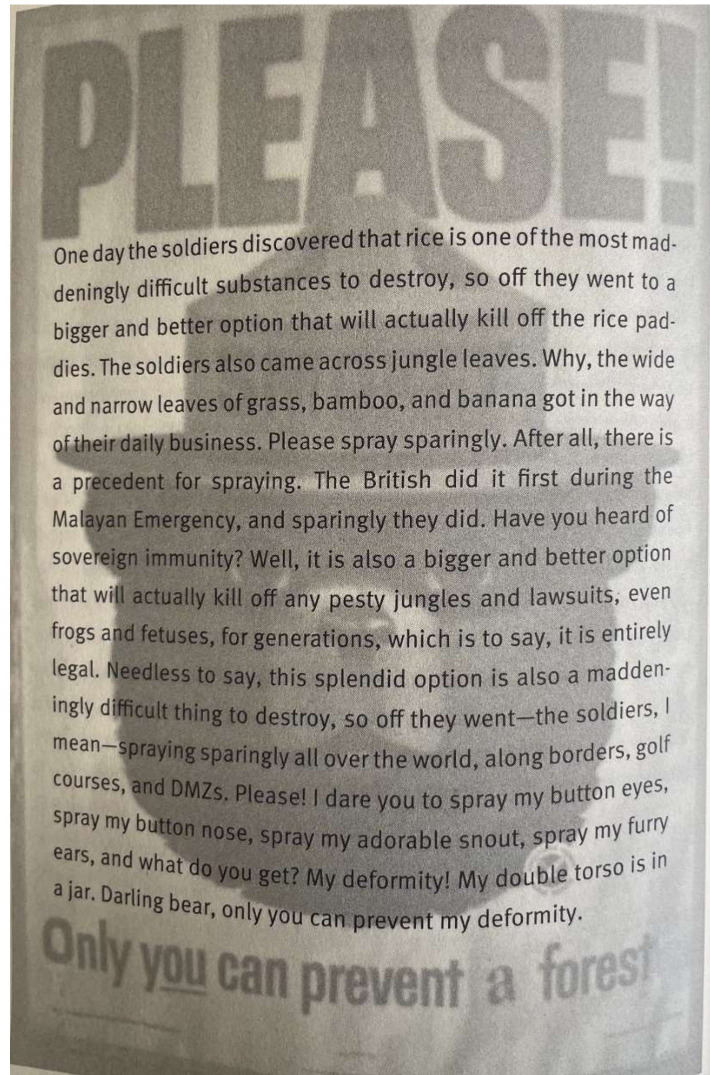
[69] Heidi Amin-Hong, "Transpacific Toxicity: Seadrift, Ecological Aesthetics, and the Afterlives of US Militarism," *ISLE: Interdisciplinary Studies in Literature and Environment* (2022): 6
[70] Lawrence-Minh Bui Davis, "On Refugee Poetics and Exophony" *Poetry Foundation* (2022). https://www.poetryfoundation.org/poetrymagazine/articles/157568/on-refugee-poetics-and-exophony
[71] Davorn Sisavath, "Cluster Bombs and War Metals: Reforming U.S. Cold War Debris in Laos," *Amerasia Journal* (2022): 244

superimposes poetry ruminating the deployment of herbicidal warfare atop of an image of Smokey the Bear. As a cultural symbol, Smokey the Bear is commonly associated with the phrase "Only *you* can prevent forest fires," an advertising campaign sponsored by the U.S. Forest Service that debuted in 1947 and appeared across cartoons, television commercials, radio programs, and school curricula across the United States. Performing the labor of educating the public about forest fires and ecological management, Smokey symbolized the growing ecological conservation movement in the middle of the 20th century. However, in a lesser-known association, Smokey was also the *unofficial mascot* of Operation Ranch Hand, a U.S. military operation dispersing chemical defoliants in rural and jungle areas of Southeast Asia during the Vietnam War.[72] Pilots carrying out Ranch Hand operations modified the slogan to read, "Only you can prevent a *forest*," shifting from Smokey's primary focus as a symbol of forest *protection* to symbolizing Ranch Hand's forest *destruction* endemic to U.S. scorched earth warfare. These posters were plastered around buildings at training grounds in Virginia, Florida, and South Vietnam, as Smokey inadvertently became transformed into an icon of ecological genocide.

[72] See James G. Lewis, "On Smokey Bear in Vietnam," *Environmental history* 11 (2006): 598-603



PLEASE!

One day the soldiers discovered that rice is one of the most mad-
deningly difficult substances to destroy, so off they went to a
bigger and better option that will actually kill off the rice pad-
dies. The soldiers also came across jungle leaves. Why, the wide
and narrow leaves of grass, bamboo, and banana got in the way
of their daily business. Please spray sparingly. After all, there is
a precedent for spraying. The British did it first during the
Malayan Emergency, and sparingly they did. Have you heard of
sovereign immunity? Well, it is also a bigger and better option
that will actually kill off any pesty jungles and lawsuits, even
frogs and fetuses, for generations, which is to say, it is entirely
legal. Needless to say, this splendid option is also a madden-
ingly difficult thing to destroy, so off they went—the soldiers, I
mean—spraying sparingly all over the world, along borders, golf
courses, and DMZs. Please! I dare you to spray my button eyes,
spray my button nose, spray my adorable snout, spray my furry
ears, and what do you get? My deformity! My double torso is in
a jar. Darling bear, only you can prevent my deformity.

Only you can prevent a forest

Figure 1.2: "Please! / One Day the Soldiers Discovered," Hardly War, Don Mee Choi, 2016. Poetry superimposed atop "Smokey the Bear" image, unofficial mascot of the U.S. military's Operation Ranch Hand.

The poems words extend the genealogy of herbicidal warfare across multiple terrains of battle, and these histories coalesce in the visualization of Smokey the Bear as a Cold War iconography that functions as a capsule for militarized tactics developed over time and across space. As Choi writes,

> One day the soldiers discovered that rice is one of the most maddeningly difficult substances to destroy, so off they went to a bigger and better option that will actually kill off the rice paddies. The soldiers also came across jungle leaves. Why, the wide and narrow leaves of grass, bamboo, and banana got in the way of their daily business. Please spray sparingly. After all, there is a precedent for spraying. The British did it first during the Malayan Emergency, and sparingly

> they did. Have you heard of sovereign immunity? Well, it is also a bigger and better option that will actually kill off any pesty jungles and lawsuits, even frogs and fetuses, for generations, which is to say, it is entirely legal. Needless to say, this splendid option is also a maddeningly difficult thing to destroy, so off they went—the soldiers, I mean—spraying sparingly all over the world, along borders, golf courses, and DMZs. Please![73]

Against rice's resilient form that resists militarized destruction, the option for herbicidal spraying offered the U.S. military a valuable tactic of denying sustenance for the communist forces in Vietnam.[74] As Choi alludes, the U.S. military draws from a long precedent of herbicidal warfare—beginning with Great Britain's so-called "limited," or in Choi's words "sparing," use of herbicides during the 1950s against insurgents in Malaya. For U.S. Secretary of State Dean Rusk, these precedents—the Geneva Protocol of 1925 banning the use of chemical warfare notwithstanding—established herbicidal warfare against communist insurgents as entirely legal, facilitating its deployment against unruly human and nonhuman ecologies—"rice paddies…the wide narrow leaves of grass, bamboo, and banana…[and]any pesty jungles and lawsuits, even frogs and fetuses"—that impeded the universal march of the U.S. war machine to liberal progress in the Global South.

Thus, the experimental war's buildup across geographies of Cold War militarism is not merely teleological—in other words, it is not as simple as the military conducting scientific research in a linear effort to produce technologies of war that are then deployed on the battlefield. Instead, the experimental war coalesces counterinsurgent knowledge from multiple domains—from the era of Japanese colonization in Manchuria and the Unit 731 experiments in biological warfare, to the U.S. tactics of terrain manipulation in Southeast Asia, to the early British deployment of herbicidal warfare—to develop a logic of war that *accumulates* its

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[73] Choi, "Please / One Day the Soldiers Discovered," in *Hardly War*, 26

[74] This dissertation will engage a deeper analysis of histories of U.S. herbicidal warfare in Vietnam in Chapter 3 of this dissertation.

structural power over time, a snow-balling effect that increasingly sharpens the war machine's tactical apparatus. As Thuy Linh Tu notes, the experimental apparatus of the U.S. military/scientific war machine is enabled "through the sacrifice of certain bodies…and the sacrifice of certain zones,"[75] an amalgamation of more-than-human assemblages that surface as expendable terrain in the pursuit of militarized knowledge. It is not merely on the battlefield that these racial logics manifest, but in the very consolidation of liberal capitalism as an enduring structure of violence that maintains its carefully curated control across regional spaces of securitization—as Choi muses, these spaces range from the borders the separate nations and the DMZ in Korea as an ecological contact zone,[76] to the luxurious spaces of excess materializing in the vast territorializing site of the golf course. The experimental war materializes across multiple temporalities and geographies, developing new forms of counterinsurgent knowledge at the expense of racialized and colonized life across the world. It is the accumulation of local conflict into a global apparatus of securitization, and it is the fundamental driving force for the expansion of U.S. Cold War imperialism in an era of counterinsurgent containment.

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[75] Tu, *Experiments in Skin*, 8

[76] For more on the Korean DMZ as an ecological zone of encounter, see Eleana J. Kim, *Making Peace with Nature: Ecological Encounters along the Korean DMZ* (Durham, NC: Duke University Press, 2022)

Chapter 2: Nuclear Experiments in Racial Matter

War is an autoimmune disease of humanity.
—Octavia E. Butler

In an unpublished essay written in 1980 and now stored in her archival collection at the Huntington Library in San Marino, California, Black feminist science fiction author Octavia E. Butler responds to the prompt: "If a future world war occurs, what form do you see it taking? Who will be the principal parties? What will set it off? What will be the deeper issues behind it? How will it be fought?"[1] The essay foregrounds nuclear weaponry as the technological condition of possibility for any future world war, with the capacity for full-scale elimination of enemy combatants and civilians animating widespread anxieties for global annihilation during the Cold War. Butler's deepest concerns about nuclear war, however, were not centered on the stockpiling of weapons and warheads for potential deployment, but rather the intimate and quotidian attachments to nuclearism that structure social life, the whimsical rhetoric through which everyday citizens discuss possible catastrophe. As she writes, "the most important underlying cause of any future nuclear war, no matter what sets it off, no matter what the issues are, is likely to be a general feeling of smugness—of knowledge and familiarity with nuclear weapons."[2] The casualness with which U.S. commentators referenced potential nuclear deployment—as if it would unilaterally save *American human lives* by a avoiding a protracted war of attrition—indexes both the racialization of life deemed disposable in the securitization of Cold War regimes of liberal humanism, as well as the deeply entrenched nature of the nuclear complex as a

[1] Octavia E. Butler, "If a future world war occurs, what form do you see it taking? Who will be the principal parties? What will set it off? What will be the deeper issues behind it? How will it be fought?" ca. 1980. Box 89. Octavia E. Butler Papers. Huntington Library, San Marino, CA.
[2] Ibid.

colonial technology in service of empire, or what Anais Maurer and Rebecca Hogue call "transnational nuclear imperialisms."[3]

One of Butler's deepest concerns was the rise of nuclear energy and weaponry during her lifespan— in her archival collection, she amassed numerous news clippings documenting global crises involving nuclear power, including the Chernobyl disaster, the possible acquisition of nuclear weapons by terrorist groups, radioactive fallout in the Pacific, and debris from crashing nuclear-powered satellites among other events.[4] The concern expressed implicitly in these collected newspaper clippings and explicitly in her unpublished essay emphasizes not merely the spectacular effects of the nuclear bomb, but what Jessica Hurley articulates as the everyday *infrastructure* of the nuclear complex, "a world remade in 1945 in the nuclear image and maintained every day since in the ongoing commitment of the United States to nurturing nuclear technology at the expense of any other interest."[5] To borrow Hurley's term, the "nuclear mundane" makes visible nuclearism as the structuring condition of militarized infrastructures of knowledge production rather than merely their material end product, situating the *nuclear* as an affective, material force that structures everyday life within a total war society.[6] Thus, in mapping the expansion of the nuclear complex across multiple geographies of U.S. empire, Butler's archival collection traces the intimate scales of friction through which nuclearism collides with desires to technologically secure the future of our planet, inviting analyses of nuclearism as an *episteme* of the Cold War human.

[3] See Anais Maurer and Rebecca Hogue, "Introduction: Transnational Nuclear Imperialisms," *Journal of Transnational American Studies* 11, no. 2 (2020)
[4] See Octavia E. Butler, "Science: Nuclear Power. 1974-1991," Folder 5, Box 292. Octavia E. Butler Papers. Huntington Library, San Marino, CA
[5] Jessica Hurley, *Infrastructures of Apocalypse: American Literature and the Nuclear Complex* (Minneapolis, MN: University of Minnesota Press, 2020), 3
[6] Ibid., 9

The nuclear complex underpins much of Cold War science fiction, a genre that has oftentimes reconstituted the history of nuclear science into perilous narratives of scientific innovation and apocalypse.[7] For instance, in Mischa Stanton's award-winning serial audio drama ars PARADOXICA, the protagonist Dr. Sally Grissom accidentally invents time travel, propelling herself backwards in time and dropping onto the S.S. Eldridge, a U.S. navy ship conducting classified military experiments in Philadelphia in 1943. Encountering a fictional version of William Donovan—the former head of the Office of Strategic Services (OSS) and widely regarded as the founding father of the CIA—Grissom is initially accused of being a Nazi spy amidst her disorientation in a new space and time. As Donovan's interrogation carries on, they both come to the realization of the fantastical; somehow, their combined scientific experiments folded the space-time continuum, allowing for Grissom's inadvertent time jump. Grissom aptly describes this phenomenon: "I guess their weird science plus my weird science equals [pause] time travel?"[8] Reveling in the possibility of a scientific project that could rival, if not surpass, the Manhattan Project's aspiration visions for not just World War II, but warfare writ large, the military forcibly recruits Dr. Grissom into the Office of Developed Anomalous Resources (ODAR), a highly classified division of the U.S. military conducting experiments in a covert town in the middle of New Mexico's desert: Polvo. A clear allusion to the Los Alamos laboratory where the atomic bomb was first developed and tested, Grissom's pioneering work on the coveted timepiece—which would enable elective, rather than accidental, time travel—promised the same cataclysmic effects on global politics that J. Robert Oppenheimer once

[7] Other notable Cold War science fictions that play with the trope of nuclear science include Kurt Vonnegut's *Cat's Cradle* (1963), Walter M. Miller Jr.'s *A Canticle for Leibowitz* (1959), Ray Bradbury's *The Martian Chronicles* (1950), and Pat Frank's *Alas, Babylon* (1959); as well as films such as Stanley Kubrick's *Dr. Strangelove or How: I learned to Stop Worrying and Love the Bomb* (1964) and Ishirō Honda's *Gojira (Godzilla)* (1954).
[8] *Ars Paradoxcia*, Episode 1 "Hypothesis"

achieved. The difference, however, is that Grissom offers not a technology of mass death, but rather, as Donovan puts it, "she gave us the answer. She will win the war; and every other war [pause] before they even happen."[9]

In many ways, the development of time travel in Stanton's audio drama allegorizes a falsehood that many key figures of the Manhattan Project genuinely believed about the atomic bomb: that it would make "war obsolete as a means of solving conflict."[10] Unique in its investigation of the Cold War *laboratory* as a site of securitization and control, Stanton's science fiction dwells with the increased anxieties surrounding the uncertainty of a nuclear future and the coalescence of scientific knowledge and foreign intelligence imbricated in the U.S. Cold War state. Scientists, with their capacity to shape the direction of humanity with their frontier of innovation, played a crucial role in the ideological and political world of the U.S. Cold War. Mired in controversies placing uncertainty on national and ideological allegiances of scientific authorities—most famously, the revocation of the security clearance of the "father' of the atomic bomb, Oppenheimer himself—the immediate post-World War II era was a moment of reckoning for the role of science in the larger military apparatus of the United States; not merely as a nation-state, but as a global champion of empire, capitalism, and liberal humanity.[11] Indeed, as *ars PARADOXICA* makes evident, the post-World War II security state is irreversibly imbricated with science in the aftermath of the "success" of the Manhattan Project, forwarding intellectual innovation as a necessary enterprise in securing the future of national and global modernity. The Cold War, thus, converged around a war of knowledge; and how loyally that knowledge adheres

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[9] Ibid., emphasis added
[10] Joseph Masco, *Nuclear Borderlands: The Manhattan Project in Post-Cold War New Mexico* (Princeton, NJ: Princeton University Press, 2006), 8
[11] See Charles Thorpe, *Oppenheimer: The Tragic Intellect* (Chicago, IL: University of Chicago Press, 2008) and Audra Wolfe, *Freedom's Laboratory: The Cold War Struggle for the Soul of Science* (Baltimore, MD: Johns Hopkins University Press, 2018)

to doctrines of Cold War liberalism in an episteme of anti-communist affect. At the heart of Cold War politics is the unquenching quest for scientific advancement that fueled the expansion of the U.S. military-industrial complex.

The invention of the timepiece and elective time travel by Dr. Grissom—by accident, at first, and then later backed by the vast funding of the U.S. military-industrial complex—coalesces fantasies of temporal manipulation abundant during the Cold War. Stanton's deployment of time travel extrapolates from the centrality of predictive algorithms and computing to the shifting nature of U.S. militarization in World War II and the Cold War—one of the lead engineers on the project is a former math teacher who unwittingly "predicted" the bombing of Pearl Harbor—which "promised to restore control and predictability" amidst the political uncertainty surrounding the era of nuclear proliferation.[12] In doing so, they make visible the organization of militarism around epistemologies of speculation, driven by an intellectual paradigm that Aimee Bahng observes as a post-World War II "changing infrastructure for scientific research funding…that turns the orientation of scientific research towards the future."[13] Similarly, Joseph Masco argues that is the affective fear of *unpredictability* that drives the operations of the security state, as he writes:

> The nuclear arms race, with its minute-to-minute calculation of threat and advantage and the always ready-to-launch nuclear war machine, was an effort to stabilize the present by loading nuclear destruction into the everyday and continually displacing it by a few minutes into the future. Mutually assured destruction promised that any state that started a nuclear war would only minutes later be destroyed by it, an unprecedented compression of time, space, and destructive capability in the name of global defense.[14]

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[12] Antoine Bousquet, *The Scientific Way of Warfare: Order and Chaos on the Battlefields of Modernity* (New York: Columbia University Press, 2009), 122

[13] Aimee Bahng, *Migrant Futures: Decolonizing Speculation in Financial Times* (Durham, NC: Duke University Press, 2018), 148

[14] Joseph Masco, *The Theater of Operations: National Security Affect from the Cold War to the War on Terror* (Durham, NC: Duke University Press, 2014), 15

In this regard, it is the space of the *near-future* that occupies perpetual apocalypse, as the state continually postpones mutually assured destruction as an effort of maintain peace in the present moment. The nuclear complex, thus, facilitates the militarization of the everyday precisely because this paradigm maintains the affect of national security against the impending threat of total annihilation imbricated in the continual functionality of the nuclear complex. Nuclearism, in this respect, stabilizes and secures the present through *displacing* apocalypse elsewhere, a temporal and spatial geography of empire.

This chapter begins with an extended engagement with Butler's archival documentation of the expanding nuclear complex alongside Stanton's allegory of nuclear science because they offer two juxtaposing speculative accounts of transnational nuclearism as a quotidian technology of securitization. While speculative fiction tends to highlight nuclearism as the harbinger of inevitable apocalypse, Butler and Stanton attune us to the structure of nuclearism as an infrastructural system that shapes the very unfolding of humanity across lines of war and militarized knowledge. In the process of displacing the threat of apocalypse elsewhere, nuclearism conjures different paradigms of life and death for populations deemed disposable under empire. Butler tracks this disposability across disparate terrains at the margins of U.S. empire, but where this most prominently manifests in the Pacific, where the United States and other nation-states—France, the United Kingdom, and Soviet Union—conducted hundreds of nuclear tests in developing *even more* efficient weapons of mass destruction. This chapter examines how transnational nuclearism transformed life in the Pacific, engineering it towards utility in the Cold War quest for communist containment and capitalist securitization.

Inspired by Aimee Bahng's assertion of Octavia E. Butler not only as a famed author of speculative fiction, but a "black feminist philosopher of science,"[15] I situate Butler's writing as a feminist practice of knowledge production that reveals the overlapping currents of nuclear imperialism and biomedical experimentation that engineers the figure of the Cold War human. Indeed, Butler characterized herself as what she calls a "HistoFuturist," a designation that Shelley Streeby characterizes as "one who extrapolates from the human and technological past and present by research, archiving, and then working over research materials to speculate about possible futures that might materialize on their foundations."[16] In doing so, Butler imbues speculative fiction with a deep tradition of political critique that engages the social world within which speculation is embedded. Her research and creative practice models an ethics of care in the midst of overlapping crises of ecological devastation, nuclear catastrophe, and racialized genocide encountered across her vast research materials, refusing to subsume these histories into a singular narrative but also "contemplat[ing] what it means to collide with and be affected by them."[17] It is this practice of archival speculation that Frances Tran theorizes akin to the science fictional act of *time travel*, which, in contrast to *ars PARADOXICA*'s mobilization as a technology of securitization, materializes as a research ethics of relationality that "*entails grappling with how your body affects other bodies*."[18] In doing so, both time travel and HistoFuturism illuminate reading practices that engage science fiction not merely as distant speculations of possible realities, but narratives of relationality that emerge from our shared

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[15] Aimee Bahng, "Plasmodial Improprieties: Octavia E. Butler, Slime Molds, and Imagining a Femi-Queer Commons," in *Queer Feminist Science Studies: A Reader* ed. Cyd Cipolla, Kristina Gupta, David A. Rubin, and Angela Willey (Seattle, WA: University of Washington Press, 2018): 310

[16] Shelley Streeby, "Radical Reproduction: Octavia E. Butler's HistoFuturist Archiving as Speculative Theory," *Women's Studies* 47, no. 7 (2018): 721

[17] Frances Tran, "Time Traveling with Care: On female Coolies and Archival Speculations," *American Quarterly* 70, no. 2 (2018): 198

[18] Ibid.

sense of crisis in a global world. Moving through Butler's archives offers a portal into the interconnected network of her relational thinking, revealing the intimate connections between nuclear imperialism, anti-Black racism, and the medical-industrial complex in an era of rising neoliberalism.

Nuclearism, in many respects, functions not merely as a spectacle of violence nor a domineering affective force of nature, but rather as a structure of knowledge that encapsulates this dissertation's primary focus: on technologies of military science that not only conjure moments of violence, but also consolidate the very racial logics that underpin Cold War liberalism and imperialism that structurally condition everyday life. Perhaps the most famous of, and arguably the most cataclysmic of, military science projects that governed the racial and geopolitical logics of the Cold War, nuclearism haunts the other chapters of this dissertation—not because it is the ultimate technology of mass destruction, but precisely because it is a paradigm that dictates the unfolding infrastructure of knowledge production that coalesces around the military-industrial complex during the Cold War, and ushers in a new world order. Thus, employing Octavia E. Butler as a guide through the transnational circuits of nuclearism, this chapter also engages the work of Marshallese poet Kathy Jetñil-Kijiner and Asian diasporic artist Jane Chang Mi to grapple with how nuclearism inhabits the bodies of the Pacific—transforming life into the material residue and experimental fodder of imperial expansion. This chapter reckons with the Cold War nuclear order, a global formation that traverses borders and bodies, yet finds itself most deeply felt and implicated in the nuclear Pacific—where nuclear and biomedical tests on Indigenous Marshallese Islanders became the very material blueprint for defining the Cold War human.

Racial Matters of the Cold War Human

Los Angeles Times

Science / Medicine

Pad on Meck Island is being prepared for battery of SDI tests planned for early 1990s.

The Altair radar, 150 feet in diameter, towers above pre-WWII Japanese administrative buildings on central Pacific island of Roi-Namur in Kwajalein Atoll.

Telemetry antennas on the island of Ennylabegan receive signals from test missiles.

Raining Warheads

Kwajalein Missile Range in Pacific Readied for Testing of 'Star Wars'

By GLENN ZORPETTE

Aerial view shows strip of land on Illeginni where test warheads come crashing down after 4,950-mile trip from Vandenberg Air Force Base.

Figure 2.1: "Raining Warheads." Los Angeles Times March 27, 1989. Box 292, Folder 5 (oversize). Octavia E. Butler Papers, Huntington Library, San Marino, California.

One of the notable newspaper clippings in Butler's archives is a 1989 *Los Angeles Times* article, "Raining Warheads: Kwajalein Missile Range in Pacific Readied for Testing in Star Wars," which documents the long history of nuclear testing in the Marshall Islands, where warheads induce "nights when skies above this remote atoll are streaked with what seem to be strange shooting stars."[19] The Kwajalein Atoll, like much of the Marshall Islands, is administered

[19] Octavia E. Butler, "Science: Nuclear Power, 1974-1991," Folder 5, Box 292 (oversize). Octavia E. Butler Papers. Huntington Library, San Marino, CA

by the U.S. navy and a site of various types of nuclear testing—occupied by the Kwajalein Missile Range, the atoll houses the U.S. Army's Strategic Defense Command's largest center for tracking space vehicles and nuclear warheads, as hundreds of test missiles have been launched toward Kwajalein in order to test their accuracy. Nuclear testing of the sort has a long history of the Marshall Islands, most famously at Eniwetok Atoll, where the U.S. conducted dozens of tests for the hydrogen bomb, with the most notable being the Castle Bravo test in 1954 that is said to have carried the force of roughly a thousand times greater than that of the bomb dropped on Hiroshima in World War II.

At the end of World War II, the Marshall Islands—previously under Japanese occupation and colonialism—transferred into the governance of the U.S. navy under an international trusteeship system that placed former Japanese colonies "whose peoples have not yet attained a full measure of self-government" under the administrative authority of the United Nations.[20] Under this wave of decolonization across Asia and the Pacific in the aftermath of Japanese empire's fall in the wake of World War II, U.S. neoimperial ambitions at the onset of the Cold War remapped the Pacific into strategic territories serving the interests of military occupation and expansion. This remapping of the Pacific in service of U.S. settler militarism, Erin Suzuki suggest, relies on a recasting of Asian and Pacific Islander racial formations:

> If the justification behind the U.S. reconstruction off the region depended on the *visible* defeat of a hostile enemy and that enemy's reeducation and assimilation into a democratic world order, the transformation of oceanic space under the Truman Proclamation from *mare liberum* to *mare nullius* depended on rendering both oceanic ecologies and Oceanic communities *invisible* against a backdrop of increasing global militarization. Together, these contrasting lenses—one highlighting Asian bodies, the other erasing Pacific Island ones—served to bolster

[20] See Aimee Bahng, "The Pacific Proving Grounds and the Proliferation of Settler Environmentalism," *Journal of Transnational American Studies* 11, no. 2 (2020): 49

> Cold War narratives that sought to distinguish U.S. imperial designs from the colonial projects of an earlier era.[21]

Casting the postwar reconstruction of Japan as a necessary endeavor in the face of impending communist expansion catalyzed by increasing Soviet and Chinese state power across the transpacific, the militarized cartography of the Pacific relies on the epistemic erasure of Indigenous Pacific Island bodies from the imaginaries of postwar decolonization. Decolonization, rather than a process of returning land to Indigenous stewardship, became repurposed to expand U.S. military expansion, as territories of the Pacific were enfolded into the expanding military-industrial complex.[22] The visibility of the Asian body qua enemy manifested desires for Pacific-bound imperial expansion, a necessary project to secure the future of the region for liberal capitalist interests. In this regard, the "free sea" (*mare liberum*) became cast as the "empty sea" (*mare nullius*), a colonial logic that transformed the Marshall Islands and other Pacific Islands into the bare matter of military occupation that set the stage for hundreds of nuclear tests that followed the era of decolonization.

The Marshall Islands were seen as an ideal testing site for nuclear weapons for their presumed "isolation" from the rest of the world, offering an ideal contained geography for weapons testing.[23] Deemed sacrificial for the "good of mankind," the Marshall Islands

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[21] Erin Suzuki, *Ocean Passages: Navigating Pacific Islander and Asian American Literatures* (Philadelphia, PA: Temple University Press, 2021), 33

[22] Simeon Man describes this remapping of the transpacific as the "decolonizing Pacific," which "names the historical juncture when anticolonial movements in the United States, Asia, and the Pacific became intertwined with the U.S. militarization drive to secure the global capitalist economy…it explains how decolonization was not antithetical to the spread of U.S. global power but intrinsic to it" (8). In other words, the "decolonizing Pacific" is the materially remapping of the transpacific world through the rubric of racial liberalism, a political project that sought to incorporate newly independent nations and people into U.S. empire's project of capitalist modernization. See Simeon Man, *Soldiering Through Empire: Race and the Making of the Decolonizing Pacific* (Berkeley, CA: University of California Press, 2018)

[23] For more on the myth of isolation, see Elizabeth DeLoughrey, "The Myth of Isolates: Ecosystems Ecologies in the Nuclear Pacific," *Cultural Geographies* 20, no. 2 (2013): 167-184. As DeLoughrey and other Pacific Islands studies scholars have argued, this myth is predicated on the colonial logic that views islands as discrete entities separated *by* the sea, whereas Pacific Indigenous people have powerfully embraced the ocean as a space that *connects* people

experienced sixty-seven nuclear tests conducted by the U.S. military—marking the Pacific as a "living laboratory" for the engineering of the Cold War human.[24] In this process, Indigenous ecologies were reimagined into zones of experimental subjugation that conjured a different world altogether; as Christine Hong writes, "these lands and people were *valued* as dystopian, theoretically parallel universes—sites that could be *devalued* by being laid to waste and thereafter subjected to scientific scrutiny."[25] Recognizing the state of apocalypse already being experienced by those in the Marshall Islands, Hong suggests that the colonial myth of isolation imagined not just a geographical separation from the Global North, but a material conjuring of other-worldliness that offered new forms of expendable matter in the experimentation of technologies of warfare. *Value* accrued through dystopia as a modality that conditioned Indigenous Marshallese people as experimental fodder, producing value insofar as their bodily matter fuels the U.S. war machine's knowledge-making apparatus. In this respect, bodies—human and nonhuman—in the Marshall Islands became subjected not just to militarized weapons-testing, but what Rebecca Hogue specifies as the "non-consensual medicalization of Marshallese communities," and in doing so "transformed the long-running racial form of presumably isolated Oceanic subjects into test-subjects during the Cold War."[26] Cast as *racial matter*, the U.S. war machine transformed Indigenous Pacific Islanders into the very biological

across different islands in the vast Pacific. See Epeli Hau'ofa, "Our Sea of Islands," *The Contemporary Pacific* 6, no. 1 (1994): 148-161

[24] Scientists repeatedly invoked notions of universal progress and the "good of mankind" when justifying the role of Marshallese Islanders to the U.S. total war effort, rationalizing their displacement as a benevolent act of service rather than a violent settler colonial process, see Jack Niedenthal, *For the Good of Mankind: A history of the People of Bikini and Their Islands* (Majuro: Bravo Books, 2001); Aimee Bahng, "The Pacific Proving Grounds and Settler Environmentalism," *Journal of Transnational American Studies* 11, no. 2 (2020): 52

[25] Christine Hong, *A Violent Peace: Race, U.S. Militarism, and Cultures of Democratization in Cold War Asia and the Pacific* (Palo Alto, CA: Stanford University Press, 2020), 111

[26] Rebecca Hogue, "Nuclear Normalizing and Kathy Jetñil-Kijiner's 'Dome Poem,'" *Amerasia Journal* 47, no. 2 (2021): 208-209

material of human embodiment disarticulated into the raw experimental fodder of scientific-knowledge-making.

Documenting the nuclear tests at the Marshall Islands alongside several other nuclear disasters in addition to multiple anti-war protests in the continental United States, Butler's archives, according to Streeby, "connected struggles over nuclear weapons in the Asia-Pacific Islands to the struggles of Black people in the United States."[27] Indeed, while global in scope, nuclearism, as Butler reveals, is articulated through a vast network of local ecological crises. The expansive nature of nuclear imperialisms as they traverse borders—at the scale of both nation and body—and temporalities, according to Anais Maurer and Rebecca Hogue, is "impossible to assess—because they are still ongoing, and the multitude of their effects are both present and yet to be determined."[28] Thus, attuning to the scale of the nuclear requires the capacity to engage scales of the transnational and the local simultaneously alongside nonlinear narratives of history, grappling with how the material remainders of nuclear devastation refuse teleological accounts of cause, effect, and singular event-ness. In this regard, Butler's thinking across expansive geographies, political contexts, and racial histories offers an alternative avenue for theorizing solidarity across shared experiences of experimental subjection, a global project of U.S. empire that transformed Black and Indigenous bodies into the raw biomatter through which fantasies of universal human embodiment coalesced across biomedical and nuclear research.

In her writing, much of Butler's concerns surrounding the nuclear complex emerge in her novel *Dawn*, the first book in the *Xenogenesis* series set in the aftermath of a nuclear war that effectively ends all human life and civilization on Earth. Surviving humans are "saved" by the

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[27] Shelley Streeby, "Speculative Fictions of a Divided World: Reading Octavia E. Butler in South Korea," *English Language and Literature* 62, no. 2 (2016): 157

[28] Maurer and Hogue, "Transnational Nuclear Imperialisms," 33

alien species Oankali, a population of gene traders who seek to biologically reengineer the human species to reinhabit the planet. Written during the rise of neoliberalism during Ronald Reagan's presidential administration in the United States, Butler coalesces concerns about Reagan's dangerous fantasies of "winnable star wars"[29] and a market economy that increasingly reduced human bodies to inanimate biological matter. While *neoliberalism* conventionally invokes an economic political system oriented around the privatization of resources, Jodi Melamed articulates a more expansive definition of the term that encompasses a "world historic organization of economy, governance, and biological and social life."[30] It is within this definition of neoliberalism wherein biological life comes into the purview of economic and political regulation in its barest forms, wherein neoliberal scientific policy "combined virulent antienvironmentalism and cutbacks in redistributive public health with massive federal investment in the new life science technologies and their commercialization."[31] Thus, federal governments and neoliberal markets invested in life at the *molecular* scale as an index for a universal humanism, eschewing a more distributed understanding of health as a system of relations between humans, the public, and the environment.[32]

While *Dawn* does not specifically invoke the nuclear Pacific, its innuendos of nuclear apocalypse in a global war coupled with Butler's copious archival notes index contemporaneous anxieties about Cold War nuclear infrastructures at a time when life sciences increasingly turn to

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[29] Streeby, "Speculative Fictions of a Divided World," 157; Streeby also cites John Akomfrah dir. *The Last Angel of History* (1996), a documentary detailing the historical legacy and roots of Afro-futurism.
[30] "The Spirit of Neoliberalism: From Racial Liberalism to Neoliberal Multiculturalism," *Social Text* 89, no. 4 (2006): 15
[31] Melinda Cooper, *Life as Surplus: Biotechnology and Capitalism in the Neoliberal Era* (Seattle, WA: University of Washington Press, 2008): 18
[32] Michelle N. Huang makes a similar argument in her critique of contemporary investments in precision medicine, which prioritize the minuscule individualization of biomedical innovation at the expense of infrastructures of public heath through which structural racism inheres. See Michelle N. Huang, "Racial Disintegration: Biomedical Futurity at the Environmental Limit," *American Literature* 93, no.3 (2021): 497-523

definitions of the human as malleable, molecular matter. Yet, these investments predated the conventionally marked time-scale of neoliberalism within the Reagan-administration, as two key advancements in biomedicine in the 1950s preceded the larger market commodification of biological material. The first emerged through Project 4.1, or the "Study of Response of Human Beings Accidentally Exposed to Significant Fallout Radiation," a series of biomedical experiments on Marshallese Islanders affected by irradiation in the aftermath of several nuclear tests in their local atolls. Project 4.1 officially commenced after the United States Atomic Energy Commission detonated Castle Bravo, the largest hydrogen bomb tested in the Marshall Islands and said to have possessed the force of "1000 Little Boys" (the atomic bomb detonated in Hiroshima), on Bikini Atoll on March 1, 1954. Seeking to examine the effects of radiation on Marshallese Islanders, these experiments hinged on a racial logic of universal sameness; despite their supposed lack of "civility," scientists noted that Marshallese Islanders "are more like us than mice," a disparaging acknowledgement of Marshallese humanity that "turned on a postulate of near-sameness, with Marshallese bodies deemed analogous to American bodies and therefore model organisms for biomedical study."[33] Universalizing human biological matter, yet still subjecting Indigenous bodies to experimental expendability, Project 4.1 transformed Cold War-era weapons testing into a laboratory for expanding definitions of the Cold War human.

A second significant inspiration for *Dawn* was the story of Henrietta Lacks, a 31-year-old African American woman who passed away in 1951 due to complications with cervical cancer, before her non-consensually extracted cellular matter went on to form the famous HeLa cell line—an immortal line of cells that could infinitely reproduce itself, providing an invaluable, and

[33] Hong, *A Violent Peace*, 130; Hong also cites Barbara Rose Johnston, "More Like Us Than Mice," in *Half-Lives and Half-Truths: confronting the Radioactive Legacies of the Cold War*, ed. Barbara Rose Johnston (Santa Fe, N<: School for Advanced Research, 2007)

inexhaustible supply of biomatter for medical research. The ethics of this case continue to haunt biomedical research, precisely because, as Priscilla Wald notes, they trouble the very question of "what constitutes a human being: how we understand the relation of human beings to human body parts, on one and hand, and to the collective body of humanity, on the other."[34] In this respect, the HeLa cell line reckoned with the shifting scales of the human as cellular and molecular levels, in turn transforming the conditions of biomedical innovation; as Jayna Brown writes, "Infinitely manipulable, life could be perpetuated and altered both spatially and temporally…follow[ing] the advent of HeLa, it would seem that biological science and technologies could usher in a new ontology of life."[35] Indeed, the HeLa cell line was instrumental in a number of biomedical discoveries—ranging from the development of the polio vaccine to the very practices of medical research itself, enabling standardized methodologies for freezing cells without harming or changing them and offering an infinitely clone-able form of biomatter for uniform experimental conditions across multiple laboratories.[36] Thus, even as extracted from the dying body of Henrietta Lacks, the HeLa cell line promised to transform the possibilities of the human, elongating its lifespan in a universalizing structure of *humanity* that elides the very fungibility of racial matter in generating this vision of life. While her human life ended prematurely due to the onset of cancer, Lacks's *material life* persisted as experimental biomatter that heralded new innovations in biomedicine and recharted the definition of the human itself.

[34] Priscilla Wald, "The Art of Medicine: Cognitive Estrangement, Science Fiction, and Medical Ethics," *Lancet* 371, no. 9628 (2008): 1908

[35] Jayna Brown, "Being Cellular: Race, the Inhuman, and the Plasticity of Life," *GLQ* 21, no. 2-3 (2015): 321

[36] For more on the invaluable role of the HeLa cell line within histories of biomedical research, see Rebecca Skloot, *The Immortal Life of Henrietta Lacks* (New York: Broadway Paperbacks, 2011)

Both the story of Henrietta Lacks and the haunting legacy of Project 4.1's nuclear experiments emerge as specters of Butler's *Dawn*, where the Oankali take particular interest in the human's "talent" for cancer—both in a biomedical and metaphorical sense. After curing the malignant cancer growing in Lilith Iyapo's body—the novel's human protagonist—Jdahya, Lilith's alien handler and doctor, remarks on the biological imperative the Oankali have for genetic engineering:

> We do what you would call genetic engineering. We know you had begun to do it yourselves a little, but it's foreign to you. We do it naturally. We *must* do it. It renews us, enables us to survive as an evolving species instead of specializing ourselves into extinction or stagnation.
>
> …
>
> We're not hierarchical, you see. We never were. But we are powerfully acquisitive. We acquire new life—seek it, investigate it, manipulate it, sort it, use it. We carry the drive to do this in a minuscule cell within a cell—a tiny organelle within every cell of our bodies. Do you understand me?[37]

While Lilith's cancer is cured through inducing her body to reabsorb malignant cells, the Oankali cellular matrix is organized around the absorption of genetic traits of foreign *species*—a model of neoliberal multiculturalist assimilation embodied within the somatic structure that hinges upon the biological imperative to perfect genetic structures akin to Darwinian models of eugenics. Whereas other models of eugenics rely upon the controlled extinguishing of "undesirable" traits of a population through reproductive suppression,[38] the Oankali *acquire* positive attributes from a multitude of sources in perfecting the cellular structures of their species. Eugenics, often

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[37] Octavia E. Butler, *Dawn* (New York: Warner Books, 1987): 39

[38] Harriet Washington discusses two models of eugenics: *negative* eugenics that is predicated on the suppression of reproduction for "undesirable" populations in order to extinguish certain hereditary traits from a population, and *positive* eugenics that is aimed at encouraging reproduction for "desirable" populations in order to proliferate desirable hereditary traits in a population. See Harriet Washington, "The Black Stork" in *Medical Apartheid: The Dark History of Medical Experimentation on Black Americans from Colonial Times to the Present* (New York: Doubleday, 2007); for more on how these models of eugenics became enfolded into the U.S. national project in the 20th century, see Alexandra Minna Stern, *Eugenic Nation: Faults and Frontiers of Better Breeding in Modern America* 2nd ed. (Berkeley, CA: University of California Press, 2016)

understood as a *social* model of population control, inheres within the *individual* bodies of the Oankali; this narrative move does not seek to detach eugenics from sociopolitical conditions of racism and ableism, but rather occasions us to think differently about how eugenics coheres fantasies of the universal human body, or what Eunice Sang Eun Lee calls the "standard man" of nuclear dosimetry.[39] *Acquisition* as a molecular relation between bodies—human and Oankali—rewrites the process of colonialism from a story of explicit genocide and conquest, towards a benevolent practice of coalescence that does not seek to eliminate a population, but to incorporate it and combine it into a collective march towards a universal, progressive humanity.

Writing about the false promises of the Human Genome Project to usher in a new era of the biological human body, Aimee Bahng comments on how this form of genetic engineering "attempt[s] to informationalize biomatter and delink it from the feeling body…convert[ing] biological life and sentiment into finance capitalism's terms of calculable, potential risk."[40] As a species, the Oankali absorb other species, a process of colonialism carried out at the somatic level—transforming raced biomatter into the material site of conquest and acquisition. While Patrick Wolfe has famously proclaimed that settler colonialism is a "structure not an event," wherein elimination is an organizing principal of a settler-colonial society rather than a one-off (and superseded) occurrence,"[41] Butler's narrative of Oankali colonialism mirrors the U.S. Cold War transformations of empire "where the institutional workings of the settler state became further streamlined to respond more quickly to the interests and investments of multinational

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[39] Eunice Sang Eun Lee describes the "standard man" of radiation experiments as a test dummy that the imperial archive generates through a myriad of traits the standardize the human into a compositive of aggregate averages. This "standard man" serves as a universalized model of the human conjured through radiation experiments, and prefigures the idealized Western European subject as the ideal model of the human species qua nuclear radiation and dosimetry. Eunice Sang Eun Lee, "Standardized Man and a Nuclear Family," Presentation at the *Association for Asian American Studies* annual conference, Denver, CO, 2022.
[40] Bahng, *Migrant Futures*, 156
[41] Patrick Wolfe, "Settler Colonialism and The Elimination of the Native," *Journal of Genocide Research* 8, no. 4 (2006): 388

neoliberal capital."[42] In an outline detailing the conception of her *Xenogenesis* series prior to its publication Butler writes of *Dawn*, at the time titled "The Training Floor,":

> As animal life on Earth is exclusive, each animal breeding within its own species, the Oankali are inclusive, incorporating through the activities of their third sex, the ooloi, useful characteristics of almost any intelligent carbon based species they come upon, and thus fitting themselves into new ecological niches, new worlds that might otherwise have been deadly to them. More important, as far as humanity is concerned, the Oankali change the dominant species already inhabiting these worlds. They do not fight for dominance. They incorporate potential competition. Instead of killing, they absorb. They are not interested in Lilith's assertion that to the salvaged remnants of humanity, absorption would be a kind of death.[43]

Here, Butler marks a shift in colonial conquest from the process of "killing" to a model of absorption, a genetic process that fuses Oankali and human bodies in order to create a hybrid population to reinhabit the planet. For the Oankali, reproduction is carried out through a third sex of their species, the ooloi, that serve as principal genetic engineers that fuse genetic material in order to reproduce the population. In an era of racial liberalism, with increasing accusations of imperialism levied towards the United States by the Soviet Union undermining its credibility as a liberal democracy, the U.S. experienced strong pressure to incorporate more diverse populations into its imperial machinations during the Cold War. Thus, U.S. empire developed new modes of colonial governmentality, one that transforms the project of explicit genocide into a neoliberal multiculturalist endeavor that embraced the contributions of a multiracial, yet still underclass, collective of populations to U.S. global ascendancy.[44]

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[42] Dean Itsuji Saranillio, *Unsustainable Empire: Alternative Histories of Hawai'i Statehood* (Durham, NC: Duke University Press, 2018), 12

[43] Octavia E. Butler, "Dawn: novel: outline," ca. 1980. Box 29, Octavia E. Butler Papers. Huntington Library, San Marino, CA.

[44] For more on this model of neoliberal multiculturalism as a model of U.S. governmentality as an "official antiracism" during the Cold War, see Jodi Melamed, "The Spirit of Neoliberalism: From Racial Liberalism to Neoliberal Multiculturalism," *Social Text* 89, no. 4 (2006): 1-24

Yet, for the Marshallese Islanders subject to nuclear tests across their lands and oceans, it was not their *life* that was incorporated into the auspices of U.S. empire, but rather their *biological matter* that served as the raw material for militarized securitization. Indeed, whereas the United States expressed concern for incorporating *Asia* into the network of U.S. liberal capitalism qua democracy—as evidenced by the transition of states like South Korea, Taiwan, and Hong Kong into the sphere of U.S. subimperial power[45]—Marshallese Islanders were reduced to a condition of necropolitical expendability, in the sense that it was their *material lives* that mattered to the nation-state. Like the HeLa cell line, Project 4.1's test subjects become incorporated into U.S. empire not as living human subjects, but as deconstructed racial biomatter that inaugurates a multiculturalist universal human made of discarded and extracted parts of racialized bodies, but yet assume a hegemonic claim to modernity for the reigning regimes of Western colonialism. The acquisition of biomatter for the purposes of genetic engineering by the Oankali, then, reinscribes a utility for *racial matter*, a breaking down of the human of neoliberal multiculturalism into its most miniscule scales of difference. Despite racial differences embodied by the "human" subject (as species) of biomedical experimentation, their bodies (as biological matter) offered "good data" in its quests of Cold War securitization.[46]

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[45] Simeon Man describes a subempire as a "semiperipheral nation-state that functions on behalf of a core hegemonic power…[one who] tends to reinforce the goal of regional capitalist integration in its drive to expand its markets beyond its national borders" (105). In this manner, subempires further the imperial agenda of a centralized empire, in this case the United States, while never falling under *formal* colonial occupation or administration. Within the context of the Cold War decolonizing Pacific, subimperial rule formed the crux of U.S. empire in Asia, in contrast to more formal modes of occupation in sites like the Marshall Islands, Guam, and Hawai'i. See Man, *Soldiering through Empire*.

[46] See Hogue, "Nuclear Normalizing," 211

The Nuclear Corpus

Shifting from Butler's global scale account of nuclearism, I now turn to the work of Marshallese poet Kathy Jetñil-Kijiner. While Butler's archival research materials and writing offers a generative avenue to think across social and political contexts in grappling with the racial matters of the Cold War human, the work of Jetñil-Kijiner's poetry collection *Iep Jaltok: Poems from a Marshallese Daughter* (2017) is grounded in the locality of nuclear ruin, inviting us to dwell with the deep relationalities invoked by nuclear embodiment. Indeed, these corporeal manifestations of nuclear war's enduring legacy take a different shape in the work of Jetñil-Kijiner in particular, whose writing and public appearances have powerfully shaped the direction of environmental justice activism in the 21st century. Most widely known for her performance of a poem to her daughter, "Dear Matafele Peinem," at the United Nations Climate Summit in 2014,[47] Jetñil-Kijiner's poetry contemplates calls for justice from the Marshall Islands that reverberate across the Pacific in the face of unending climate crisis and catastrophe. In her poem "Fishbone Hair," Jetñil-Kijiner confronts the death of her niece Bianca, who fell ill at a young age due to suspected radiation poisoning:

> There had been a war
> raging inside Bianca's six year old bones
> white cells had staked their flag
> they conquered the territory of her tiny body
> they saw it as their destiny
> they said it was manifested[48]

Throughout the poem, Jetñil-Kijiner places a particular emphasis on Bianca's disarticulated body parts in the wake of radiation poisoning: her "six year old bones," "white cells," "rootless hair //

[47] Kathy Jetñil-Kijiner , "United Nations Climate Summit Opening Ceremony - A Poem to My Daughter," https://www.kathyjetnilkijiner.com/united-nations-climate-summit-opening-ceremony-my-poem-to-my-daughter/
[48] Kathy Jetñil-Kijiner , "Fishbone Hair" in *Iep Jaltok: Poems from a Marshallese Daughter* (Tucson, AZ: University of Arizona Press, 2017), 25

that hair without a home," her "skull // when they closed // her casket," and "fishbone hair" that all disperse from "the territory of her tiny body."[49] Within Asian American poetry, Rachel Lee has argued that thinking in terms of human fragments and body parts is a particularly useful endeavor in revealing how race inheres as a "fictional (discursive) construct—only ambivalently, incoherently, or 'problematically' linked to the biological body."[50] Yet, while the racialization of somatic matter undercuts the biologization of race, which we know to be a social construct, Jetñil-Kijiner's perspective from the Pacific reveals that the racial markers that describe body parts is not merely a discursive construction, but a geopolitical force that etches racial expendability onto the very biological matter of Indigenous Pacific bodies. Such racial hieroglyphics manifest structurally and inhere across generations, "posit[ing] the suffering child as a metaphorical nuclear testing site,"[51] as the temporal register of nuclear imperialism refuses teleological narratives of conventional cause and effect. While Bianca's leukemia cannot be attributed with full scientific certainty to irradiation in the Pacific, the causal qua correlational relationship with leukemia signifies a racializing effect in which radiation's porous movement binds Marshallese Islanders within a global diaspora of nuclear contamination, one which Natalia Duong describes in another context as those linked "by exposure as opposed to national belonging."[52]

The final two lines of the above excerpt invoke the history of U.S. manifest destiny, a project that imagined the continental United States as conquerable territory destined to be

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[49] Ibid.

[50] Rachel Lee, *The Exquisite Corpse of Asian America: Biopolitics, Biosociality, and Posthuman Ecologies* (New York: New York University Press, 2014), 8

[51] Michelle Keown, "Children of Israel: US Military Imperialism and Marshallese Migration in the Poetry of Kathy Jetñil-Kijiner," *Interventions* 19, no. 7 (2017): 943

[52] Natalia Duong, "Agent Orange Bodies: Viet, Duc, and Transnational Narratives of Repair," *Canadian Review of American Studies* 48, no. 3 (2018): 410, n7

enfolded violently into U.S. empire. As scholars such as Evyn Le Espiritu Gandhi and Jodi Byrd have demonstrated, manifest destiny was never limited to the continental United States, as the "paradigmatic Indianness" of Indigenous territories and peoples across the Pacific justified the expansion of the American imperial frontier into the transpacific in order to coalesce the military presence to sustain the containment of communism during the Cold War.[53] Yet, while these projects unfolded on territorial levels and military bases were established across Hawaiʻi, Guam, Okinawa, and the Philippines amongst other archipelagos in the Pacific, the transformation of the Marshall Islands into a living laboratory of experimentation invites engagement with the scale of settler militarism on the ecological scale of embodiment. Indeed, amidst the global reckoning with the immense scale of environmental crises that are compounded by the converging legacies of racial capitalism, settler colonialism, and military imperialism, Jetñil-Kijiner's poetry "allegorizes Marshallese experience to make a claim for a cultural geologic that is not reducible to a universalized climate science of the Anthropocene."[54] In other words, while the Anthropocene universalizes catastrophe across a range of discourses that privilege the environmentally damaging actions of the "human" species, Jetñil-Kijiner's poetry and activism attends to the local scales of restoration and destruction that engage in competing claims to the future of our planet.

Thus, the questions that Jetñil-Kijiner raises about transpacific nuclear colonialism are fundamentally questions about how we remember history, legacies of violence that compound themselves into the very bodies of displaced and colonized people who bear witness to the

[53] See Evyn Le Espiritu Gandhi, Chapter 2 "The 'New Frontier': Settler Imperial Prefigurations and Afterlives of the US War in Vietnam," in *Archipelago of Resettlement: Vietnamese Refugee Settlers and Decolonization across Guam and Israel-Palestine* (Berkeley, CA: University of California Press, 2022); and Jodi Byrd, *Transit of Empire: Indigenous Critiques of Colonialism* (Minneapolis, MN: University of Minnesota Press, 2011)
[54] Elizabeth DeLoughrey, *Allegories of the Anthropocene* (Durham, NC: Duke University Press, 2019), 4

deterioration of environments in which they are enmeshed. It is in this manner that what performance theorist Diana Taylor calls the "repertoire," or "acts usually thought of as ephemeral, nonreproducible knowledge,"[55] engage the body as a material receptacle of history that holds memory of violence transferred from generation to generation. The narrator in Jetñil-Kijiner's poetry first encounters the history of nuclear testing at the age of fifteen, when she decides to do a history project confronting this legacy. The poem, "History Project," recounts the process of encountering this archive of violence, a historical manifestation of the violence that transforms Indigenous bodies into data points for imperial knowledge production. Across the poem, Jetñil-Kijiner recounts the affect of confronting this archive: photographs of "a boy, peeled skin // arms legs suspended // a puppet //next to a lab coat // lost in his clipboard," "firsthand accounts // of what we call // jelly babies," "snapshots // of American marines and nurses branded // white with bloated grins sucking // beers and tossing beach balls along // our shores," and "island ancestors, crossed -legged // before a general listening // to his fairy tale // about how it's // *for the good of mankind*."[56] Juxtaposing the detached, emotionless American scientist with military personnel enjoying the island paradise of their settler militarist station, the poem gestures towards the extractive relationship the U.S. military adopted towards the Marshall Islands. In contrast, the Marshallese Islanders were treated as test subjects, captive biomatter whose expendability fueled the scientific march of progress "for the good of mankind." This recurring motif of liberal progress has been often recounted in justification for the nuclear tests in the Pacific, a reminder that the Cold War human's ascension into universal humanity always requires an underside in which racialized life is marked as disposable in scientific progress.

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[55] Diana Taylor, *The Archive and the Repertoire: Performing Cultural Memory in the Americas* (Durham, NC: Duke University Press, 2003), 20
[56] Jetñil-Kijiner, "History Project," *Iep Jaltok*, 21

The poem interweaves the narrator's encounter with the archive of violence qua science that casts Indigenous bodies as disposable, and in doing so works through the affective dissonance of encountering oneself in an archive that drains one's subjectivity into the inanimacy of experimental fodder. Recasting this history into her project, the narrator projects her emotions into a posterboard, serving both to retell the history of her ancestors as well as the more mundane function of fulfilling the requirements for a school project:

> so I finish my project
> graph my people's death by cancer
> on flow charts in 3-D
> gluestick my ancestors' voice
> onto a posterboard I bought from office max
> staple tables screaming
> the 23 millions of dollars stuffed int our mouths
> generation
>   after generation
>   after generation
> and at the top
> I spray painted in bold stenciled yellow
> FOR THE GOOD OF MANKIND[57]

Ironically, the white judges that encounter her project misread the intention of her history project, proclaiming "*Yea… // but it wasn't really // for the good of mankind, though // was it?*"[58] Indeed, this encounter performs the problem of liberal progress narratives of the post-Cold War, a recognition that the nuclear experiments in the Marshall Islands were *inhumane* but a failure to recognize the defining category of "mankind" that inheres across the structural legacy of nuclear imperialism is not one of universalism, but one that Sylvia Wynter has famously proclaims, "overrepresents itself as if it were the human itself."[59] Instead, this articulation of the Cold War

[57] Jetñil-Kijiner, "History Project," 23
[58] Ibid.
[59] Sylvia Wynter, "Unsettling the Coloniality of Being/Power/Truth/Freedom: towards the Human, After Man, Its Overrepresentation—an Argument," *CR: The New Centennial Review* 3, no. 3 (2003): 260

human underpins the problem of liberalist ideations of Cold War violence—in an effort to recast the Cold War legacy of nuclear experimentation as a dehumanizing blip in the history of Cold War militarism, liberalist narratives fail to recognize how the very logic of nuclear experimentation, succinctly expressed "for the good of mankind," materializes in the very congealment of the liberal human as the reigning post-Cold War structural form of liberalism itself. Instead of confronting the violent legacies recast on the narrator's posterboard—detailed statistics of Indigenous death and stories of ancestors who speak of devastating loss—the powers that be, indexed by the "three balding white judges" only view history through rose-tinted glasses—recognizing that yes, this history is bad and was not actually for the good of mankind, but fail to recognize that the narrator's critique is not of a history gone awry, but an enduring structure of settler militarism that has fundamentally transformed the Marshall Islands into a permanent outpost of Cold War science's experiments in racial matter.

Against a Universal Nuclearism

This history of *racial matter* requires us to grapple with how abstractions of the human into experimental fodder shape the universalizing structure of the Cold War human. In this manner, Butler's mapping of geographies of experimentation across the material life of HeLa and the ever-expanding nuclear complex engages a methodology that Yen Le Espiritu calls "critical juxtaposition," bringing together seemingly disconnected histories to reveal overlapping currents of war and empire.[60] Constructed through this modality of experimental fungibility, both Henrietta Lacks and Marshallese Islanders exposed to radioactive fallout illuminate the racial

[60] Yen Le Espiritu, *Body Counts: The Vietnam War and Militarized Refugees* (Berkeley, CA: University of California Press, 2014), 21

logics of experimentation predicated on the pursuit of universal knowledge, knowledge organized around "improving" the collective human species. In this regard, the Oankali's interest in the humans' "talent" for cancer as a malignant defect that can be cured through absorption also metaphorizes their desire to genetically reprogram the human race. As Jdahya remarks in *Dawn*, human bodies were "fatally flawed" and genetically predisposed for collective annihilation because they possessed tow inherently incompatible characteristics: intelligence and a hierarchical social structure. As he suggests, "When human intelligence served [hierarchy] instead of guiding it, when human intelligence did not even acknowledge it as a problem, but took pride in it…that was like ignoring cancer."[61] Intelligence, thus, serves the interests of furthering hierarchy, mobilized as an apparatus of subjugation that—in a total war state—increasingly oriented economies of knowledge production around the expanding military-industrial complex.

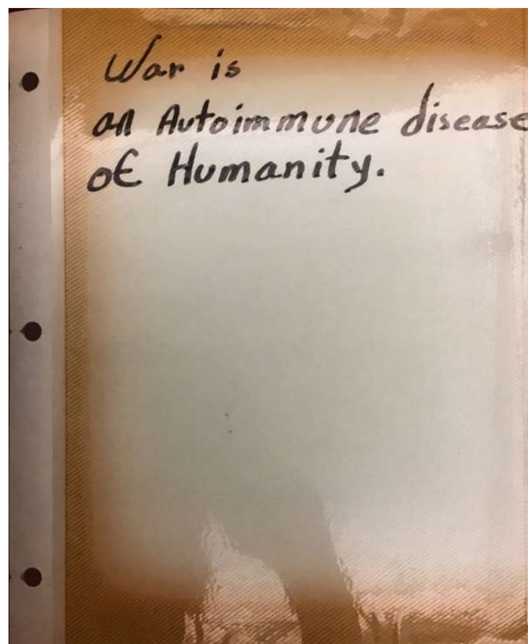

Figure 2.2 "War is an autoimmune disease of humanity." Box 49, Octavia E. Butler Papers, Huntington Library, San Marino, California.

[61] Butler, *Dawn*, 37

Amongst the stacks of scribbled notes detailing the conception of the *Xenogenesis* series in Butler's archives, the words "War is an autoimmune disease of humanity" stand out, written in black sharpie on a fading laminated piece of paper stored amongst other loose-leaf pieces of notebook paper. Just as an autoimmune disease denotes when an organism's immune system attacks its own healthy cells, war sees humans turn on their own; those tasked with defense and security become agents for death in a collective "suicide" of humanity, to borrow from Butler's own characterization.[62] Metaphorizing war as an autoimmune disorder that infects the body politic of a shared universal *humanity*, Butler attunes us to not only war's sociopolitical, historical, and conceptual effects, but also the corporeal manifestations through which war comes to acquire meaning, power, and feeling—how war comes to *matter*. War, thus, functions not merely through territorial conquest, but as a somatic violence that operationalizes the biological body in service of empire.

Specific to the Reagan-era fantasies of a winnable nuclear war with the Soviet Union, Butler powerfully expresses concerns with the familiarity of civilians and politicians with the sheer scale of destruction promised by nuclear weaponry, a process that Hogue names "nuclear normalizing," or the "obfuscation of causal relationships, which render nuclearization and its effects innocuous."[63] On May 24th, 1981, Butler wrote a letter to the editor published in the *Los Angeles Times*, "Civil Defense in a Nuclear Age," critiquing Edward Teller's pro-civil defense position; Teller sought to develop a civil defense system commonly derided as "star wars," a concept of using satellite-based lasers to destroy incoming nuclear warheads. Butler's response, however, was not against the position itself, but a case of deriding Teller for "wanting the right

[62] Butler, *Dawn,* 13-17
[63] Hogue, "Nuclear Normalizing," 212

thing for the wrong reasons."[64] Civil defense, in Butler's eyes, was necessary not because of impending nuclear war with the Soviet Union, but precisely because nuclearism has been conditioned so deeply into the everyday life of empire that the possible acquisition of nuclear warheads by terrorists or otherwise unexpected incidents on a smaller scale could promise catastrophe for the population. In this vein, Butler proffered the necessity of civil defense to safeguard against the impending collapse of the United States at the hands of its own nuclear arsenal.

The turn toward securitization in a time of increasing fears of nuclear annihilation during an era of Reagan-inspired neoliberal doctrines of war and scientific advancement gestures towards the intense anxiety Butler experienced surrounding the expanding possibility of nuclear catastrophe. However, as Butler argues for *increased* securitization in response to the impending apocalypse seemingly on the horizon, it also equally urgent to contend with the already-existing nuclear apocalypse that forms the very condition of possibility for the "security" of the U.S. continental mainland even as it is mired within speculative potentialities of annihilation. For, without the experimental subjugation of Marshallese Islanders, the nuclear technology that conjures imaginaries of future apocalypse would never have exited. In this manner, *Dawn*'s powerful critique of nuclear catastrophe as a "suicide" of humanity that ushers in a new world order of apocalypse offers a valuable narrative for grappling with how racial matter comes to be the experimental fodder for developing definitions of the human. Yet it also risks casting nuclear devastation as a *universal* condition that promises species-level extinction to a collectively bound "humanity," or what Lisa Yoneyama, in the context of the atomic bombing of Hiroshima, terms "nuclear universalism," or "the idea that Hiroshima's disaster ought to be remembered from the

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[64] Octavia E. Butler, "Civil Defense in a Nuclear Age," Letter to the Editor, *Los Angeles Times*, May 24, 1981. Octavia E. Butler Papers. Huntington Library, San Marino, CA.

transcendent and anonymous position of humanity, and that remembering of Hiroshima's tragedy should invoke natural and commonly shared human thoughts, sentiments, and moral attitudes not limited by cultural boundaries."[65] In other words, by casting nuclear devastation as a unilaterally collective concern that binds the world into a common humanity threatened with annihilation, universal accounts of nuclearism risk eliding the materialist histories of colonialism that shape *who* is most threatened by irradiated futures, and whose lives have already been disposed of in the quest of nuclear proliferation. What is necessary, then, is a deep place-based analysis that reckons with the scale of nuclearism across the Pacific, one of the most profoundly devastated arenas of military testing during the Cold War.

On one hand, Butler's invocations of medical experimentation and biomedical fungibility clearly demarcated racialized histories of anti-Blackness in medical innovation, drawing attention to how the medical-industrial complex casts Black biomatter as expendable, yet inexhaustibly necessary to the universal progress of humanity. n the other hand, her gestures towards nuclear apocalypse operate at a species-level form of universalism, a narrative function that I argue engages what Michelle N. Huang calls "studious deracination," or "a narrative strategy defined by an evacuated racial consciousness that ironizes assumptions of white universalism and uncritical postracialism."[66] In this respect, Butler evacuates the explicit racialization of nuclear apocalypse in order to imagine it as a universal catastrophe, one that binds humanity in a collective need for demilitarization. Not merely an uncritical postracial account of nuclearism—as evidenced by Butler's deep understanding of nuclear geographies in the archive—Butler's account of universal nuclearism gestures towards the need to develop

[65] Lisa Yoneyama, *Hiroshima Traces: Time, Space, and Dialectics of Memory* (Berkeley, CA: University of California Press, 1999), 15
[66] Huang, "Racial Disintegration," 500

alternate forms of solidarity in the face of militarization, thinking across racial difference to attune our structural analysis to the nuclear complex as an *overarching infrastructure* that governs racial logics at the scale of the body, local, and transnational.

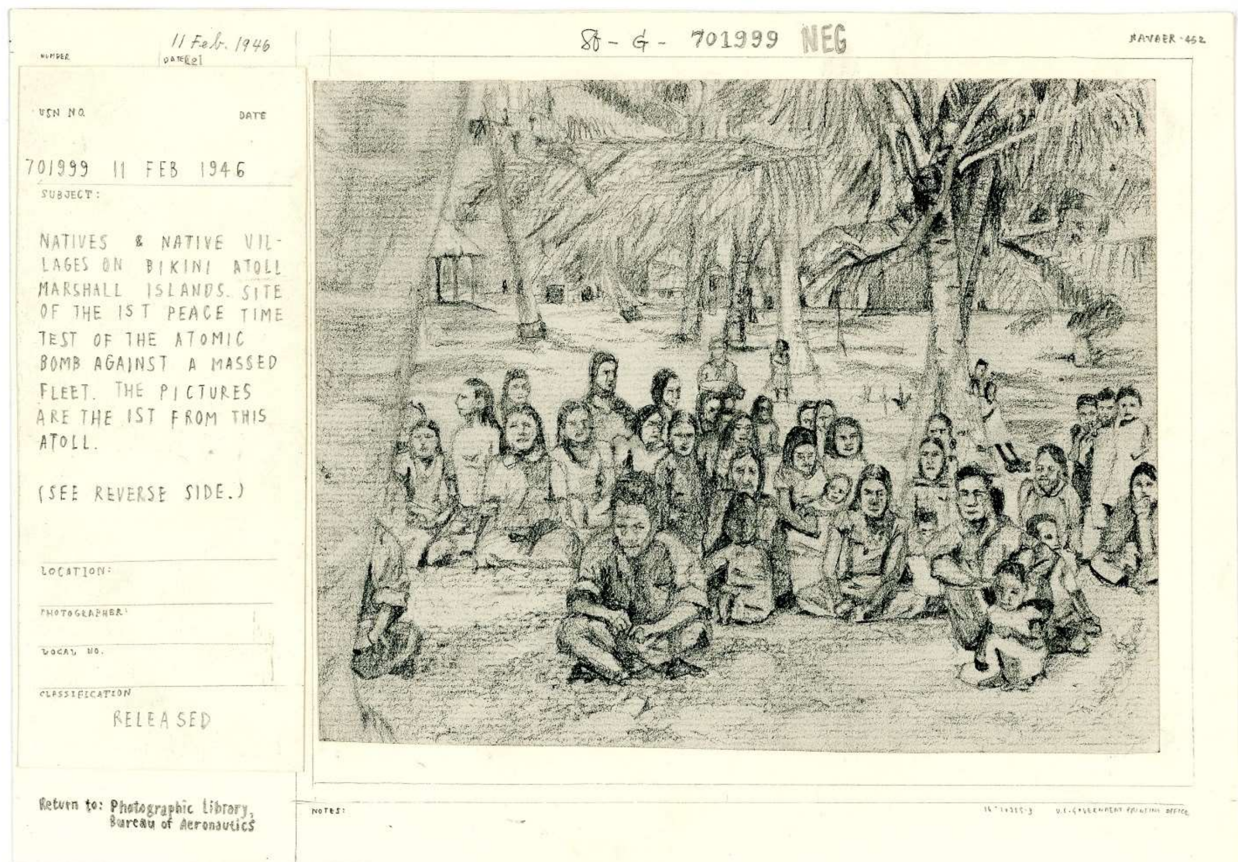

Figure 2.3 (See Reverse Side.), Jane Chang Mi, 2017. Pencil redrawing of image from the photographic archive of Operation Hardtack I, nuclear testing in the Marshall Islands.

I end this chapter with Jane Chang Mi's visual project *(See Reverse Side.)* (2017), in an attempt to think relationally across depictions of the nuclear subjection of Marshallese Islanders in the archive of Cold War science—not necessarily to restore them to transparent legibility that continually establishes Indigenous people as "objects" of scientific study, but to rethink how we consider historical representation in the ruins of nuclear catastrophe. As an Asian American artist living on and off in Hawaiʻi for much of her adult life, Mi's work must be read through a framework of what Candace Fujikane calls "settler aloha ʻaina," which emphasizes the necessity

for non-native settler allies in the Pacific, and specifically Hawai'i, to "exercise settler kuleana (responsibilities, rights, privileges, purview) given to them but who do not lose sight of their settler privileges."[67] Out of hundreds of photographs taken of nuclear tests in the Pacific that offered a scientific and historical record of the experiments, very few were taken of the villages or villagers devastated and displaced by nuclear fallout—an archival lacuna that actively erases Indigenous presence from the atolls. Responding to this erasure, Mi redrew the few photographs in the archive depicting Marshallese people, aesthetically remapping histories of nuclear testing from their spectacular scenes of devastation and their scientific laboratories of datafication toward the lives of Indigenous people disrupted by the global nuclear complex.

Employing the medium of pencil drawing, Mi recreates images of Marshallese people sitting on beaches beneath the palm trees at Bikini Atoll, awaiting their imminent displacement for the settler project of U.S. militarism. As Fiona Amundsen and Sylvia Frain argue, Mi's choice to redraw the photographs with a pencil draws on the materiality of lead as a substance impervious to radioactivity, serving as an ethical mode of witnessing violence that refuses the documentary aesthetics of colonial archiving.[68] As they write,

> Photographs of detonating bombs dominate this national archive. Mi's treatment of these thirteen images grants a visibility to what has been obscured—made invisible—within the 'official' government archive itself. However, it is a visibility that brings with it a strong sense of opacity. Although Mi's drawings release the Indigenous lives and lands represented in the original photographs from the confines of a very American nationalist-centric archive, they do not pretend to provide insight into the realities of living in a nuclear test zone. If anything, her pencil drawings function to obscure any sense of clarity the photographs could have claimed to provide.[69]

[67] Candace Fujikane, *Mapping Abundance for a Planetary Futue: Kanaka Maoli and Critical Settler Cartographies in Hawai'i* (Durham, NC: Duke University Press, 2021), 14
[68] Fiona Amundsen and Sylvia Frain, "The Politics of Invisibility: Visualizing Legacies of Nuclear Imperialisms," *Journal of Transnational American Studies* 11, no. 2 (2020)
[69] Ibid., 133

Against the authoritative mode of documentation promised by state-sponsored, archival photography, Mi's drawings offer an ethical witnessing premised on the slow relations of pencil drawing that generate alternate histories of nuclearization. The opacity of the archival recreations offers a form of knowledge production that does not seek to *reproduce* the violence of nuclear colonialism and U.S. military science, nor to offer a definitive account of Indigenous experiences of nuclear fallout retold by an Asian American settler ally. Instead, the drawings offer a more modest aim—a desire to reject the imperial *mattering* of Indigenous bodies into experimental biomatter, and think through the human costs of settler militarist dispossession in the Pacific.

Against scientific histories that cast bodies like that of Marshallese people and Henrietta Lacks as expendable biomatter in pursuit of new knowledge of the "universal human," Mi's drawings imbue the archive with what Ronak Kapadia calls "warm data," an aesthetic strategy that refuses the "coldness" of bureaucratic, scientific, and legal systems that conventionally frame surveilled and militarized bodies and to reorder "our vision from the deadening logics of militarized detention toward sensuous imaginings of security and freedom."[70] In this manner, these drawings unsettle the universal yearning for the Cold War human qua liberal freedom, revealing the documentary enclosure of the colonial archive of Cold War science to be a tactic of colonial erasure that elides the Indigenous lives deemed disposable in the quest for nuclear knowledge. Saturated by the embodied legacy of nuclear contamination, the bodies of Pacific Islanders nonetheless carry an affective connection to the lands and ecologies that surround them that invite us to imagine conditions of fallout differently. Racial matter, while functioning on one hand as the bare matter of scientific experimentation in generating these visions of the Cold War

[70] Ronak Kapadia, *Insurgent Aesthetics: Security and the Queer Life of the Forever War* (Durham, NC: Duke University Press, 2019), 109

human, also offers a mode of ethical relationality that reaches across social and political contexts to bind potentials for solidarity. In doing so, Mi's aesthetic project follows in the spirit of Butler and Jetñil-Kijiner's desires for contemplating futures not predicated on the fungibility of racial matter, but harnessing the relationality of matter as an ecological form of kinship across shared histories of experimental subjugation.

CHAPTER 3: EUGENIC ECOLOGIES OF CHEMICAL WARFARE

The opening pages of Welsh photojournalist Philip Jones Griffiths' collection, *Agent Orange: Collateral Damage in Viet Nam* (2003), depict acres of desecrated landscapes. Captured in black and white, smoke lingers from eradicated jungles, making way for barren land in the aftermath of onslaughts of chemical attacks and cluster bombs deployed throughout the war. As the collection progresses, the fiery damage settles—left in its wake are charred trunks and empty branches that index the remainders of the U.S. war on nature, emblematic of the defoliation campaigns that decimated environments in Southeast Asia during the Vietnam War. From 1962-1971, the U.S. military and its allied forces sprayed an estimated twenty-million gallons of herbicides and chemical defoliants over rural and jungle areas of Southeast Asia, known as Operation Ranch Hand. With the Vietnam War providing an experimental space for the expansion of military capacities in nonnuclear warfare suitable for *limited* war—or smaller, more localized conflicts—the development of military technologies in chemical warfare (including herbicides such as Agent Orange, as well as napalm and tear gas) served a useful purpose in the military's "flexible response" to communist insurgency in the Global South.[1] Operation Ranch Hand deployed a range of chemicals—famously dubbed "Rainbow Herbicides" Referring to the different colored stripes labeling their containers—for two primary purposes: 1) to remove mangrove cover in jungle areas to increase visibility of guerilla combatants, and 2) to contaminate cropland that provided sustenance for the National Liberation Front. As the North Vietnamese communist forces proved adept at navigating the jungle terrain of Southeast Asia for tactical benefit, the U.S. military required a strategy of violence that could contend not only with

[1] See Sarah Bridger, *Scientists at War: The Ethics of Cold War Weapons Research* (Cambridge, MA: Harvard University Press, 2015), 34; David Zierler, *The Invention of Ecocide: Agent Orange, Vietnam, and the Scientists Who Changed the Way We Think About the Environment* (Atlanta, GA: University of Georgia Press, 2011), 53

enemy human combatants, but also the ecological terrain utilized as protective cover, source of sustenance, and site of refuge.

Eventually, Griffiths' collection turns to the human costs of herbicidal warfare. Traveling across villages in Vietnam, Griffiths follows the stories of children living with disabilities induced by toxicity lingering in the aftermath of Agent Orange exposure. The most infamous of the "Rainbow Herbicides," Agent Orange was sprayed at over fifty times its suggested concentration, leaving traces of dioxin in the environments. A highly toxic contaminant, dioxin lingered in the bodies of animals, both human and nonhuman, and is linked to numerous birth and health issues in both Vietnamese and U.S. veteran bodies. These issues included stillbirths, cancer, cognitive disabilities, and the increased rate of birth for conjoined twins.[2] Several artists and activists, seeking financial and symbolic redress in the wake of Agent Orange's devastating effects, turned to visual representations of disabled children as an affective vehicle for generating sympathy on behalf of those affected. However, as I have argued elsewhere and later in this dissertation, photography occupies a unique cultural position in relation to the Vietnam War; visualizations of violence relayed the brutality of war in Southeast Asia to the public, facilitating the larger populace's affective relation to war abroad.[3] These photographs of disabled children, thus, function as the condition of knowability for militarized violence—an archive for remembering the inhumanity of war that remains in its embodied afterlives.

Exceptionalizing the production of disability as an "accident" borne out of collateral damage, Griffiths approaches disabled Vietnamese children as the inadvertent remains of a war

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[2] For more on the health effects of Agent Orange, see Zierler, *Invention of Ecocide*; Alvin Lee Young, *The History, Use, Disposition and Environmental Fate of Agent Orange*, (New York: Springer Science & Business Media, 2009); and Fred Wilcox, *Waiting for an Army to Die; The Tragedy of Agent Orange* 2nd ed. (New York: Seven Stories Press, 2011)
[3] See Keva X. Bui, "Objects of Warfare: Infrastructures of Race and Napalm in the Vietnam War," *Amerasia Journal* (2022). This article is also reprinted in Chapter 4 of this dissertation.

waged on nature—eliding the material forms of violence that the U.S. war machine *deliberately* inflicted on its human targets. In perhaps one of the most unnerving collection of photographs in his collection, Griffiths' documents the "secret tomb" of unborn fetuses preserved in formaldehyde at the Tu Du Maternity Hospital[4] in Saigon, Vietnam: the "most inhuman of human remains."[5] Attending to the human remains of war as unborn fetuses rather than the conventional detritus of corpses of dead soldiers, Griffiths unwittingly recalibrates our understanding of militarized violence as a problem of *reproductive justice*—one that inhibits the future of a nation through intergenerational chemical poisoning. Disability, thus, is central to the machinations of the colonial war machine that operates through the debilitation of the enemy nation's future; as Jasbir Puar notes in the context of Israel's militarized occupation of Palestine, "maiming functions not as an incomplete death or an accidental assault on life, but as the end goal in the dual production of permanent disability via the infliction of harm and the attritions of life support systems that might allow populations to heal from this harm."[6] The objective, within a biopolitics of debilitation and militarized maiming, is not death per se, but the temporal disruption of a population's capacity for resistance, thereby facilitating an acquiescence to colonial and imperial order. Unleashed onto the reproductive systems of Vietnamese populations, Agent Orange's debilitating effects constitute a regime of biopower that binds Vietnamese national futurity with the toxic contamination of its ecologies.

People currently living with dioxin-induced disabilities have inherited its poisonous effects from mothers exposed to these toxins during or prior to pregnancy; yet, thousands more resulted in stillbirths. This story narrates what, in this chapter, I term "eugenic ecologies," which

[4] Doctors at Tu Du Maternity Hospital have been long- and well-known for collecting fetuses affected by herbicidal warfare in the aftermath of the Vietnam War to study the effects of chemical poisoning.
[5] Philip Jones Griffiths, *Agent Orange: Collateral Damage in Viet Nam* (London, UK: Trolley, 2003), 38
[6] Jasbir Puar, *The Right to Maim: Debility, Capacity, Disability* (Durham, NC: Duke University Press, 2017), 143

emphasizes how social and scientific logics of designating the *political* value of certain forms of life and death translate from capitalist tactics of ecological management to landscapes of warfare. Eugenics, as a politically inflected ideology of preserving valued life at the expense of devalued life, provides an important optic for understanding how necropolitical regimes of militarism consign certain forms of human and nonhuman life as expendable—what Achille Mbembe calls "the status of the *living dead*."[7] Herbicidal deployment indexes the biotechnological regulation of plant life, which facilitates the expansion of U.S. imperialism's dominion over nature. Mobilized during the Cold War, the objective of environmental regulation shifted from optimizing agricultural yields toward the eradication of an ecologically porous definition of "enemy life" that collapses into the terrain in which it is surrounded, wherein "the guerilla is deemed indistinguishable from plant life, in essence, one and the same as the bushes, trees, and foliage below."[8]

In arguing that the militarized deployment of herbicides in the Vietnam War constitutes a eugenicist logic, I make an epistemic argument about Cold War reproductive politics in the contexts of imperial warfare through their shared logics of population management in the interests of capitalist securitization. Indeed, in a different context, Alys Eve Weinbaum names the "slave episteme" to describe how the alienation and commodification of slave reproduction forms the epistemic blueprint for contemporary capitalist renderings of *biological* bodies as objects of speculation and exchange, as the afterlife of reproductive slavery "renders human reproduction's devaluation and extraction *conceivable*."[9] In other words, the history of

[7] Achille Mbembe, *Necropolitics* (Durham, NC: Duke University Press, 2019), 92
[8] Christine Hong, *A Violent Peace: Race, U.S. Militarism, and Cultures of Democratization in Cold War Asia and the Pacific* (Palo Alto, CA: Stanford University Press, 2020), 138
[9] Alys Eve Weinbaum, *The Afterlife of Reproductive Slavery: Biocapitalism and Black Feminism's Philosophy of History* (Durham, NC: Duke University Press, 2019), 2

commodifying Black slave reproduction functions as the epistemic logic that makes possible contemporary capitalist speculation on the biological bodies of women of color in the Global South. In historical materialist sense, the commodification of slave reproduction undergirds the transformation of biological bodies into a capitalist item of exchange, materializing new definitions of reproduction and material exchange in new eras of technological and speculative interest in economies of reproduction.

In this chapter, I extend this framework to argue that the debilitation of Vietnamese reproductive bodies is conceivable only through its continual framing as an *accident* of liberal warfare in the securitization of global capitalism, a Cold War episteme that prioritizes the reigning dominance of *ideological* humanist life at the expense of living bodies deemed disposable. If the commodification of slave reproduction constitutes the condition of possibility for contemporary economies of reproductive exchange, then it is liberal humanism's ideation of the universal human propped up by logics of liberal democracy and capitalist modernity that engenders eugenicist practices of herbicidal warfare that decimate human and nonhuman life in the Global South. The naturalization of militarized death in the Global South is seen as an unfortunate byproduct of a humanitarian Cold War, wherein the narrative of unintended collateral damage obfuscates how, regardless of supposed "intentionality," the poisoning of Vietnamese reproductive capacities fulfills ulterior motives of U.S. Cold War imperialism that seeks to incapacitate anti-capitalist trajectories of nationalization within Southeast Asia. Reproductive control, as Laura Briggs reminds us, functions alongside militarized tactics of destruction in managing populations in the global South in order to maintain conditions of capitalist modernization, wherein the quest to halt communist expansion deployed both the distribution of contraceptives in South Vietnam and the indiscriminate chemical destruction of

the North.[10] These histories converge in Cold War eugenic logics of population management—wherein curtailing reproduction in the "Third World," intentionally or not, is proffered as the necessary panacea to the problem of environmental degradation and global overpopulation.[11]

Throughout this chapter, I read scientific, environmentalist, and artistic contestations of herbicidal deployment in the United States and Southeast Asia—both for agricultural and military purposes—to reveal the joint logics of capitalist and militarized regimes for regulating both *political* and *biological* life and death across human and nonhuman populations. While, on one hand, Griffiths' collection exemplifies the limits of reparative critiques of war's violence that render disability a sympathetic problem in need of repair,[12] on the other hand it helpfully frames the reproductive violence of war in relation to the U.S. war on nature, which offers a point of departure for examining the interconnectedness of ecological lifeworlds in the constitution of Southeast Asian multispecies futurity.

The first part of this chapter examines two historical manifestos—Rachel Carson's environmental treatise *Silent Spring* (1962) and Paul Ehrlich's alarmist *The Population Bomb* (1968)—in order to trace how the logics of biopolitical control over human and nonhuman life shaped the eugenicist policies of the U.S. Cold War security state. Both Carson and Ehrlich approach the question of environmental conservation in drastically different manners, offering a vantage point into understanding how relations between humans and the nonhuman world is intimately governed by a eugenicist logic that inscribes certain populations as slated for already

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[10] Laura Briggs, *Reproducing Empire: Race, Sex, Science, and U.S. Imperialism in Puerto Rico* (Berkeley, CA: University of California Press, 2003), 147

[11] For more on the politics of Cold War reproductive control and management, see Michelle Murphy, *Seizing the Means of Reproduction: Entanglements of Feminism, Health, and Technoscience* (Durham, NC: Duke University Press, 2012)

[12] For more on how representations of disability as a problem in need of repair circulate in cultural media, see Natalia Duong, "Agent Orange Bodies: Việt, Đức, and Transnational Narratives of Repair." *Canadian Review of American Studies* 48, no. 3 (Winter 2018): 387-414

premature death. The second part of the chapter to artistic cultural production by Vietnamese and Vietnamese diasporic artists Dinh Q. Le and Tuan Mami, in order to articulate how Southeast Asian aesthetic projects can remap our understandings of political relations between humans and the environment in the wake of militarized science and toxicity. Against eugenicist projects that seek to eliminate Southeast Asian more-than-human life, these artists develop modes of ecological kinship and interrelatedness that articulate visions of demilitarized solidarity that might emerge from geographies of contamination.

Contextualizing Herbicidal Warfare

Aimed to manage the unruly jungle terrain of Southeast Asia to expose hidden communist insurgents embedded within the ecosystem, Operation Ranch Hand provided a valuable strategy of transforming the environments of the region into a tactically suitable battlefield for U.S. military intervention. Coining the term "ecocide," a sizable coalition of anti-war scientists, led by bioethicist Arthur Galston, condemned the military's deployment of herbicidal chemicals in Southeast Asia.[13] As Galston later wrote, the term "ecocide" describes the dispersal of chemical defoliants in rural and jungle areas of Southeast Asia and "was coined to evoke the specter of the parallel crime of genocide…[and] acknowledgement of genocide as a

[13] Arthur Galston, unwittingly, played a key role in the development of Agent Orange. In 1943, Galston completed his dissertation on soybean flowering at the University of Illinois, at Urbana-Champaign. His dissertation studied the use of 2,3,5-triiodobenzoic acid (TIBA) to encourage the flowering of soybeans and noted that at high levels TIBA had a defoliating effect, removing the leaves from plants. In 1951, biological warfare scientists at Fort Detrick, Maryland began investigating the military possibilities of defoliants based on Galston's research with TIBA, eventually producing the toxic defoliant Agent Orange—a combination of two agricultural herbicides (TIBA and 2,4-D). After discovering the misappropriation of his research, Galston embarked on a long career as a bioethicist, advocating for peaceful applications of scientific research. Galston's story is a narrative of scientific discovery par excellence—the notion that *all* scientific innovation is implicated within the military-industrial complex, since the military-industrial complex extends across all domains of academic knowledge production.

crime against *humanity* raises a parallel question about the environment."[14] Echoing contemporaneous concerns raised by environmentalists, such as Rachel Carson, surrounding chemical contaminants' long-term effects on the environments and human inhabitants, these scientists rallied in a movement against ecocide—a rhetorical formation that named a universal violence against a shared environmental world.

While useful for calling attention to the ecological violence of the war in Southeast Asia by pressing at an increasing, but by no means universal, concern for environmental justice, condemnations of ecocide failed to mount a sustained critique of U.S. imperialism while, in fact, simultaneously reifying the political mythology of science as an apolitical project divorced from Cold War geopolitics. Galston and his cohort's critique of herbicide usage implores a desire for universalizing concern through invoking human rights discourse. However, Lisa Yoneyama argues in a different context that we should be wary of how the international language of "crimes against humanity," especially when employed as a redressive account for military violence, occludes how the very fantasy of a singular universal humanity is the very epistemological frame that enables U.S. Cold War imperialism to masquerade as humanitarian benevolence.[15] The human rights discourse invoked by the term "ecocide" elides the failure of international human rights regimes to reconcile the politically constructed *in*humanity of certain Asian subjects, indexed by what Christine Kim calls the "perceived intransigence" of national formations staunchly resistant to liberal capitalist intervention.[16] For those subjects, human subjectivity

[14] Arthur Galston, "Falling Leaves and Ethical Dilemmas: Agent Orange in Vietnam" in *New Dimensions in Bio Ethics: Science, Ethics, and the Formulation of Public Policy* ed. Arthur Galston and Emily Shurr (New York: Springer, 2001), 122 (emphasis mine)
[15] See Lisa Yoneyama, *Cold War Ruins: Transpacific Critique of American Justice and Japanese War Crimes* (Durham, NC: Duke University Press, 2016)
[16] Christine Kim, "Figuring North Korean Lives: Reading at the Limits of Human Rights," in *The Subject(s) of Human Rights: Crises Violations, and Asian/American Critique* ed. Cathy J. Schlund-Vials, Guy Beauregard, and Hsiu-chuan Lee (Philadelphia, PA: Temple University Press, 2020), 224

remains out of reach; they remain disposable within a necropolitical regime of U.S. imperialism due to their ongoing perceived association with communism. Thus, framing opposition to ecocide as primarily a question of humanitarian ethics is divorced from the geopolitical conditions inherent in U.S. imperial and military occupation, precisely because it is predicated on the question of who counts as human within the crosshairs of U.S. militarization.

Indeed, the Cold War generates new geopolitical formations through which human and nonhuman abjection is constructed, necessitating a framework of transnational environmental justice that attends to the incorporation of *plant life* into the militarized state's regime of bio- and necropower. In this regard, the U.S. war machine employs techniques of managing ecological life within the more-than-human terrains of warfare. Taking cue from the increased interest in animal life—and animality—that has animated literary theory in the recent decade, Jeffrey T. Nealon provocatively argues that it is the "plant, rather than the animal, [that] functions as the form of life forgotten and abjected within a dominant regime of humanist biopower."[17] Rereading theories of Foucauldian biopolitics—which define biopower as the exercise of sovereign power through the regulation of biological life processes of a population[18]—Nealon suggests that considering plant life within the domain of biopower unsettles the consolidation of liberal human subjectivity in relation to sovereign state power. In related manner, Joseph Pugliese articulates a "biopolitics of the more-than-human" in order to argue that this exercise of power over more-than-human ecologies manifests most prominently in contexts of militarized zones of violence.[19] Unlike Nealon, who argues that plant life constitutes the *ultimate* abjected

[17] Jeffrey T. Nealon, *Plant Theory: Biopower and Vegetable* Life (Palo Alto, CA: Stanford University Press, 2016), x

[18] Michel Foucault, "'Society Must Be Defended,' Lecture at the College de France, March 17, 1976," in *Biopolitics: A Reader* ed. Timothy Campbell and Adam Sitze (Durham, NC: Duke University Press, 2013)

[19] See Joseph Pugliese, *Biopolitics of the More-Than-Human: Forensic Ecologies of Violence* (Durham, NC: Duke University Press, 2020

form of life within humanist biopolitics, Pugliese's account of a biopolitics of the more-than-human expresses an understanding of the interconnectedness of human and nonhuman ecologies, and how their intertwined targeting by state apparatuses of militarism functions in *conjunction* with humanist regimes of bio- and necropower.

As Galston and these other scientists were primarily concerned with the scientific effects of chemical poisoning on the environments of Southeast Asia, they failed to address the political and racialized logics of a tactic of warfare that exceeded the "acceptable" terrain of warfare on the battleground and seeped into the intimate lives of civilian and nonhuman denizens. These connections borne out of more-than-human relations demand different rubrics for measuring the political legacy of herbicidal warfare. Herbicidal warfare's production of contaminated environments not only produces material toxicity, but also revises the very racialized logics of "life" itself as it is reproduced in the afterlives of war and militarism. Herbicides are "weed-killers"—in the following section, I situate the "weed" as a socially constructed figure that denotes politically undesirable life from the pastures of agricultural capitalism to the jungles of U.S. imperial warfare. In doing so, I also detail how the herbicide shapes configurations of life in relation to race and disability in conjunction with Cold War projects of militarized population management.

Constructing the "Weed" in Southeast Asia

In 1962, environmentalist Rachel Carson published *Silent Spring*, a treatise towards environmental justice critiquing the industrial deployment of chemical pesticides and herbicides—particularly DDT—for selectively killing certain insects and plants in service of optimizing agricultural yields. Warning of the dangers of incessant chemical poisoning of

interconnected ecosystems and continuous human intervention into nonhuman environments, Carson's manifesto offers a powerfully dystopic account of the tragic afterlives of landscapes wrought by ecological contamination—withering plants, dwindling biodiversity, and an eerie *silence* that haunts the "spring without voices."[20] In one powerful vignette, Carson recalls the bountiful sagebrush sprawling across the lands of the U.S. West, cultivated through the relational interplay between the ecosystem of the Western plains and the rugged Rocky Mountains. Describing the harsh climate intrinsic to this geography—long, blizzarding winters; scorching hot summers; the driest of droughts only momentarily relieved by scarce droplets of rain—Carson details the myriad conditions that laid the ground for sage growth. Accompanied by rich animal life, such as the pronghorn antelope and sage grouse, these ecologies live in symbiosis, providing the optimal relations for their mutual thriving. Life in the plains is oriented around the sage, an abundant ecology that nurtures denizens in its habitat.[21]

As beautiful and bountiful as the sage ecology is, its existence went against the desires of cattlemen for more grazing land; they demanded the removal of sage in order to artificially fashion unbroken grassland in service of agricultural "progress."[22] Grassland is not the natural outcome of this region's geography, a landscape already acclimated to the proliferation of sage. Yet, sage was undeniably *undesirable* by the humans populating this habitat, as it inhibited the unsatiated desires of agricultural conquest and profiteering. Thus, land management agencies set out to fulfil the eradication of sage, carried out through cutting, plowing, seeding, and, eventually, chemical spraying. While, at the time of her writing, the long-term effects of sage eradication remained largely speculative, Carson emphasizes that "the whole closely knit fabric

[20] Rachel Carson, *Silent Spring* 50th anniversary ed. (Boston, MA: Houghton Mifflin, 2002), 2
[21] Ibid., 64-68
[22] Ibid.

of life has been ripped apart."[23] Life in the plains is no longer oriented around the sage, as agribusiness interests converged with the technological tools necessary to efficiently terraform life itself. Without a doubt, the delicate balance amongst flora and fauna has been irreversibly disrupted, shattering the living world in its natural state—but clearing it for human life to mount its march toward modernity.

Published in the midst of the ongoing Cold War securitization of a global capitalist economy, *Silent Spring*'s speculative account of domestic ecological collapse collides with the ongoing militarized violence being waged on the natural world across the Global South. Primarily concerned with the increasing encroachment of agribusiness into ecological management via chemical means, Carson echoes the problem of a growing technological modernization imbricated in the expansion of liberal capitalism, a political system that prioritizes extractive profiteering on environments imagined as *property* rather than cultivating relations of ecological caretaking.[24] However, as Cathy Schlund-Vials has argued, Carson's privileging of domestic agribusiness as the apex of ecological collapse render environmental futures "as conditional (and often speculative) circumstances instead of war-induced actualities," eliding how dominion over nature translated from capitalist ecologies of agribusiness to the transnational U.S. Cold War imperial project.[25] Indeed, the futures of ecological crisis projected in *Silent Spring* were *already occurring* in the contemporary realities of war in Southeast Asia. Even as it was published in the same year as the commencement of herbicidal defoliation campaigns in the

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[23] Ibid.,

[24] In a different context, Aimee Bahng names "settler environmentalism" as the "approach to the environment as something to be measured, contained, regulated, and even governed as if it were bound by the same strictures as the Westphalian nation-state" (48). In doing so, Bahng articulates how environmental law is structured around settler conditions of property ownership rather than ecological relations, a fundamental orientation towards more-than-human ecologies organized around liberal humanist possession. See Aimee Bahng, "The Pacific Proving Grounds and the Proliferation of Settler Environmentalism," *Journal of Transnational American Studies* 11, no. 2 (2020)

[25] Cathy Schlund-Vials, "Silent Spring and Biological Annihilations: Re-seeing America's Pacific Century through Environmental Catastrophe," *Verge: Studies in Global Asias* 7, no. 1 (2021): 23

Vietnam War, *Silent Spring* catalyzed a national environmental movement that only occasionally, if at all, highlighted war-induced atrocities carried out under the flag of U.S. liberal democracy. Its narrow focus on the relationship between *people*—atomized into localized entities—and the environment, rather than interrogating the transnational scope of *institutional* and *imperial* power, obscures the ecological crisis emergent from the expanding influence of the military-industrial complex.

The continuity between chemical contaminants utilized domestically for agricultural control and those dispersed abroad for militarized securitization demonstrates the convergence of military and capitalist investments in pursuing technoscientific dominion over nonhuman worlds. Indeed, the story of herbicidal warfare begins long before the Vietnam War; it is a story that narrates the convergence of capitalist modernity and military imperialism in the regulatory management of plant life. In the late 1870s, Charles Darwin conducted experiments on hundreds of plant species with the goal of isolating and better understanding the internal mechanism regulating plant growth. Successfully isolating this growth mechanism within the tip of the plant, Darwin's discovery led to an outgrowth in botanical research and plant physiology--subsequent experiments in hormonal manipulation engendered numerous discoveries in biochemistry that had exponential benefit for agricultural economies. New mechanisms for regulating, managing, and ultimately streamlining plant growth enabled higher levels of efficiency in the cultivation of cash crops. However, hormonal manipulation did not just apply to encouraging faster growth for *desirable* crops—it also enabled the discovery of herbicidal chemicals that could selectively target and inhibit the growth of certain types of plants, *undesirable* weeds antithetical to the growth of cash crops.[26]

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[26] See Zierler, *Invention of Ecocide*; specifically, Chapter 3 "Agent Orange before Vietnam"

At the core of the development of chemical herbicides was a eugenicist logics; one that David Mitchell and Sharon Snyder succinctly define as "the science of racial purification and the purification of human 'defects.'"[27] Within the context of human life, eugenics is most commonly implemented through selective breeding, the biopolitical regulation of human reproduction and the elimination of genetic inheritance of undesirable traits across generations in an effort to cultivate the ideal genetic society.[28] Applied to plant life, eugenics articulates a desire for ecological purity—requiring the eradication of plants and insects that inhibit the cultivation of a desired ecosystem for agricultural and capitalist interests. Evolutionary biology and plant sciences, as Banu Subramaniam suggests, is forever haunted by the legacies of eugenics first popularized by Darwin and his cousin Francis Galton, as their early theories of species and evolutionary difference became the blueprint for designating the political and social value of life itself. In the early 20th century, eugenics translated the central questions of biological inheritance and species variation into hierarchies of life that naturalized racial and cultural difference; as Subramaniam writes, "*the benign language of variation is thus converted into the profoundly political language of difference*, [wherein] difference now stood for the superiority of some groups and the inferiorities, pathologies, deviance, and perversions of others."[29] Difference is diversity racialized, a political process that attaches social meaning to biological and species

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[27] David Mitchell and Sharon Snyder, "The Eugenic Atlantic: Race, Disability, and the Making of an International Eugenic Science, 1900-1945," *Disability & Society* 18, no. 7 (2003): 844

[28] For a more depth discussion of eugenics as a political ideology of racial and reproductive control, see Alexandra Stern, *Eugenic Nation: Faults and Frontiers of Better Breeding in Modern America* 2nd ed. (Berkeley, CA: University of California Press, 2015); Dorothy Roberts, *Killing the Black Body: Race, Reproduction, and the Meaning of Liberty* (New York: Pantheon Books, 1997); Harriet Washington, "The Black Stork: The Eugenic Control of African American Reproduction," *Medical Apartheid: The Dark History of Medical Experimentation on Black Americans from Colonial Times to the Present* (New York: Doubleday, 2007): 189-215; Bayan Abusneineh, "(Re)producing the Israeli (European) Body: Zionism, Anti-Black Racism and the Depo-Provera Affair," *Feminist Review* 128, no. 1 (2021): 96-113

[29] Banu Subramaniam, *Ghost Stories for Darwin: The Science of Variation and the Politics of Diversity* (Urbana-Champaign, University of Illinois Press, 2014), 14

variation. Through eugenics, scientific questions of *why* biological variation exists in our world convert into political problems of *how* to handle and exterminate difference, a social project organized around the desire to engineer the ideal human society for prosperity under capitalist modernity.

During the Cold War, questions of managing *difference* became articulated through racial liberalism, the selective incorporation and assimilation of certain "exemplary" racialized subjects into the auspices of U.S. empire at the expense of the violent exclusion, and eradication, of others.[30] Mobilized through multiple imperial wars in Asia, this violent eradication did not distinguish between "good" and "bad" subjects, but rather followed what Christine Hong calls the "principle of indistinction," or the "lethal conflation of racialized humanity with suspect terrain that refused differentiation on the level of the individual."[31] A form of collateral damage that extends the latitude of premature death to populations connected to an *ecosystem* targeted for destruction, Hong's articulation of the principle of indistinction also exemplifies the racial logic underpinning indiscriminate chemical spraying of herbicides. As Carson writes, "not only the target insect or plant, but anything—human or nonhuman—within the range of chemical fallout may know the sinister touch of poison."[32] Chemicals are porous, and their porosity shapes the material flows of toxicity that refuse differentiation between different forms of life; thus, the U.S. "war on nature" attempts to eradicate unruly ecologies in order to terraform terrains of the battlefield to serve tactical interests, while simultaneously poisoning human and nonhuman bodies situated in proximity to this very terrain. In other words, this refusal to distinguish

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[30] For more on Cold War era racial liberalism, see Jodi Melamed, *Represent and Destroy: Rationalizing Violence in the New Racial Capitalism* (Minneapolis, MN: University of Minnesota Press, 2011); and Simeon Man, *Soldiering through Empire: Race and the Making of the Decolonizing Pacific* (Berkeley, CA: University of California Press, 2018)
[31] Hong, *A Violent Peace*, 1
[32] Carson, *Silent Spring*, 156

between the target of chemical poisoning and the collateral bodies in its vicinity underpins a political logic of indiscriminate destruction that links herbicidal dispersal to Cold War tactics of militarized destruction that co-construct figures of the "weed" or "pest" and the "enemy" as materially porous and embodied assemblages slated for eradication.

For instance, describing the Michigan Department of Agriculture's mission to manage the population of the Japanese beetle in the early 20th century through the language of militarization, Carson remarks that it "launched an attack worthy of the most deadly enemy instead of only a moderate destructive insect, employing the most dangerous of chemicals distributed in a manner that exposes large numbers of people, their domestic animals, and all wildlife to the poison intended for the beetle."[33] This aptly named "war on nature" frames the unintended targets of chemical exposure as "incidental victims,"[34] emphasizing how the porosity of chemical contamination seeps into life connected by a shared ecosystem. Militarization is encoded into the material process of chemical spraying, one that transforms the "moderate destructive insect" into the "most deadly enemy" through the logics of racial enmity.[35] As such, the process of chemical spraying invites consideration of how "intentionality" oftentimes is mobilized as an optic for eliding the material violences of war in favor of elevating the humanitarian contours of the U.S. War machine—particularly during the Cold War, when militarized eradication is mobilized under the auspices of the heroic containment of communist expansion. While the *intentional* death of Asian civilians in the contexts of war bolsters critiques of the U.S. imperial state,

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[33] Ibid., 88

[34] Ibid., 85

[35] Achille Mbembe argues that necropolitical states operate as "societies of separation," wherein the consolidation of Western modes of liberal and political democracy rely upon "clearly distinsuighing its own citizens" through a regime of "separation, hate movements, hostility, and, above all, struggle against an enemy" (42). In this regard, the construction of the "enemy" as a population slated for death in a militarized world is the necessary condition of unity that binds liberal democratic societies together as a consolidated "nation-state" in the face of outside evils, which, during the Cold War and for the United States, came to be racialized and imagines as the figure of communist, Asiatic expansion. See Mbembe, *Necropolitics*.

unintentional death becomes a necessary condition of possibility for securing liberal capitalism as a promise of freedom for those who survive.

Carson's account of the eradication of the Japanese beetle also reminds us that Asiatic racial form, both domestically and abroad, has always been constructed vis-à-vis the inhuman figure slated for premature death. The agricultural furor surrounding the proliferation of the Japanese beetle mirrored historical anxieties about uncontrollable and undesirable Asian immigration, as Jeannie Shinozuka suggests, scientists' remarks about the "oriental" aesthetic of the beetle "not only juxtaposed it against American insects and emphasized its foreignness, but also marked it as exotic and inferior."[36] This attachment of racialized, foreign Asian bodies to nonhuman forms littered much of xenophobic discourses spanning the 19th and 20th century, as the animation of the inhumanity of Asiatic peoples mobilized anti-Asian legislations and violence spanning multiple borders.[37] Within this historical backdrop, Karen Cardozo and Banu Subramaniam insist that Orientalism assembles Asian/America through a geography of relational ontologies between *nature* and *culture* that emphasize the porosity between human and nonhuman political formations.[38] The rhetoric of "invasive species" that animates the Yellow Peril threat of Asian bodies—human and nonhuman—entering the United States, thus, invokes more than just a regular racist discourse, but also offers an optic for approaching the interior racialized logics that shape how U.S. institutions conceptualized the nexus of managing

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[36] Jeannie Shinozuka, "Deadly Perils: Japanese Beetles and the Pestilential Immigrant, 1920-1930s," *American Quarterly* 65, no. 4 (2013): 840

[37] For more on this paradigm of Yellow Peril racialization, see Erika Lee, "The 'Yellow Peril' and Asian Exclusion in the Americas," *Pacific Historical Review* 76, no. 4 (2007): 537-562; Nayan Shah, *Contagious Divides: epidemics and Race in San Francisco's Chinatown* (Berkeley, CA: University of California Press, 2001); and Colleen Lye, *America's Asia: Racial Form and American Literature, 1893-1945* (Princeton, NJ: Princeton University Press, 2005)

[38] See Karen Cardozo and Banu Subramaniam, "Assembling Asian/American Naturecultures: Orientalism and Invited Invasions," *Journal of Asian American Studies* 16, no. 1 (2013)

nonhuman environments through militarized and agricultural mechanisms of technoscientific control.

While herbicides were initially developed to create optimal agricultural conditions for the growth of desirable crops, the *militarization* of herbicides required a reorientation in the "social function" of plant physiology in a time of total war."[39] Early developments in herbicidal chemicals were designed for optimizing agricultural yields—even though herbicides function through targeting specific weed species to administer *death*, their primary goal is to facilitate *life* for desirable crops by removing competition for nutrients and sustenance. Thus, the herbicide makes visible botany's underlying eugenic impulse: the desire to control and eliminate species difference in favor of cultivating desirable forms of life under capitalist regimes of biopolitical regulation. As Rachel Lee argues, "to use a botanical metaphor, biopolitics is the logic of pruning *nonselected* parts of the socius so that the *selected* remainder can thrive."[40] Framed within the context of herbicidal deployment, botany serves not merely as a metaphor for biopolitics but rather the organizing logic that underpins the biotechnological regulation of plant life. Organized around the controlled suppression of undesirable life for the prosperity for politically and economically valuable life, the utility of herbicides opened up new possibilities for the industrialization of agricultural labor.

Thus, the militarization of herbicides followed a converse logic of agricultural herbicides: as state historian David Zierler writes, "in stronger concentrations, military-grade herbicides would extend their weed-killing properties to all plant life to ensure the *minimization* of the

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[39] Zierler, *The Invention of Ecocide*, 38

[40] Rachel Lee, *The Exquisite Corpse of Asian America: Biopolitics, Biosociality, and Posthuman Ecologies* (New York: New York University Press, 2014), 57

productivity of land under the control of enemy forces."[41] This logic proceeds from the deployment of agricultural herbicides--extending the murderous function of the herbicide to encapsulate *all* ecological life in order to diminish the life outcomes of the targeted *human* populations. These populations do not merely encompass the figure of the enemy, but also encapsulate civilian "collateral damage" populated by peoples already deemed disposable in service of larger military objectives. Eugenic ecologies, thus, describes a paradigm in which the regulatory measures of managing ecological life function in service of militarized regimes of necropower, wherein the purpose is "to regulate the distribution of death and make possible the murderous function of the state."[42] The expendability of these populations makes possible the securitization of liberal democracy in the Global South, necessary collateral damage in service of expanding the abstract ideals of the U.S. nation-state and material conditions of its imperial power.

"In Vietnam," Zierler writes, "the forest was the weed."[43] As indexed by its shifting and expansive subjectivation, the "weed" denotes a politically constructed form of plant life that designates its detrimental value to the objectives of the imperial state—here, forests in Southeast Asia do not inhibit the growth of other forms of ecological life, but rather the expansion of U.S. military and imperial interests in the region. Imperial expansion, when implemented through the imaginary of the weed, proceeds through the depletion of life itself. This conferring of "living" dead status onto environments in Southeast Asia resonates with Carson's resounding critique of Western environmental relations in *Silent Spring*, where she writes, "our attitude towards plants is a singularly narrow one. If we see any immediate utility in a plant we foster it. If for any

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[41] Zierler, *The Invention of Ecocide*, 39
[42] Mbembe, *Necropolitics*, 71
[43] Zierler, *The Invention of Ecocide*, 2

reason we find its presence undesirable, ore merely a matter of indifference, we may condemn it to destruction forthwith."[44] Such a worldview is central to Western modes of neoliberal governance organized around the "economization of life"[45] geared towards extractive profiteering; technological innovations, thus, facilitated new ways of regulating the environment, "giv[ing] a giddy sense of power over nature to those who wield them."[46]

Reproducing Life in a Contaminated World

Ascertaining U.S. military intent in the chemical afterlives of Agent Orange dispersal affords little utility in accounting for the material violence of herbicidal warfare. Indeed, the language of intentionality often embedded in discourses of "collateral damage" elide how the consequences of Agent Orange—those that construct Asian life as expendable "weeds" in Cold War intervention—index Cold War tactics of population management that fuel capitalist development projects in the Global South. As Michelle Murphy demonstrates, during the Cold War era, the U.S. primarily concerned itself with the problem of overpopulation as an existential threat to the maintenance of capitalist modernity, and thus posited the biopolitical regulation of fertility and birth as the necessary precondition for economic development and industrialization both domestically and abroad in the Global South. In his alarmist book, *The Population Bomb* published in 1968, American biologist Paul Ehrlich warns of the dangers of excessive population

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[44] Carson, *Silent Spring*, 63

[45] Michelle Murphy describes the "economization of life" as a historically specific process of U.S. neoliberalism that sought to organize life around its capacity to serve the interests of the fostering the national economy, "dividing life into categories of more and less worthy of living, reproducing, and being human—and reinscribed race as the problem of 'population' hinged to the fostering of the economy" (6). This model of neoliberal governance quantified racialized life within eugenicist paradigms that attached the value of life to its capacity to serve capitalist interests, and Cold War model of racialization that shaped the operations of the war machine. See Michelle Murphy, *The Economization of Life* (Durham, NC: Duke University Press, 2017).

[46] Carson, *Silent Spring*, 68-69

growth, both for the quality of life of human society as well as its ramifications for environmental degradation. Worried about the undue extraction of resources human population growth would cause for the environment, Ehrlich advocated for stringent mechanisms for controlling reproduction—including both invoking extraordinarily unrealistic doomsday scenarios of a future with "sixty million billion people" on Earth, leading to approximately 100 persons for each square yard of Earth's surface, land, and sea," as well as legal coercion such as the revision of tax laws to incentivize families having fewer children.[47] Displacing responsibility for environmental degradation, poverty, economic stagnation, and famine to the problem of overpopulation, these Malthusian discourses proffered population management as the pathway to economic development in the Global South and became an integral aspect of Cold War anti-communist foreign policy.[48]

Ehrlich's eugenicist accounts of the need to manage global reproduction proffers a mythology of capitalist scarcity that elides the unequal distribution of resources occurring under neoliberal economies of racial capitalism. Responding to this historical backdrop, in 1989 a group of feminists primarily from South Asia and Europe gathered in Comilla, Bangladesh, penning the Declaration of Comilla to refuge the Cold War entanglements of reproductive politics and capitalist securitization. The declaration asserts:

> Genetic and reproductive engineering are part of an ideology of eugenics which we oppose. In this ideology, human beings are viewed as inherently inferior or superior. This leads to degradation, discrimination and elimination of oppressed groups; be they women, disabled, people of certain colors, races, religions, class,

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[47] Paul Ehrlich, *The Population Bomb* (New York: Ballantine Books, 1968)

[48] See Betsy Hartmann, *Reproductive Rights and Wrongs: The Global Politics of Population Control* 3rd ed. (Chicago, IL: Haymarket Books, 2016) and Laura Briggs, *Reproducing Empire: Race, Sex, Science, and U.S. Imperialism in Puerto Rico* (Berkeley, CA: University of California Press, 2003)

> or caste. Similarly, traits of animals and plants are arbitrarily valued as being desirable or undesirable and become subject to genetic manipulation.[49]

The feminist collective gathering in Comilla revealed how eugenics underpinned Cold War regulatory mechanisms targeted at human reproduction, asserting how experiments in reproductive technologies destabilized the lives of oppressed women in the Global South while failing to resolve the genuine problems of hunger, disease, and pollution engendered by the circuits of global capitalism. Most pertinently to this chapter, they also draw attention to how this unilateral biopolitical control over life extends across human and nonhuman ecologies, articulating the arbitrariness of designations of "desirable" and "undesirable" life as outcomes of racial capitalism implemented through Cold War discourses of population management. Thus, these activists speak to concerns not only about expanding genetic engineering projects, but how technological innovations granting political control over biological processes of life and death bolster projects of industrialization that seek to eliminate forms of life antithetical to the global capitalist project.

In contrast to Ehrlich's demonization of reproduction in the Global South as the harbinger of global ecological collapse, the Declaration of Comilla invites consideration of how lingering specters of Cold War population management materially manifest in contemporary more-than-human bodies emerging in the afterlives of warfare. What is at stake, then, is ascertaining how Cold War population management unfolds across technologies of warfare—while herbicidal warfare's primary target was, officially at least, the jungle terrain of Southeast Asia, its enduring toxicity engenders reproductive debilitation that necessitate a retroactive analysis of Agent Orange within the contemporaneous concerns about racialized and classed

[49] The Declaration of Comilla is reprinted in FINRRAGE-UBINIG International Conference 1989, "Declaration of Comilla."

reproduction in the Global South. This rethinking of the legacy of herbicidal warfare through reproductive politics shifts our understanding of war from the spectacular operations of the battlefield, towards the eugenicist paradigms that shape the contours of race- and nation-making during the Cold War. Describing what she calls the "race/reproduction bind," Alys Eve Weinbaum argues that "nation formation is always caught within a racialized reproductive logic about the propagation of national subjects and citizens."[50] In doing so, she articulates a theoretical framework for grappling with how race governs the central logics of disciplinary control over reproduction, as colonial subjection shapes which bodies are allowed to give birth, which, in turn, regulates the biopolitics processes of life and death of subjugated populations and delimits those who are inhibited from reproductive freedom.

Figure 3.1: *Pure Land*, Dinh Q. Lê, 2019. Installation at Tang Contemporary Art, Bangkok, Thailand.

[50] Alys Eve Weinbaum, *Wayward Reproductions: Genealogies of Race and Nation in Transatlantic Modern Thought* (Durham, NC: Duke University Press, 2004), 12

Drawing from the visual aesthetics like those in Griffiths' photojournalism that opened this chapter, Vietnamese American artist Dinh Q. Le visualizes Agent Orange's material legacy through the reproductive afterlives of the Vietnam War, again emphasizing the aesthetic register of postwar disability as the material manifestation of chemical toxicity. Exhibited at the Tang Contemporary Art Museum in Bangkok, Thailand in early 2019, Le's installation "Pure Land" is composed as a series of porcelain sculptures: pristine white figures of disabled children perched atop blooming lotus flowers. Accompanying these sculptures, photographs of surrealist landscapes hang from the surrounding walls, granting the exhibit an eerie, futuristic quality that simultaneously conjures mystical and fantastical imaginaries of ecological embodiment. Upon closer examination, one realizes the photographs actually portray conjoined and stillborn fetuses, images gathered from the archival collection at Tu Du Maternity Hospital. However, unlike Griffiths' documentary photography, Le superimposes the photographs with images of lotuses, viewed from underwater. Speaking to this imagery, Le remarks that these photographs illustrate how these children, like the lotuses, are "born of contaminated soil, of beneath the water, but these children are pure, and they emerge pure."[51] Juxtaposed against the disabilities and reproductive issues induced by exposure to Agent Orange toxicity, the installation's invocation of purity indexes multiple meanings: bodily purity, environmental purity, and material purity. For Le, purity is both spiritual and aspirational, "the utopia we hope for, but our world is changing so fast and we are actually destroying everything."[52]

[51] Loredana Pazzini-Paracciani, "Pure Land—Artist Dinh Q. Le and Curator Loredana Paracciani in conversation."
[52] Ibid.

Figure 3.2: Porcelain sculptures from *Pure Land*, Dinh Q. Lê, 2019.

What does it mean to aspire towards purity in a contaminated world? As scholars of feminist science studies such as Alexis Shotwell and Anna Lowenhaupt Tsing have argued, aspirations for purity are limited political projects—they decollectivize our sense of relation to one another and fail to address the need to attend to life in an *already contaminated* ecosystem.[53] Indeed, on first encounter with the installation, the lustrous porcelain deity-like figures, drawn from Buddhist mythologies of purity and ecological connection, evoke a spiritual kinship with the "pure land" that honors ecological relations. Remarking on the substance's allure within Asian American visual culture, Anna Storti describes porcelain's "seemingly impossible

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[53] See Alexis Shotwell *Against Purity: Living Ethically in Compromised Times* (Minneapolis, MN: University of Minnesota Press, 2016) and Anna Lowenhaupt Tsing, *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins* (Princeton, NJ: Princeton University Press, 2015)

properties," its simultaneous strength and delicacy as well as its pure white color, as resembling the exotic acquisition of luxurious Asiatic commodities in the Western world in early colonial trade.[54] Desired for its elusive, yet beautiful, aesthetic, porcelain is entwined with a genealogy of Orientalism that imagines the Asiatic through abstract gestures and forms—what Anne Anlin Cheng calls "ornamentalism."[55] Le himself remarks on this materialization of Asiatic qualities through aesthetic and material forms, as "Pure Land" conjures "a familiar iconography" that recalls a general Orientalist imaginary that then becomes interrupted by "figures [that] are not what they expect."[56] Referring to the "imperfect" bodies caused by disabilities engendered by Agent Orange, Le's installation unsettles the majestic purity of the ornamentalist aesthetic embraced by the porcelain figures, attending to the (re)production of *Southeast Asian* racial form in the material histories of U.S. militarism.

The question that emerges from "Pure Land," then, is why is disability considered aesthetically *incongruent* with the supposed purity of Asian racial form? Speaking to the materiality of the exhibit—both the porcelain sculptures and the silver, mercury-like fabric that adorns the photographs—Le remarks on the futuristic quality of the exhibition's aesthetic, projecting subjects of his display into a fantastical, future landscape. Indeed, many postwar narratives render disability as a problem in need of "fixing," folding disabled Vietnamese children into U.S. narratives of liberal humanist reconciliation in order to recuperate histories of American war crimes. However, Le refuses this impulse in favor of imagining alternate forms of kinship in the wake of contamination that open up diasporic futures rooted in multispecies connection. The dominant regime of reproductive futurity, as Aimee Bahng attests, "orients

[54] Anna Storti, "Half *and* Both: On Color and Subject/Object Tactility," *Women & Performance: a journal of feminist theory* 30, no. 1 (2020): 3
[55] Anne Anlin Cheng, *Ornamentalism* (Oxford, UK: Oxford University Press, 2018), 19
[56] Pazzini, Paracciani, "Pure Land"

subjects towards a reproductive imperative, [and] also extrapolates from eugenicist rhetoric to ascribe a genetically selective future."[57] Against this eugenicist rhetoric that attempts to eradicate disability from future worlds, "Pure Land" imagines a postwar future that refuse this impulse by orienting disability as both the product of imperial warfare, as well as what Mel Chen calls a "toxic worlding" that embraces socialities that emerge in the wake of contamination.[58] In this future, disabled people are central to the reproduction of the national futurity—the porcelain sculptures highlight how disability features as embodied difference that facilitates and interconnectedness with the contaminated earth, disrupting capitalist modes of relation that view the environment as property to be militarized and extracted from. It also suggests the possibility of a different kind of world—one in which the fetuses pictured in the photographs might flourish in relation with the caretaking of an ecological world organized around multispecies relations rather than capital accumulation and militarized securitization.

Bringing together plant life, disabled children, and stillborn fetuses to index the haunting afterlives of Agent Orange, Le emphasizes the multiple ontological forms that constitute the material remains of chemical war. The lotus, as national Vietnamese symbol for human and ecological purity, articulates an extension of the human body that allows it to flourish in contaminated environments. Metaphorizing these environments, "Pure Land" teeters a delicate balance between visually reproducing the violence of militarized debilitation and also confronting the material realities of chemical devastation in endeavoring towards what Natalia

[57] Aimee Bahng, *Migrant Futures: Decolonizing Speculation in Financial Times* (Durham, NC: Duke University Press, 2018), 90

[58] Rather than simply describe toxicity as an affliction, Mel Chen invites us to consider "toxic worlding," a paradigm that engages toxicity as a condition "that is too complex to imagine as a property of one or another individual or group or something that could itself be so easily bounded" (196). Instead, toxicity offers an opportunity to think about collectivities that emerge amidst shared conditions of contamination, and what kind of queer world-making might emerge from these embodied, affective solidarities. See Chen, *Animacies*.

Duong calls "transnational socialities" that embrace interconnectedness emerging through our shared *vulnerability* to contamination.[59] These futures should not be mistaken for a romanticization of toxicity, but rather a materialist critique that emphasizes toxicity's perennial presence within the afterlives of colonialism, militarism, and imperialism. Confronting that fact forces us to consider alternate modes of relations that reveal the imbrications of militarized violence within the contaminated forces of ecological crises that human and nonhuman life finds itself imbricated within.

Queer Ecological Relationalities in the Afterlives of War

Figure 3.3: *Physicality*, Tuan Mami, 2013. Installation at Nha San Collective studio in an abandoned Army Medical Pharmaceutical Factory, Hanoi, Vietnam.

[59] Natalia Duong, "Agent Orange Bodies: Việt, Đức, and Transnational Narratives of Repair," *Canadian Review of American Studies* 48, no. 3 (2018): 409

In 2013, the newly revitalized Nha San Collective exhibited co-founder Tuan Mami's site-specific installation, "Physicality," in an art studio retrofitted within a former Army Medical Department Pharmaceutical Factory in Hanoi, Vietnam. The Nha San Collective is the first and longest-running non-profit space for experimental artists in Vietnam, founded in 1998 by Nguyen Manh Duc and Tran Luong. After the studio closed in 2011 due to pressure from government authorities, a young generation of artists, including Mami, organized to revitalize Nha San through mobile and guerilla projects with a new dedication to "examining traditional, local and global socio-political contexts and history."[60] The factory was established in 1947 to produce medicine for the army in the midst of the First Indochina War, or what Vietnamese people refer to as the Anti-French Resistance War. After decades of overlapping military conflicts resulting from legacies of French colonialism and U.S. imperialism in Southeast Asia, the sensorial materiality of war persists in the physical infrastructures of wartime—upon first entering the factory and being overcome by the enduring odor of chemicals and medicine entrenched in the walls, Mami remarked that it "[created] a haunting about life, death, and the invisible existence of the physical world."[61] Collaborating with his friend Mr. Kinh, a manger of a local Cactus National Park, Mami crushed plaster from the walls and mixed it with fresh soil, then planting different variations of cacti to grow in twelve separate glass containers. Invoking themes of renewal and reincarnation, Mami's installation makes visible the transformation of chemical residues of war into new stories of ecological life.

[60] Nha San Collective, "About." https://nhasan.org/introduces
[61] Tuan Mami, "Physicality" (2013). http://tuanmami.com/Project-Detail.aspx?Id=39

Figure 3.4: Immortality: The Remnants of the Vietnam and American War, Binh Danh. Chlorophyll print.

Similarly, Vietnamese American artist Binh Danh turns to plants as narrators of life in the aftermath of war; in his photography series, *Immortality: The Remnants of the Vietnam and American War*, Danh restages the war in Southeast Asia through an ecological theater, utilizing photosynthesis to record and imprint iconic images of war onto the leaves of tropical plants—what the artist calls chlorophyll prints. Casting images of air strikes, mothers carrying and mourning their children, military barracks, and fallen soldiers, these chlorophyll prints both literally and metaphorically inscribe the history of warfare onto ecological matter. In doing so, Danh visualizes the material processes of the Vietnam War, a conflict that stretched the violence of warfare across human and nonhuman worlds and left a lasting imprint and legacy on the environments of Southeast Asia. For Danh, the *Immortality* series expresses his desire to tell his community's history by bridging the gap between science and art, noting in an interview that "one of the most important lessons [he] learned in science class is that our bodies are composed

of atoms and that every atom in our body has a history."[62] Speaking to a fundamental theory of chemistry—that matter is neither created nor destroyed, merely transformed—Danh articulates a new materialist theory of history that emphasizes what Heidi Amin-Hong calls "feminist refugee memory," a diasporic analytic of war's afterlives that approaches the "environment as a maker of accumulated histories rather than a depletable resource."[63] Against extractive and militarized imaginaries of Southeast Asian environmental landscapes, Danh's aesthetic experiments with chlorophyll prints emphasize the lingering material effects of U.S. militarism as they extend across ecological domains of Vietnam, Southeast Asia, and refugee afterlives, generating an unsettling diasporic memory of war that extends in more-than-human, global formations.

The title of Danh's project, "Immortality," indexes the elongation of the life-span of the leaf—a part of the plant typically associated with limited longevity—into an immortalization of war's afterlives, highlighting the omnipresence of permanent or forever war in the post-Cold War temporality. Relatedly, Mami's invocation of "physicality" emphasizes the material remainders of war even in their supposed invisibility, manifesting the residual afterlives of militarized toxicity in the visual and sensorial register of the natural world. Paying attention to the ecological lifeworlds that bear witness to incessant militarized violence that persists outside the confined temporality of "wartime," Mami and Danh emphasize how militarism is experienced beyond the scale of human life and death in what Rob Nixon has famously termed "slow violence."[64] As Thuy Linh Tu emphasizes, the "reconceptualization of 'wartime' as less a temporality than a sensibility" unsettles the neat containment of military violence within

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[62] Adam McCauley, "Vietnam War Images, Photosynthesized," *The New York Times* (2012). https://lens.blogs.nytimes.com/2012/05/30/reading-the-leaves/

[63] Heidi Amin-Hong, "Militarized Sustainability: Feminist Refugee Memory and Hydropower in the Mekong Delta," *Verge: Studies in Global Asias* 7, no. 1 (2021): 122

[64] See Rob Nixon, *Slow Violence and the Environmentalism of the Poor* (Cambridge, MA: Harvard University Press, 2013)

spatiotemporal boundaries, and invites new sensorial and affective entanglemetns that emerge in its wake.[65] For ecological worlds, war is *immortal*; its memories permeate water, soil, foodways, and other ties that bind our environment, fomenting what Ann Laura Stoler calls the "ongoing ruination" that continues "exerting material and social force in the present."[66] Yet, war's immortality is not static, but rather a dynamic valence that forever is in flux as it shifts along with the material ebbs and flows of its material ruination. Indeed, in the afterlives of militarization, the landscape coalesces the *physical* manifestation of political violence, the material terrain that bears the legacy of imperialism through its enduring toxic contaminations. Particularly as the decimation of the environment featured prominently in U.S. military intervention in Southeast Asia, both artistic projects press at central questions of remembering the Vietnam War as a crisis at more-than-human scales.

Figure 3.5: *Let it grows up on*, Tuan Mami, 2010. Photograph by Khvay Samnang.

[65] Thuy Linh Tu, *Experiments in Skin: Race and Beauty in the Shadows of Vietnam* (Durham, NC: Duke University Press, 2021), 19

[66] Ann Laura Stoler, *Imperial Debris: On Ruins and Ruination* (Durham, NC: Duke University Press, 2013), 11

Featured in the *Asian American Literary Review*'s 2015 special "(Re)collecting the Vietnam War,"[67] Mami's 2010 performance "Let it grows up on" compels a confrontation with embodied toxicity, envisioning queer ecological relations that emerge from the ruinations of war. In the performance Mami secures two black cable ties around his arm, tightening the cusp around the midsection of his arm as he wields a silver blade in his other hand. Slowly, Mami makes a small incision on his forearm; as blood streams from the cut, he carefully places a single rice seed into the fresh entry point, pushing it into his body until it remains only partially visible. Inviting a colony of microbial life-forms that dwell on the rice seed into his body, Mami repeats the cycle twice more—each rice seed placed adjacent. Over the course of the next month, Mami documents the growth of bacterial infections as the rice seeds "grow" in relation with the microbes already in his body, making way for new living assemblages in the wake of toxicity.

In a visual diary documenting the bacterial growth of the rice seeds, Mami ponders "about how to combine the natural world and [his] life as a human being in [his] work."[68] This contemplation, I suggest, endeavors for queer ecological relations divested from liberal individualism in search of fashioning a more just world commensurate with more-than-human relations that emerge in the wake of militarized and imperial violences in Southeast Asia. For the United States, the Cold War imperial project evinced a desire for a universal human subject diffracted across the Global South and tethered to global capitalism, requiring the assimilation of "Asia" into its informal empire. Thus, the conventional constructions of Asian/American racialization rely on the atomization of Asian-raced peoples into individual, discrete bodies categorized under "good" and "bad" labels of the citizen-subject—as Kandice Chuh remarks,

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[67] Cathy Schlund-Vials and Sylvia Shin Huey Chong eds. "(Re)collecting the Vietnam War," Special Issue, *Asian American Literary Review* 6, no. 2 (2015)

[68] Tuan Mami, *Rice Seeds Diary* (2010). http://www.tuanmami.com/Project-Detail.aspx?Id=19

"those racialized as Asians have cathected to bourgeois ideals such that many of us are now regularly part of the machinery of hegemonic social reproduction."[69] Yet, as Chuh maintains, for those who *dis*identify from this model of liberal humanism, there might be other possibilities. This disidentification holds the potential to fracture the contained unit of Asian/American subjecthood and elaborates into otherwise worlds for minoritarian livability at the very edge of the human.

Shifting from the spectacularized arena of combat glamorized in militarized narratives, Mami priorities the transitory human body as a vessel of ecological relations, congealing more-than-human life in the wake of slow, attritional violence of overlapping militarisms and imperialisms. These toxic contaminations are not merely negative indicators of the effects of warfare induced by herbicidal warfare, but they account for a shared corporeal vulnerability that "usher[s] in a different ability to *be* in the world."[70] Indeed, Mami's vexed relation to the rice seed reminds us that while rice represents a sustaining force of life for Vietnamese people, this very status also slated it as an ecological life-form targeted for poisoning and death in the strategic deployment of U.S. herbicidal warfare.[71]

As poisoned source of sustenance threatening life in warring landscapes, rice's shifting function within the political ecosystem of Vietnam reminds us that the ecology of minoritarian living is already littered with the enduring toxic matter seeping from the afterlives of imperialism. Characterized as a form of slow, premature death, toxicity manifests the foreclosure of possibility for life. However, as Mel Chen asserts, building political community within shared

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[69] Kandice Chuh, *The Difference Aesthetics Makes: On the Humanities "After Man"* (Durham, NC: Duke University Press, 2019), 129

[70] Duong, "Agent Orange Bodies," 409 (emphasis mine)

[71] Fred Wilcox, *Scorched Earth: Legacies of Chemical Warfare in Vietnam* (New York: Seven Stories Press, 2011), 9-23

conditions of toxicity enables a "queer knowledge production that gives some means for structural remedy while not abandoning a cliam to being just a little bit 'off.'"[72] For minoritarian subjects confined to premature death by way of a toxic, inhospitable world, "life" cherished by liberal humanism is already always unavailable. Against normative frames of biological reproduction under which "life" is generally sustained in a matrix of heteronormativity, queer of color performance "can facilitate the reproduction of *imperiled* life; it can sustain life."[73] Thus, by staging intimate forms of kinship between human and bacterial life, "Let it grows up on" coalesces ecological forms of radical and multispecies intimacy that may transform the very conditions of the human in the wake of toxicity.

The grotesque nature of "Let it grows up on" refuses the aesthetic sensibility of what is conventionally understood as "beautiful" art, captivating viewers with its intensity and daring critique of human embodiment. By dilating the gaze toward a performance beyond the purview of human life, Mami aestheticizes the materiality of imperial toxicity by fixating the audience's view on the human body, before subsequently disarticulating its coherence into bacterial life—an alternate arrangement of living. In doing so, he conjures a moment of interspecies encounter that Aimee Bahng calls "speculative fabulation, "intermingling a new assemblage of materialities "through which to imagine another ontology, beyond the human."[74] This life cultivated allows for a queer ecological relationality that both "reconfigure[es] the afterlife of war into a process of collaboration and transformation,"[75] and opens the body into life otherwise.

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[72] Chen, *Animacies*, 220
[73] Joshua Chambers-Letson, *After the Party: A Manifesto for Queer of Color Life* (New York: New York University Press, 2018), 85
[74] Aimee Bahng, "Plasmodial Improprieties: Octavia E. Butler, Slime Molds, and Imagining a Femi-Queer Commons," in *Queer Feminist Science Studies: A Reader* ed. Cyd Cipolla, Kristina Gupta, David A. Rubin, and Angela Willey (Seattle, WA: University of Washington Press, 2017), 323
[75] Ly Thuy Nguyen, "Queer Dis/inheritance and Refugee Futures," *WSQ: Women's Studies Quarterly* 48, no. 1-2 (2020): 223

This performance of multispecies solidarity revises historical narrations of the "Asian"—typified by conventional renderings of Asiatic bodies as external entities threatening the sanctity of the U.S. nation-state. Turning to bacterial life functions as neither solely an investment in the nonhuman racial form nor a total divestment from humanism within queer of color or Asian/Americanist inquiry—it is a refiguring of the relationality between human and nonhuman worldmaking that demands alternate imaginations of the "human" itself that refuse the eugenicist logics of necropolitical warmaking. As such, Mami's performance is invested in humanist inquiry insofar as it considers the *porosity* of the human body in its multiple relations. By realizing the potential of posthuman thought, Mami's invitation into queer ecological relations unbinds the human from the liminal constraints of liberal subjectivity that emphasize discrete individuality, a containment that cedes ground to the unpredictability of more-than-human worlds that sustain life in the midst of toxic conditions wrought by capitalist and imperialist devastation.

If the U.S. war machine is predicated on managing more-than-human, ecological life to enact its necropolitical Cold War agenda of securing the future of liberal capitalist governance, a lesson we might learn from Mami is that "art is like a game that transforms one thing into another, whether it deals with a big issue or a neglected one."[76] This *game of transformation* compels disidentification from the individuality of the liberal human as a critical mode of queer of color possibility, refusing to romanticize the material conditions of toxicity while simultaneously reproducing more-than-human life in its wake. A form of aesthetic play, Mami's performance transforms the very conditions through which queer of color life might emerge. No

[76] Tuan Mami, "Artist Statement," *Krisis*, Exhibition catalog. https://krisislive.wordpress.com/artists/tuan-mami/#content-wrapper

longer merely a body for the human, Mami dazzlingly transforms his own arm into an ecological conservatory for another form of minoritarian life lived otherwise: the microbial ecosystem of bacteria cultivated in a speculative experiment of worldmaking from the laboratory of queer life itself.

This game of transformation indexes the capacity for aesthetic reimaginations of histories of overlapping violences, enabling something new to emerge in the wake of catastrophe. In Mami's performance, time passes, and bacteria begins to settle in his body. Even though "Let it grows up on" lasts only twenty minutes, it is a durational performance: the particulars unseen to the human eye but constantly persisting in a slow, improvisatory choreography at the molecular level. Indeed, Mami leaves the rice seeds in his body to its very limit—until his body literally rejects the bacterial life through his own illness. The constant multiplication of bacteria, while straining the human body, signals toward a collective performance that emerges in the wake of toxicity, forming an arrangement of matter and being that exceeds the human but remains everlastingly entangled with it. This convergence is messy, as queer of color performance often is—as Joshua Chambers-Letson writes, it is "not so much a blending or melting, we are strewn detritus hovering at the surface, trying not to be dragged under, while caught up in precarious, awkward, and queer entanglements, rich with friction as we bump up against and crash into each other."[77] As an assortment of microbes loosely floating alongside one another in minoritarian affinity, it is a fabulation of species-being that dares to venture into the capacious unknown that exists beyond the human.

At the end of the live performance of "Let it grows up on" Mami empties a basket of rice seeds into the wind of an electric fan, and the seeds spread across the floor of the room. After

[77] Chambers-Letson, *After the Party*, 185

dilating viewers to a performance on the molecular level, Mami stages the aleatory dispersal of life otherwise, attending to what Natalia Duong articulates as a "diasporic" network of toxicity that "highlight[s] the movement of chemicals across national borders…[and is] defined by exposure as opposed to national belonging."[78] As such, "Let it grows up on" searches for ecological relationalities in the wake of toxicity that bind more-than-human life beyond nationalist geographies. Forming an intimate bond between human, microbial, and nonhuman life, Mami gestures toward the queer entanglements that choreograph precarious performances in negotiating the catastrophic slow violence of toxicity wrought by militarism and imperialism—arrangements, not so much in service of resistance per se, but rather an asynchronous movement toward momentarily sustaining life in the midst of political discord. They collide; they clash; they are sutured together by a mutual convergence and a politics of life. In the wake of toxicity, they persist in commons.

Acknowledgements

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[78] Duong, "Agent Orange Bodies," 410

Chapter 4: Infrastructures of Race in America's Napalm

In a 2019 interview with *The Guardian* about his recently published novel *On Earth We're Briefly Gorgeous*, Ocean Vuong recounts memories of his family matriarchs telling grandiose tales about the Vietnam War. His grandmother would pause after reciting a ghost story, remarking, "oh that was after the napalm," to which the young Vuong would respond with the unanswered question, "what's napalm?"[1] Rather than pausing to answer Vuong's query, his grandmother would continue on, engrossed within the mythology of her own history—a story that captivated Vuong's creative imagination of war, displacement, and resilience. Although denied a material definition, Vuong articulates the affective dimensions of napalm early in his novel. Little Dog—the central character of the book—visits a local Goodwill with his mother, who asks him to read the label of a dress to confirm whether it was "fireproof."[2] Gingerly responding with affirmation, despite no assurances from the dress's limited label, the young Little Dog acknowledges the weighty trauma scorched into memories of fire for the Vietnamese women in his family. Interweaved with his imagination of "monarchs fleeing not winter but the napalm clouds of [his mother's] childhood in Vietnam,"[3] Little Dog eerily confronts the legacy of napalm as a relational object—one, even in its material absences, connected to the more-than-human world of his own diasporic journey that lingers in his poetic and queer memories of war.

Placed at the center of the spectacle of the war in Southeast Asia, napalm materialized the vexed logics of inhumanity at play within larger infrastructures of the U.S. military-industrial complex. In 1966, after the firm United Technology Center (UTC) acquired a massive contract to

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[1] Emma Brockes, "Ocean Vuong 'As a child I would ask: What's napalm?'," *The Guardian*, June 9, 2019, https://www.theguardian.com/books/2019/jun/09/ocean-vuong-on-earth-we-are-briefly-gorgeous-interview.
[2] Ocean Vuong, *On Earth We're Briefly Gorgeous* (New York: Penguin Random House, 2019), 13 (hereby cited as OEWBG).
[3] Ibid., 14.

produce ready-made napalm bombshells for U.S. military deployment in the Vietnam War, protesters organized by the Stanford Committee for Peace in Vietnam converged to pressure the Redwood City Port Commission to block the production of napalm within the city. As H. Bruce Franklin—a former English professor at Stanford University and an organizer with the committee—recounts, many protesters likened the usage of napalm in the Vietnam War to the usage of chemicals in World War II Nazi concentration camps. As one protester asserted, "If you could actually see the bodies of men, women and children burned by this weapon, you would act to prevent Redwood City from becoming a name to go down in history with Buchenwald."[4]

This protest emerged as part of a larger wave of anti-war activism across the country—primarily targeting other primary manufacturers of napalm, most famously the Dow Chemical Corporation—as this grassroots movement "linked business, weapon, war, and country so effectively…that napalm came to symbolize for many all that was objectionable about American involvement in Vietnam."[5] This movement hit its height after Associated Press photographer Nick Ut's Pulitzer Prize winning photograph, "The Terror of War"—sometimes colloquially referred to as "Napalm Girl Or "Accidental Napalm Attack"—circulated nationally, making visible the body of a young, female child as the innocent victim of napalm's brutal force. These cultural discourses surrounding napalm earmarked the critical struggles over the racialized and gendered violence implicit in U.S. intervention in Southeast Asia, as these debates coalesced in and around the figure of napalm as an object capable of affecting both material and political forms of militarized violence.

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[4] H. Bruce Franklin, *Vietnam and Other American Fantasies* (Amherst, MA: University of Massachusetts Press, 2000), 82

[5] Robert Neer, *Napalm: An American Biography* (Cambridge, MA: Harvard University Press, 2013), 224

Both as a material object of violence and discursive political signifier, napalm illuminates the organizing logics of Cold War racial and political thought. While it became infamous for its indiscriminate usage in the Vietnam War against civilian populations, [6] napalm was initially developed in 1942 by chemistry professor Dr. Louis Fieser in a covert military laboratory at Harvard University. Referred to as "Anonymous Research No. 4" in the university's official ledger, napalm emerged out of a partnership between Fieser's laboratory and the U.S. military's Chemical Warfare Service. Initially tasked with research on poisonous gases, Fieser instead proposed an investigation of the military possibilities for gelled fuels, remarking that "as a substance intended solely for use against people . . . [poison gas] seemed inhumane."[7] On the other hand, napalm—an incendiary composed of a gelling agent and flammable petrochemical deployed in bombs and flamethrowers—provided a valuable weapon for destroying enemy infrastructures, offering a seemingly more humane alternative. However, across multiple military incursions in Asia and the Pacific during the second half of the twentieth century, the U.S. military practiced little restraint in employing napalm against civilian populations, viewing its destructive capacity as a necessary enterprise in the securitization of liberal capitalism in the Global South during the Cold War.[8] Defining napalm requires exceeding its material definition, for napalm embodies what Jane Bennett terms "vibrant matter," where its significance lies in its political agency, its "ability to make things happen, to produce effects."[9] Napalm, as a political

[6] Despite the fact that napalm became most famous for its violent deployment in the Vietnam War, it had been extensively deployed in transpacific warfare since World War II. The US and its allied forces dropped 16,500 tons of napalm on Japan and its Pacific territories in 1945, 32,537 tons in the Korean War over the span of three years, and 388,000 tons in Vietnam and surrounding areas of Southeast Asia from 1963-1973.
[7] Neer, *Napalm*, 27.
[8] Ibid., 75-86.
[9] Jane Bennett, *Vibrant Matter: A Political Ecology of Things* (Durham, NC: Duke University Press, 2010), 5.

object, coalesces the contradictory logics of a war fought on behalf of liberal humanity that enacted untold material violence on racialized peoples and ecologies in Southeast Asia.

The most thorough historical investigation of napalm's iconic status in U.S. history to date, Robert Neer's *Napalm: An American Biography*, is organized around the underlying premise that napalm is a fundamentally *American form*—an "American biography" that illuminates the ebbs and flows of U.S. history. As he writes,

> Napalm was born a hero but lives a pariah. Its invention is a chronicle of scientific discovery as old as Yankee ingenuity and as modern as the military-academic complex. Its history illuminates America's story, from victory in World War II, through defeat in Vietnam, to its current position in a globalizing world.[10]

Traversing the legacies of scientific discovery, militarized knowledge production, war and imperialism, and political activism, napalm's material and cultural history has much to tell us about the consolidation of U.S. empire in the second-half of the 20th century, wherein the military-industrial complex deepened its entanglements with the simultaneous ideological spread of liberal capitalism and intellectual exploration of the natural, scientific world. Yet, this chapter also engages napalm in relation to another American cultural form—what Colleen Lye has famously termed "America's Asia" to detail the emergence of Asian racial form through the historical and materialist crosscurrents of power between the United States and Asia as a ubiquitous political formation.[11] Napalm's primary heyday in the Cold War military theater not only primarily targeted Asian life across Korea, Vietnam, Cambodia, and Laos—with brief forays into Japan and the Pacific Islands at the tail end of World War II—but also converged with key moments in Asian American history: the anti-war movement, the Immigration Act of

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[10] Neer, *Napalm*, 4

[11] See Colleen Lye, *America's Asia: Racial Form and American Literature, 1893-1945* (Princeton, NJ: Princeton University Press, 2005)

1965, and the consolidation of "Asian American" as a pan-ethnic group.[12] Thus, while napalm's role as a weapon of mass destruction has been widely documented and condemned, this chapter instead engages napalm as an *epistemology* of U.S. militarism that shapes the material and political form of Asian/American racialization as an enduring structural legacy of the Cold War.

In order to grapple with napalm's aligned military objectives of destroying infrastructural material and suppressing communist life in Southeast Asia, this chapter develops a theoretical framework of "objects of warfare" to describe a set of political relations intertwined with racialized personhood and militarized objecthood in the wake of U.S. militarism. Chad Shomura reminds us that Asian/America is composed "not only by flows of people but also by the flows of things and interrelated constructions of personhood and objecthood"[13]; accordingly, objects of warfare emphasize the centrality of *militarized* objecthood to the making of the Cold War liberal human. Indeed, napalm is a political object *co-constituted* with the racialized Asian body as it engenders the objectification of populations made expendable by U.S. militarized violence.[14] The joint processes of decimating material infrastructures of life and entraining political subjects into the machinations of capitalist modernity, thus, coagulate the operative ideology of Cold War imperialism: disciplining populations into a global capitalist ecosystem via violent enactments and discourses of freedom. While napalm is most commonly associated with its *material* role in

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[12] For more context about the history of Asian American panethnic consolidation and social movements in the 1960s, see Yen Le Espiritu, *Asian American Panethnicity: Bridging Institutions and Identities* (Philadelphia, PA: Temple University Press, 1993)

[13] Chad Shomura, "Object Theory and Asian American Literature," in *The Oxford Encyclopedia of Asian American Literature and Culture*, ed. Josephine Lee (New York: Oxford University Press, 2020): 4 (emphasis mine).

[14] In developing my account of "objects of warfare," I build on Michelle N. Huang's articulation of Asian American racial formation via "ecologies of entanglement," an account of racial formation that "foreground[s] the relationships between us and the world with which we interact…shift[ing] the 'objects of study' from objects in themselves onto the phenomena that create and bind them." This framework highlights the analytical possibility that emerges when we momentarily bracket "human" and "object" distinctions in favor of understanding how Asian American racial formation inheres through relational entanglements that emerge *between* objecthood and personhood in the wake of war and militarism. See Michelle N. Huang, "Ecologies of Entanglement in the Great Pacific Garbage Patch," *Journal of Asian American Studies* 20, no. 1 (2017): 98.

enacting brutal, inhumane violence in the Vietnam War, its deep imbrication within Cold War ideologies of liberal capitalist development invites consideration of napalm's *political* significance as an epistemology of U.S. militarism.

This entanglement of infrastructural destruction with civilian death is no accident of war; rather, it is a fundamental racial logic embedded within napalm that drives Cold War imperialism. Indiscriminate in its destruction, napalm operates as a racialized technology of militarized destruction—its very positioning as a "humane" weapon of warfare illustrates what Christine Hong denotes the "principle of indistinction," a paradigm of murderous U.S. Cold War militarization "predicated on the lethal conflation of racialized humanity with suspect terrain that refused differentiation on the level of the individual."[15] Within the realm of Cold War counterinsurgency, military targets expanded from the human bodies of an enemy army to include the ecologies and infrastructures sustaining the communist state. In this paradigm, I argue that Vietnamese bodies—allies, enemies, and civilians alike—become racialized, expendable material to be destroyed, indistinguishable from the material targets in the crosshairs of the U.S. Cold War military state. This process of wanton material destruction characterized Cold War—and particularly the Vietnam War's—investments in preserving liberal humanism via capitalist modernity at the expense of Asian life.

Napalm's political objecthood is animated vis-à-vis the entwined construction of Vietnamese objecthood *and* personhood, a racial formation emerging out of the Cold War's twin forces of imperialism and liberal humanism. Situating it within Enlightenment genealogies of the individual, rights-bearing subject that serves as the hallmark of universal humanity, Lisa Lowe describes how modern liberal humanism offers an abstract rendering of freedom that forcibly

[15] Christine Hong, *A Violent Peace: Race, U.S. Militarism, and Cultures of Democratization in Cold War Asia and the Pacific* (Palo Alto, CA: Stanford University Press, 2020), 1.

forgets violent histories of settler colonialism, chattel slavery, and Western imperialism that constitute the very making of the liberal human subject qua race.[16] During the Cold War, this desire for a universal human subject tethered to global capitalism catalyzed multiple imperial wars in Asia, wherein the promise of freedom for the liberal subject became entwined with the militarized securitization of capitalist democracy across the region, or what Erin Suzuki calls "*liberation* through *securitization*."[17] As institutionalized Cold War-era implementations of racial liberalism sought to extend liberal freedoms of the human to racialized populations previously excluded from that very category,[18] Cold War liberal humanism masqueraded as humanitarian benevolence that posited militarized violence as a necessary condition of possibility for the quintessential free, liberal Asian subject integral to securing capitalist interests. This emphasis on racialized *humanity* obscures the historical legacy of objecthood and personhood's twinned roles in the making of contemporary Asian/America in the wake of U.S. military and imperial violence. On the other hand, objects of warfare describe how militarized objecthood materializes the racialized logics undergirding the U.S. imperial war machine that construct Asian life as terrain that can be destroyed, and remade, in service of liberal capitalism.[19]

Napalm's effect exceeds its material capacity for destruction and incapacitation, for its political deployment also constitutes the condition of possibility for postwar Asian racial

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[16] Lisa Lowe, *The Intimacy of Four Continents* (Durham, NC: Duke University Press, 2015), 39.
[17] Erin Suzuki, *Ocean Passages: Navigating Pacific Islander and Asian American Literatures* (Philadelphia: Temple University Press, 2021), 24 (emphasis original).
[18] See Jodi Melamed, *Represent and Destroy: Rationalizing Violence in the New Racial Capitalism* (Minneapolis: University of Minnesota Press, 2011).
[19] Here, I draw from scholars who have powerfully theorized how "human terrain" came to describe anthropological efforts to understand local cultures in the Global South and translate this knowledge into tactics of military counterinsurgency. Human terrain, thus, describes the transformation of "enemy" populations into terrains of military conquest. See Ronak Kapadia, *Insurgent Aesthetics: Security and the Queer Life of the Forever War* (Durham, NC: Duke University Press, 2019); Hong, *A Violent Peace*; and Roberto J. González, *American Counterinsurgency: Human Science and the Human Terrain* (Chicago: Prickly Paradigm Press, 2009).

formation. Accordingly, the opening exchange between Vuong and his grandmother around the unanswered question "what's napalm?" looms as a polemic guiding this chapter. This question elicits not only how, in stories of refugee trauma, silences themselves "may act as conduits of collective memory production,"[20] but also towards the situated indefinability of napalm as a substance that straddles material, epistemological, affective, and embodied meaning. Situating napalm as a material object that organizes the discursive and political tactics of U.S. imperial warfare in the Vietnam War, this chapter begins through an examination of napalm's deployment in mass-bombing campaigns in Southeast Asia as narrated by Vuong's *On Earth We're Briefly Gorgeous*. Focusing on napalm's role in the U.S. military strategy of infrastructural warfare draws attention to the racial logic that constructs Asian-raced bodies as expendable material to be destroyed. This theorization of Asian racial form via militarized objecthood informs the insights of the latter parts of the chapter, which examine aesthetic renderings of napalm across several shorter cultural texts such as Nick Ut's "The Terror of War," Nicolas Lobo's "Bad Soda / Soft Drunk," and Eugene Lim's *Dear Cyborgs* amongst other U.S. cultural texts. By situating the cultural life of napalm as a heuristic for interrogating military violence, I demonstrate how visual and literary representations evoke and contest the violent constitution of postwar Asian racial form.

"Back into the Stone Ages": Infrastructural Warfare in the Vietnam War

Napalm featured prominently in U.S. infrastructural warfare campaigns in the Vietnam War. Compared to conventional explosives, napalm has a particular destructive capacity; as historian Robert Neer notes, "explosives damage, fire annihilates: a shattered structure can

[20] Yvonne Kwan, "Time-Image Episodes and the Construction of Transgenerational Trauma Narratives" *Journal of Asian American Studies* 23, no. 1 (2020): 29.

perhaps be repaired, but an incinerated facility, its contents vaporized, melted, warped, or reduced to ash is ruined."[21] As such, napalm captures the necropolitical dimensions of infrastructural warfare, which, as Achille Mbembe argues, seeks "absolute domination" over its subjugated population, facilitating "a modality of killing that does not distinguish between external and internal enemy."[22] Key to infrastructural warfare in Vietnam was Walt Whitman Rostow, an economist who served as a chief foreign policy advisor to President John F. Kennedy and later for his successor, Lyndon B. Johnson. As a nationally renowned expert in development policy and a staunch capitalist, Rostow drew Kennedy's attention after the publication of his book, *The Stages of Economic Growth: A Non-communist Manifesto*, which argued that thorough and rapid economic growth across the Global South would best aid U.S. desires to quell global communist expansion. In doing so, Rostow believed that the U.S. was perfectly positioned to guide these countries, particularly Vietnam, towards the ideal economic society promised by liberal-capitalist ideologies in a linear timeline of economic growth. As military historian David Milne asserts, this aggressive vision of economic growth informed Rostow's equally aggressive advocacy for Operation Rolling Thunder and other mass-bombing campaigns in Vietnam, positioning infrastructural warfare as a vital means for securing liberal democracy in an era of expanding communist influence.[23] Following an economic framing of infrastructural bombing "as a form of punitive demodernization,"[24] Rostow's vision for Operation Rolling Thunder—for which napalm was seen as an ideal weapon of choice[25]—encapsulated a belief that if economic

[21] Neer, *Napalm*, 17.
[22] Achille Mbembe, *Necropolitics* (Durham, NC: Duke University Press, 2019), 82.
[23] David Milne, "'Our equivalent of guerilla warfare': Walt Rostow and the Bombing of North Vietnam, 1961-1968," *The Journal of Military History* 71, no. 1 (2007): 170.
[24] Stephen Graham, "Disruption by Design," in *Disrupted Cities: When Infrastructure Fails*, ed. Stephen Graham (New York: Routledge, 2010), 116.
[25] Marine Guillaume, "Napalm in US Bombing Doctrine and Practice, 1942-1975," *The Asia-Pacific Journal* 14, no. 5 (2016): 5.

growth and civilian life in North Vietnam were disrupted sufficiently, then the North Vietnamese military would inevitably surrender the war and cede the nation to liberal capitalist influences.

Assumptions of capitalist trajectories of development in Southeast Asia largely informed the U.S. military's agenda in the Vietnam War. President Johnson, advised by Rostow's economic vision for Vietnam, intertwined anti-communist military ambitions with visions of capitalist development in Vietnam; as Heidi Amin-Hong suggests, "it was his public appeals to the ideals of scientific objectivity and modernization that enabled support for the escalation of military involvement in Vietnam" on the grounds of "universal human progress."[26] Similarly, Aimee Bahng notes that the type of financial speculation that Rostow's training as a development economist participates in "produces a kind of speculative fiction . . . despite its overtures to fact over fiction."[27] Rostow's appeal, then, rationalized Operation Rolling Thunder by characterizing infrastructural destruction as necessary in order to secure the promised haven of liberal-capitalist order in Southeast Asia, drawing from ostensibly objective and empirical models of economic development to conjure speculative futures for the region. Combining a liberal desire to aid a supposedly ailing Global South with an anti-communist and hawkish military vision, Rostow's theories of development became a driving force for U.S. military intervention in Vietnam. In doing so, he cemented his influence on an agenda of infrastructural warfare that operated in conjunction with the imperial logics of the military-industrial complex. Within this strategy, napalm's utility is framed not through destruction, but as a technology of

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[26] Heidi Amin-Hong, "Militarized Sustainability: Feminist Refugee Memory and Hydropower in the Mekong Delta," *Verge: Studies in Global Asias* 7, no. 1 (2021): 131.
[27] Aimee Bahng, *Migrant Futures: Decolonizing Speculation in Financial Times* (Durham, NC: Duke University Press, 2018), 4.

securing modernity across transnational geographies—which is to say, securing the future of liberal capitalism against the expansion of communism.

While Rostow's speculation—that sufficient infrastructural destruction would drive North Vietnam to surrender the war—proved historically inaccurate, the underlying premise of his vision for infrastructural warfare compelled inextricable connections between race, infrastructure, and capitalist visions of development in the unfolding Vietnam War, and the Cold War largely. In *On Earth We're Briefly Gorgeous*, Vuong brings this history into focus, with an extended rumination on infrastructural warfare that interrupts a narration of Little Dog's multiracial genealogy, juxtaposed with that of Tiger Woods.

> 1964: When commencing his mass bombing campaign in North Vietnam, General Curtis Le May, then chief of staff of the U.S. Air Force, said he planned on bombing the Vietnamese "back into the Stone Ages." To destroy a people, then, is to set them back in time. The U.S. military would end up releasing over ten thousand tons of bombs in a country no larger than the size of California—surpassing the number of bombs deployed in all of WWII combined.
>
> 1997: Tiger Woods wins the Masters Tournament, his first major championship in professional golf.
>
> 1998: Vietnam opens its first professional golf course, which was designed on a rice paddy formerly bombed by the U.S. Air Force. One of the playing holes was made by filling in a bomb crater.[28]

Encapsulating not only napalm, but also carpet- and fire-bombing campaigns that constituted Operation Rolling Thunder, the bomb operates as a figure of destruction and a metaphorical portal that hurtles Vietnam back into pre-modernity—it ushers Vietnam into a capitalist trajectory comprised of a linear timeline of development that secures the nation's capitalist future even in the midst of communist control. Infrastructures, as Nikhil Anand, Akhil Gupta, and Hannah Appel suggest, are productive assemblages that "configure time, enable certain kinds of

[28] Vuong, *OEWBG*, 60-61.

social time while disabling others, and make some temporalities possible while foreclosing alternatives."[29] Accordingly, the large-scale bombing campaigns in Vietnam employed against infrastructures enable the emergence of capitalist temporalities of development in Vietnam while simultaneously foreclosing agricultural ways of life embedded in spaces of so-called primitive pre-modernity—like the agrarian space of the rice paddy. For Rostow, the "rejection of rural attitudes and agricultural practices" was a precondition for liberal-capitalist development,[30] and thus the elimination of these "pre-modern" infrastructures in favor of emptied, desolate lands facilitates speculative development projects like that of the professional golf course. This logic of destruction encapsulates what Bahng in a different context calls a "scene of speculative building," a racialized geography "evacuated of its denizens and prepared to signify the sheer potential of capital."[31]

In an interview with the *Wall Street Journal*, Vuong notes that he inserted Tiger Woods into his novel in order to illuminate a forgotten pre-history of racialized subjects in the U.S., legacies of violence obscured by the liberal humanist paradigm of individualism that idolizes the figure of the celebrity while eliding their genealogies of slavery, genocide, and war.[32] Once a fertile cropland supplying sustenance for the Vietnamese population, the rice-paddy-turned-golf-course is haunted by this very legacy of militarized decimation. Indeed, in her analysis of the everyday consumer objects remnant from infrastructures of militarization that litter landscapes of Vietnamese life, Michelle N. Huang argues that the material outcomes of wartime capitalist

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[29] Nikhil Anand, Akhil Gupta, and Hannah Appel, *The Promise of Infrastructure* (Durham, NC: Duke University Press, 2018), 15.
[30] Audra Wolfe, *Competing with the Soviets: Science, Technology, and the State in Cold War America* (Baltimore, MD: Johns Hopkins University Press, 2012), 63.
[31] Bahng, *Migrant Futures,* 120.
[32] Maris Kreizman, "Ocean Vuong: America 'Has Amnesia' About Tiger Woods," *Wall Street Journal*, June 4, 2019, https://www.wsj.com/articles/ocean-vuong-america-has-amnesia-about-tiger-woods-11559662495.

development in Vietnam persist as everyday beacons of the enduring U.S. neocolonial war economy, "relocat[ing] the objective of war from political ideologies to the objects that constitute it."[33] These everyday objects—Coca-Cola cans, a metal comb salvaged from a downed American airplane, and candy showered on children in South Vietnam—like the golf course, carry the affective history of incessant U.S. military occupation transformed into an economy of consumerist objects integral to liberal subjectivity.[34] Thus, Vuong's juxtaposition of Woods's meteoric rise to sporting celebrity in the U.S. with Vietnam's economic development in the aftermath of mass-bombing campaigns underpins how teleological narratives of progress both figuratively and literally displace histories of militarized destruction in their proffering of liberal capitalism as the panacea for the "problem" of underdevelopment in the Global South, a reigning Cold War ideology materially imposed on the geographies of Southeast Asia.

Vuong highlights General Curtis Le May's phrase "back into the Stone Ages" as a metaphor for the capitalist transformation temporally and materially undergone by Vietnam in the aftermath of napalm-, carpet-, and fire-bomb destruction—an emptied slate that operates as the precondition for capitalist development. While the utility of infrastructural warfare seemingly resides in its unique capacity for destruction, insights from feminist new materialist philosophy invite a different focus by investigating matter in its most substantive forms. Amidst these paradigms of infrastructural destruction, it is useful to remember a defining property of matter: it cannot be created nor *destroyed*, merely *transformed*. In her foundational theory of agential

[33] Michelle N. Huang, "Matériel Culture: The Militourist Aesthetic of Mary McCarthy's Vietnam War Reportage," *Contemporary Literature* 61, no. 2 (2021): 181.
[34] In her work on the U.S. Secret War in Laos—a contemporaneous large-scale bombing campaign that played a central role in U.S. intervention in Southeast Asia—Davorn Sisavath develops a methodology of engaging military waste and objects in the afterlives of U.S. bombing campaigns in Southeast Asia in order to construct an alternative archive for investigating the material histories of U.S. militarism. See Davorn Sisavath, "The U.S. Secret War in Laos: Constructing an Archive from Military Waste," *Radical History Review*, no. 133 (2019).

realism, feminist physicist Karen Barad argues that matter constitutes "ongoing historicity," wherein "*matter is substance in its intra-active becoming—not a thing, but a doing, a congealing of agency*."[35] Here, "intra-action" revises "interaction" to refuse an assumption of the prior state of independence for discrete phenomena or actants, instead emphasizing a conceptual shift that understands how phenomena coming into being in *simultaneity* through their entanglements—an active form of matter*ing*. Encapsulated here, in the active rendering of matter, is the need to attend to what Ann Laura Stoler terms "ruination," or an ongoing imperial process that "bind[s] human potentials to degraded environments, and degraded personhoods to the material refuse of imperial projects."[36] For Vuong, then, the verb "destroy" carries a deeper weight than its putative definition imbricated in damage and ruin; rather, the bomb engages an active imperialist mattering that dematerializes and *transforms* Vietnam's geography, tethered to its human populace, into the conditions of pre-modernity ripe for capitalist development.[37]

This U.S. militaristic policy of clearing supposedly pre-modern space in favor of empty land primed for capitalist futurity also hinges on the attachment of Vietnamese bodies and ways of life to those very infrastructures. In the novel, Little Dog recounts how his mother's schooling ends after a napalm raid destroyed her schoolhouse when she was five. This inhibition of education is narrated through the loss of language: "Our mother tongue, then, is no mother at all—but an orphan. Our Vietnamese a time capsule, a mark of where your education ended, ashed."[38] A time capsule, as a collection of objects and information from a specific time period

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[35] Karen Barad, "Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter," *Signs: Journal of Women in Culture and Society* 28, no. 3 (2003): 821-22.
[36] Ann Laura Stoler, *Imperial Debris: On Ruins and Ruination* (Durham, NC: Duke University Press, 2013), 7.
[37] In the context of the Secret War in Laos, anti-war activist Fred Branfman similarly argues that the principal goal of bombing was, in fact, not destruction, but the debilitation of the foundations of a future communist state should the U.S. lose the war. See Fred Branfman, *Voices from the Plain of Jars* 2nd ed. (Madison: University of Wisconsin Press, 2013), 25.
[38] Vuong, *OEWBG*, 31-32.

preserved in the Earth to be uncovered by a future generation, functions as a temporal bridge embedded in the planet's ecology; it is the past communicating with the future through a present tense voice. Recalling Neer's assertion that the utility of napalm is in the irrecoverable nature of incinerated infrastructure, the time capsule signals the entrapments of temporality instigated by war. According to Jasbir Puar, infrastructural destruction is not just a material but a temporal modality, in which "the target . . . is not just life itself, but resistance," wherein "time itself is held hostage."[39] Characterized by confinement outside of modernity, this rendering of infrastructural warfare demonstrates how the Cold War dyad of capitalism and communism is both epistemically and materially superimposed onto regimes of violence in Vietnam. Napalm's destruction of infrastructure constrains Vietnamese bodies in time, locked in the language of a five-year-old girl, where "to speak in our mother tongue is to speak only partially in Vietnamese, but entirely in war."[40] Foreclosing the future of Vietnamese life, napalm congeals Asian personhood within a temporal past unable to exist properly in liberal capitalist modernity.

As temporality became an extension of the war's battleground, the war to secure liberal capitalist control of Vietnam transformed into a racial project of securing the future of capitalist possibility as an ideological and imperial project in the Global South that necessitated the destruction of infrastructures that sustained life otherwise. In a speech delivered at Fort Bragg, North Carolina during the early stages of war, Rostow proclaimed that, "communism is best understood as a disease of the transition to modernization."[41] This metaphorical framing of communism within a framework of toxicity in relation to modernization reveals the political and racial logics of Cold War infrastructural warfare. As Mel Chen argues, metaphoric renderings of

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[39] Jasbir Puar, *The Right to Maim: Debility, Capacity, Disability* (Durham, NC: Duke University Press, 2017), 135-36.
[40] Vuong, *OEWBG*, 32.
[41] Milne, "'Our equivalent of guerilla warfare'," 202.

toxicity "should not be detached from an understanding of how toxins function in, and impair, actual bodies and systems," and instead inform a broader understanding of how notions of impairment "should be understood as a societal production."[42] In other words, the political schema that conditions communism within a parasitic relationship to capitalist modernity is an ecological formation that cannot be divorced from the epidemiological and anthropocentric interpretation of the toxin as an inherent threat to human life—an enemy in need of eradication.

Part of the project of defining life and death that constitutes racialized necropower, according to Mbembe, is the construction of the political "other" or the "enemy" as a subject to be killed—a necessary condition of possibility for Western modes of liberal democracy.[43] While the U.S. Cold War state prototypically defined this enemy as the "communist" across its various geographies of violence, incidental death—or collateral damage—exceeds the porous boundaries of this singular subjectivity as the latitude of death extends to civilians perceived as adjacent to communism, whether that adjacency be perceived through geographic, visual, or political proximity. Collateral damage, as Mimi Thi Nguyen argues, emerges out of *liberal* war; while war "perpetrates deliberate violence to injure bodies and properties of a named enemy[,] liberal war perpetrates violence that it claims is incidental to its exercise of power to free others from a named enemy who is in their midst."[44] Put differently, liberal war rationalizes incidental death as a necessary condition of possibility for the eradication of a clearly defined enemy, an endeavor aligned with liberal humanist desires for expunging the "disease" of communism from Southeast Asia. As a political object, napalm exemplifies a Cold War imperial project organized around the

[42] Mel Chen, *Animacies: Biopolitics, Racial Mattering, and Queer Affect* (Durham, NC: Duke University Press, 2012), 192.
[43] Mbembe, *Necropolitics*, 42.
[44] Mimi Thi Nguyen, *The Gift of Freedom: War, Debt, and Other Refugee Passages* (Durham, NC: Duke University Press, 2012), 20.

simultaneous construction *and* destruction of militarized objecthood in order to secure the ideological reign of the liberal human subject.

America's Napalm

Napalm's attachment to Asian racial formation is not merely a byproduct of its continual deployment in the Cold War in Asia, but emerges out of distinctive visual iconographies that employed napalm as a symbol for brutality of the war in Vietnam. Most famous of these images is Associated Press photographer Nick Ut's "The Terror of War"—sometimes referred to as "Napalm Girl" or "Accidental Napalm Attack"—which circulated nationally in 1972, making visible the body of a young, female child as the innocent victim of napalm's ruthless, indiscriminate destruction. The picture captured 9-year-old Phan Thi Kim Phuc running from the aftermath of a napalm bomb striking her home village of Trang Bang, leaving much of her skin as scar tissue in the present day.[45] Ut's photograph carried a unique testimonial power, as the Associated Press strategically chose "The Terror of War" for widespread circulation because "Kim Phuc stands out as the only naked person, her pain magnifying the suffering of those who surround her."[46] Framed thus, the photograph evinces not only how Kim Phuc's body amplifies a sense of empathy felt on behalf of those pictured alongside her in the photograph, but also how this public grief extends to the invisibilized civilian lives indelibly impacted by napalm and the Vietnam War writ large.

[45] Despite the emphasis on visuality I employ in this section, I intentionally choose not to display the image in this article out of a refusal to reproduce the violence engendered by the dissemination of images of brutal violence against racialized flesh.
[46] Thy Phu, *Picturing Model Citizens: Civility in Asian American Visual Culture* (Philadelphia: Temple University Press, 2011), 106.

Visualizations of violence through photography, television, and cinema fueled political tensions surrounding the Vietnam War, effecting moral outrage on behalf of a perceived condition of humanity that connected Southeast Asians and U.S. citizens.[47] Photojournalism occupied a unique position in Vietnam War culture, for, in contrast to moving images present in television and film footage, the photograph reduces the body and landscape to a static image, emphasizing the visceral violences, emotions, and "an ability to connote completeness and to evoke the past."[48] As it continually resurfaces in public memories of the war, the static nature of the photograph gestures towards a racialized objectification of the body that freezes Kim Phuc's personhood into a singular moment of despair and victimhood, tethering the specter of liberal humanity to postwar femininity imagined as an object of rescue. This call for public empathy concomitantly refigures the problem of the war in Vietnam as its exceptionality as a dehumanizing war—a rhetoric that obscures the role of the Vietnam War in upholding the liberal human as the hallmark of U.S. liberal democracy and capitalism. In this paradigm of remembering the war, napalm is itself reduced to an abstract signifier of violence visually absent from the photograph, while the image of the napalm *girl* becomes untenably attached to the specters of war's memory, aestheticizing the brutality of violence through the object of the Vietnamese body displayed across U.S. and global media.

Within conventional memories of the Vietnam War, the iconography of Kim Phuc's body illuminates how napalm's representation in U.S. popular imaginary indexes the vulnerability of Asian femininity as a condition of U.S. benevolent imperialism. This section explores this constitution of postwar Asian racial form through napalm, an object that coalesces collective

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[47] Neda Atanasoski, *Humanitarian Violence: The U.S. Deployment of Diversity* (Minneapolis: University of Minnesota Press, 2013), 74.
[48] Marita Sturken, *Tangled Memories: The Vietnam War, the AIDS Epidemic, and the Politics of Remembering* (Berkeley: University of California Press, 1997), 90.

imaginaries of the viscerally brutal nature of the Vietnam War. Racial form, as theorized by Colleen Lye, highlights the historical contingency of aesthetic representations of the Asian, signaling that visual and cultural representations of race index structural legacies of transnational geopolitical relations.[49] In doing so, studies of racial form investigate race as the aggregation of cultural, historical, and social forces that construct the legibility of the "Asian," racialized and gendered signifiers attached to, but not entirely synonymous with, the Asian human subject. Napalm's intelligibility as an object of Asian political subjectivity, then, demonstrates how postwar Asian racial form inheres vis-a-vis the material violences of the Cold War.

More than two decades after the famous napalm strike on Trang Bang, a much older Kim Phuc—now residing in Canada after defecting from Vietnam—traveled to the Vietnam Veteran's Memorial in Washington D.C. for a Veteran's Day commemoration in 1996. The celebration sought reconciliation in the aftermath of U.S. incursions into Vietnam, 21 years after the war's official end. In her speech Kim Phuc expressed her own desires for reconciliation in the aftermath of her own bodily violation, as she remarked, "I do not want to talk about the war because I cannot change history . . . Even if I could talk face to face with the pilot who dropped the bombs, I would tell him we cannot change history but we should try to do good things for the present and for the future to promote peace."[50] Moments later, John Plummer—a Methodist minister and former U.S. Army captain—passed her a note reading, "Kim, I am that man."[51] The two fell into an embrace, with tears flowing as Kim Phuc uttered the words "I forgive you," words that accompanied the symbolic gesture of outstretched arms wrapped around Plummer's

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[49] Colleen Lye, *America's Asia: Racial Form and American Literature, 1893-1945* (Princeton, NJ: Princeton University Press, 2005).
[50] Denise Chong, *The Girl in the Picture: The Story of Kim Phuc, the Photograph, and the Vietnam War* (Toronto: Penguin Canada, 2006), 362.
[51] Ibid.

body signaling a forgiveness that performatively fulfilled the theme of reconciliation that defined the day of commemoration.[52]

When framed around a politics of recognition and state attempts to recuperate postwar narratives, redress, according to Lisa Yoneyama, "become[s] converted into the object of exchange within institutionalized spheres,"[53] relegating wartime violence to a confined moment in the past. This invocation of redress and repair also gestures towards a dual meaning: on the one hand, it invokes the physical reparation of injury borne by Kim Phuc's body in the aftermath of the napalm bombing; on the other hand, it articulates a political project that translates Kim Phuc's narrative into a rhetorical maneuver deployed to heal the collective wounds of war borne by the U.S. national body politic by resuscitating the liberal human. As Kim Phuc becomes an "ambassador of peace and reconciliation," Thy Phu reminds us that she complicates the narrative of victimhood, demonstrating how the U.S. nation-state has at once indirectly injured her body while simultaneously utilizing it to transform her into the symbol of the liberal human subject that can eschew the figurative and physical scars of war in the service of forwarding a utopian, postwar future.[54] Within the context of postwar disability, Natalia Duong suggests, "repair . . . becomes a much more complex process than attempts to 'cure' the effects of disability."[55] Instead, repair becomes sutured to healing the wounds of the nation-state in foreclosing the

[52] The truth of these events seems questionable, at best. After images of this moment circulated nationally, media reports emerged noting that the South Vietnamese army, not the U.S.'s, had carried out this particular bombing campaign, with the U.S. playing, at maximum, an advisory role. As a result, many questioned Plummer's actual involvement in the napalm strike on Trang Bang. Plummer staunchly maintained his own culpability and Kim Phuc insisted that the *absolute* truth matters less than the act of redress. I highlight this embrace between Plummer and Kim Phuc here not necessarily to rehash these debates on historical authenticity, but rather to point towards how this act of redress and reconciliation illuminates the imperial desires to forget and exceed the inhuman violences of the Vietnam War.
[53] Lisa Yoneyama, *Cold War Ruins: Transpacific Critique of American Justice and Japanese War Crimes* (Durham, NC: Duke University Press, 2016), 11.
[54] Phu, *Picturing Model Citizens*, 115.
[55] Natalia Duong, "Agent Orange Bodies: Việt, Đức, and Transnational Narratives of Repair," *Canadian Review of American Studies* 48, no. 3 (2018): 392.

traumatic past of war and violence by incorporating the most famous victim of the Vietnam War into the auspices of liberal humanity.

This collective desire for redress held both by state and activist groups aims to restore the Asian body reduced to an object of warfare back into the frame of liberal humanism, indexing Kim Phuc's own representational transition from object of rescue into symbol of reconciliation in the construction of postwar Asian racial form. This attempt to repair our collective memory of a violent, inhumane war, as Mimi Thi Nguyen writes, "bear[s] the effect of restoring our progressive time consciousness, with each survivor affirming the *aliveness* of the other."[56] Aliveness, as a racialized descriptor, invokes Mel Chen's framing of *animacy* as a quality of liveness attached to objects and beings, a profoundly political concept "shaped by what or who counts as human, and what or who does not."[57] The recuperation of Kim Phuc from objecthood to personhood via state redress, then, is not a moment of reparative justice, but rather one that reinstates the prominent imperial attachment that forms the crux of U.S. Cold War ideology. In other words, the political recognition of Kim Phuc's humanity is wholly contingent upon the public forgetting of the atrocities committed by the U.S. imperialist military-industrial complex. Kim Phuc's story refuses the narrative convention of typical "war stories," which, as Viet Thanh Nguyen avers, elides the supposedly mundane happenings of civilian life in favor of the spectacular, heroic adventures of the soldier on war's battlefield.[58] Nguyen insists that authentic war stories dwell in the "dreadful knowledge of the inhumanity that exists within the human, and the humanity of those who appear inhuman."[59] Doing so requires acknowledging the complex

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[56] Nguyen, *The Gift of Freedom,* 85 (emphasis mine).
[57] Chen, *Animacies,* 30.
[58] Viet Thanh Nguyen, *Nothing Ever Dies: Vietnam and the Memory of War* (Cambridge, MA: Harvard University Press, 2016), 224.
[59] Ibid., 236.

terrain of war's memories, wherein the victims are not always innocent nor are the perpetrators always evil. Yet, it also bespeaks the urgency of telling stories of war that exceed the Manichean bind of good and evil, of human and inhuman, wherein the unquenching yearning for humanity belies the true nature of militarized violence.

The rhetorical gesture that attaches Kim Phuc to the liberal human subsequently detaches her body from the historical memory of napalm's brutality as an object of warfare that consistently reminds the public of an imperialist war fought in Southeast Asia. This mechanism of strategic forgetting illustrates a polemic of discourses of racial dehumanization, a process that Chen articulates in two forms, one characterized by the "*removal* of qualities especially cherished as human" and another "involv[ing] the more active *making* of an object."[60] Inversely, the reification of the liberal human—humanization—can be characterized doubly also, either by the active *making* of a human or by the *removal* of qualities associated with the object. The recuperation of Asian objecthood into humanity, then, hinges upon the capacities of the human—the ability to think, feel, and *forgive*—overshadowing the memories of Kim Phuc as an object of warfare qua rescue—a victim, a static image produced at the nexus of napalm's material violence and U.S. imperialism's epistemic force. By obscuring the violent history of napalm in Vietnam, these moves of redress function to humanize postwar, racialized subjects by distancing themselves from objects of warfare—eliding how the making of racial form is inherently embedded in the materiality of militaristic violence. This rhetorical move to assimilate Kim Phuc into the ideological nation-state by strategically forgetting the historical violence of napalm obscures how, in the context of postwar Asian/America, racial difference is an effect of the co-production of objects of warfare and raced bodies under the conditions of U.S. military empire.

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[60] Chen, *Animacies*, 43.

Put differently, the desire to humanize postwar subjects by eschewing histories of militarized objecthood cleaves racial violence from the fundamental infrastructures of U.S. militarism.

For the U.S. soldier, napalm evokes the sentimental memories of military dominance and power, epitomized by the infamous line "I love the smell of napalm in the morning" from Francis Coppola's iconic film *Apocalypse Now* (1979). Uttered by a shirtless Lieutenant Colonel Bill Kilgore against a backdrop of Vietnam's burning landscape and the imperious soundscape of military helicopters and booming explosions, this affective longing for napalm's destructive force evokes white supremacy's fetish for militarized violence.[61] While this signification indexes napalm's narratorial power as what Robert Neer calls an "American biography" that illuminates the ebbs and flows of U.S. expansive military empire,[62] napalm also narrates the story of Asian racial form, signaling the conditions of its production in the circulation of U.S. imperialism.[63] We must be wary of how Kim Phuc's story contrastingly illuminates the restoration of racialized victims to a status of liberal humanity that belies a deeper critique of structural violences that persist beyond atomized violences of war. It is indelible that postwar Southeast Asian/America is borne from this history of militarized violence; however, as Vuong reminds us, "let no one mistake us for the fruit of violence—but that violence, having passed through the fruit, failed to

[61] Other invocations of napalm in U.S. culture and politics conjure similarly visceral desires: In David Fincher's *Fight Club* (1999), soap salesman Tyler Durden introduces us to a homemade concoction of napalm, composed of gasoline and frozen orange juice; Avant Research, a dietary supplement brand, produced a topical fat burner, "Avant Napalm,' that promises an "explosive mixture of ingredients that is sure to help you make quick work of enemy fat cells dug in deep on the battle field of your body;" and in the aftermath of the white supremacist insurrection at Capitol Hill on January 6th, 2021, several reports emerged of rioters carrying jars of homemade napalm.
[62] Neer, *Napalm*, 4.
[63] Napalm also figures prominently in Asian American literature and culture, registering the militarized violence enacting against Asian populations, its haunting memories in diaspora, and its effects for galvanizing widespread political movements: In her poem "My Cherubs Know Napalm Flames," Khaty Xiong describes the eerie process of the searing flames of napalm, burning through the skin to reveal the bones underneath; In Viet Thanh Nguyen's *The Sympathizer*, the unnamed narrator is brutally injured in an "accidental" explosion on the set of *The Hamlet*, a fictional rendition of *Apocalypse Now* featured in Nguyen's novel.

spoil it."[64] While napalm consolidates the Cold War fantasy of Asian racial formation—the material containment of bodies and landscapes within the doctrines of liberal humanism and global capitalism—this fantasy is also underwritten by an Asian/American political subjectivity that refuses assimilation into the liberal human.

Napalm's Stickiness and Other Sensations

If napalm's political legacy lies in its capacity to *materially transform* Vietnam's geography into the conditions of global capitalist development, it is also true that napalm's interactions with life in Southeast Asia transform napalm itself as a material and affective substance imbued with distinct memories of militarized violence. Napalm no longer exists as a substance in and of itself, but as matter in a political ecology of object relations; as Karen Barad writes,

> All bodies, not merely "human" bodies, come to matter through the world's iterative intra-activity—its performativity. This is true not only of the surface or contours of the body but also of the body in the fullness of its physicality, including the very "atoms" of its being. Bodies are not objects with inherent boundaries and properties; they are material-discursive phenomena. "Human" bodies are not inherently different from "nonhuman" ones. What constitutes the "human" (and the "nonhuman") is not a fixed or pregiven notion, but nor is it a free-floating ideality…material apparatuses produce material phenomena through specific causal intra-actions, where "material" is always already material-discursive—*that is what it means to matter*.[65]

In this description, matter—as both material and discursive phenomenon—emerges out of *intra-actions*, the encounters and circulations of material and semiotic meaning that transform and produce objects and subjects not as discrete entities that precede their encounter, but that are constructed *through* them. Matter is not a bounded form, and thus, an object's physical

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[64] Vuong, *OEWBG*, 231.
[65] Barad, "Posthumanist Performativitity," 823-824

materiality and political discursiveness cannot be separated from the conditions of its making within these intra-actions. In this manner, napalm's multiple encounters with the Vietnamese body—physical in the arena of war and discursive in the realm of culture—materially *and* semiotically constructs it as an object that materializes the remainders of war and embodies the historical coagulation of anti-Asian violence.

Figure 4.1: *Bad Soda / Soft Drunk*, Nicolas Lobo, 2014. Installation at Gallery Diet, Jacksonville, Florida.

Grappling with this material legacy of napalm, Miami-based artist Nicolas Lobo created a series of sculptures in his installation, "Bad Soda / Soft Drunk," which debuted in Gallery Diet in Jacksonville, Florida in 2014. Known for his fascination with obscure substances in his artistic practice, Lobo's installation is composed as a series of sculptures incorporating two seemingly disparate materials: Nexcite, a discontinued sexual energy drink from Sweden typically marketed towards women, and Lobo's own concoction of napalm composed of large blocks of Styrofoam

doused with benzene and gasoline. Lobo was fascinated with online videos offering instructions in developing napalm,[66] a practice popular amongst white supremacist right-wing online subcultures since David Fincher's 1999 film *Fight Club* featured a bathroom recipe of napalm composed of gasoline and frozen orange juice. The sculptures are shaped in the tradition of Gong Shi, or "Chinese scholar stones," in order to bride "the disconnect between the intellectual mind and physical experience."[67] Invoking Asiatic forms both aesthetically through the scholar stones and materially through napalm, the sculptures conjure a sense of dissonance: they transform a deadly weapon of war and fetish of white supremacist violence into a rumination on the philosophy of human life and natural entanglements, all while surrounded by a sea of crates containing an aphrodisiac energy drink that promises increased sexual appetite for women.

Despite neither the artist being Asian American nor the subject of the art being human, the installation indelibly relies on Asian aesthetic forms in fusing the visceral materiality of militarized violence with contemporary capitalism's profiteering off of women's sexual energy. In an interview Lobo remarks that his sculptures intend not to directly engage the subject of war, but rather to ponder the "psychological understanding of [napalm] by humans," a phenomenon *discursively* familiar to most Americans due to its prominence in Vietnam War-era cinematography and imagery, yet *sensorially* is relegated to the realm of mythology.[68] In this regard, Lobo's installation attempts to *deracinate* napalm by removing visible racial markers of the human and war that construct napalm's intelligibility as what Kyla Tompkins might describe as "crude matter," or the "organic form, as in the chemical or biological sense of a shape or relation not mediated by human intervention."[69] However, race, cannot be evacuated from

[66] See Ann Binlot, "Sexually-Charged Napalm Sculptures Debut at Gallery Diet in Miami," *The Daily Beast* (2014)
[67] Scott Indrisek, "Sexual Energy and Napalm Stike Miami (don't Worry, It's Safe)," *BlackBook Magazine* (2014)
[68] Ibid.
[69] Kyla Tompkins, "Crude Matter, Queer Form," *ASAP/Journal* 2, no. 2 (2017): 265

napalm precisely because race inheres in the very material and semiotic structures that consolidate napalm as an object of political relations, wherein "crudeness" simply functions to obscure the relations that shape an objects ontological form, "the accidents and the concerted work through which something comes into social coherence as an aestheticized object."[70] Deracinated and detached from the theater of war within which it came to political coherence, napalm is *incomplete* as an object precisely because its materiality and political agency is inextricably bound to its object history, as the very material form of anti-Asian Cold War militarism—it is the object that materializes the Asian-as-Other, which is inflected through monikers of the "gook" or the "communist," who is always constructed for death in the fetish of white supremacist militarization.

In its epistemic and material form, napalm reveals the design of U.S. military empire—an institution that is at once organized around spectacular forms of brutal violence in addition to obscured epistemological projects of knowledge and meaning-making—in constructing logics of race that subtend the objectification of Asian/American racialization in the ongoing nature of warfare. The fantasy of napalm, then, lies not only in its ability to engender blazing violence across battlegrounds of Asia, but rather in its capacity to produce new racial subjects in and of themselves—bodies perpetually attached to the specter of militarized violence, wherein incorporation becomes seemingly the only escape from violence's captive hold. Indeed, in pursuit of a sustained theory of the material ontology of Asian racial form, Anne Anlin Cheng develops a rubric of "ornamentalism" that "ask[s] how racial personhood can be assembled not through organic flesh but instead through synthetic inventions and designs."[71] This notion of synthetic personhood characterizes a racial form primarily constructed through inorganic

[70] Ibid., 266
[71] Anne Anlin Cheng, *Ornamentalism* (Oxford, UK: Oxford University Press, 2019), 19

objecthood, which Cheng primarily historicizes through an aesthetic ensemble of Orientalist fabrics, sculptures, and other décor—the ornamental. However, within the context of Cold War paradigms of Asian racialization, wherein militarization became the primary discursive technology through which U.S. orientalism materialized,[72] Lobo's aesthetic congealment of the "Asiatic" within the material sensuality of napalm recalls the visceral violence that materializes in and through Asian bodies.

One of napalm's signature features is its *stickiness*, which are "especially effective since they are in direct contact with whatever they burn."[73] In his installation, while Nexcite is a love-based energy drink designed to increase the sexual energy of women, Lobo pays close attention to the material *sensuality* of napalm, a substance that "in its design [is] supposed to stick to the skin and cause this burning sensation."[74] Collapsing the *sticky* violence of engulfing flames with a sexual intimacy embraced in skin-to-skin contact and "hot sensations of feeling, Lobo embraces the cognitive dissonance seemingly conjured by these disparate sensations. Yet, the intimacy forged between napalm and the Vietnamese body captures an affective force of militarized violence, one that reveals its sensual articulations of racial and gendered violence recounted by Kim Phuc in Denise Chong's biography documenting her experiences with napalm:

> Her first memory of the engulfing fires was the sight of flames licking her left arm, where there was an ugly, brownish-black gob. She tried to brush it off, only to scream out at the pain of the burn that had now spread to the inside of her other hand.
>
> In that instant, Phuc knew she had touched burned flesh.[75]

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[72] Sylvia Shin Huey Chong, *The Oriental Obscene: Violence and Racial Fantasies in the Vietnam Era* (Durham, NC: Duke University Press, 2012), 19
[73] Neer, *Napalm*, 16
[74] Binlot, "Sexually-Charged Napalm"
[75] Chong, *The Girl in the Picture*, 66

Hauntingly visceral, Kim Phuc's memory of napalm's sensation is an intimate slowness—Kim Phuc's body slowling feeling the rush of fire crawl through her flesh, "licking her left arm," as napalm attached itself to her body, refusing to release its captive grip as it brought about an endless onslaught of searing devastation. The closeness of napalm and her body is a material attachment, but one that also semiotically transforms how we understand the attachment of napalm to the Vietnamese body. While the force of the explosion knocked her off of her feet, it was the chemical—napalm—that stuck to her body. In this moment of intimate stickiness, Kim Phuc becomes forever attached to napalm—donned the "Napalm Girl"—an intimate entanglement that forever bonds militarized violence with the Vietnamese body. In this regard, the Asian body functions as a repository for the parasitic hold of militarized and colonial violence,[76] wherein the material stickiness of napalm articulates the gendered and sexualized dimensions of militarized violence that cling to the body, a material memory of war embedded in flesh.

Against this backdrop, I want to end with a provocation: that napalm's historical entanglement with the Asian American movement of the 1960s offers pathways for reconceiving Asian/American sociality as a political form of demilitarized solidarity. In Eugene Lim's eclectic novel *Dear Cyborgs*, a rotating cast of characters—including two Asian American boys in the Midwest bonding over their mutual love of comic books, a curiously ponderous team of superheroes, an art curator, and an anti-capitalist, revolutionary "terrorist—ruminate on the

[76] Here, I am drawing from Anna Storti's developing of the Asiatic body as a "host" for colonial memories, desires, and fetishes. While Storti primarily theorizes the multiracial Asian/white body as an ontological form that harbors colonial violence as a parasitic relation that uncovers the residual violences of racial mixture in transpacific militarized violence, I find this framework useful for thinking about how material forms and ontological violences *bind* to certain bodies in ways that cathect Asian racial form to histories of violence. This framework does not eschew agency or desires for other paradigms of living beyond the entrapments of militarized legacies, but forces us to reckon with the ways that violence lingers in the body with parasitic force. See Anna Storti, "A Host of Memories: Mixed Race Subjection and Asian American Performances Against Disavowal," (Ph.D. Dissertation: University of Maryland, College Park, 2020)

aesthetics and politics of Asian American protest. At one point, the conversation devolved into a debate about Richard Aoki, a famed Asian American activist and member of the Black Panther Party later revealed to be a FBI informant.[77] The group weights a set of questions at the heart of Asian American political subjectivity: do Aoki's contributions to the movement outweigh the potential harm he dealt? Did Aoki outgrow his early political allegiances to the state to become a legitimate activist on behalf of Black, Asian American, and other people of color/Third World communities? And what did this history say about the broader landscape of Asian American political subjectivity, a narrative that owes much to Aoki's contributions to establishing Asian American studies as a field and popularizing the slogan "Yellow Peril supports Black Power?"

In the midst of this conversation, the narrator zones out, pondering a "footnote in history" pertaining to Kiyoshi Kuroyima, another Japanese American activist who was born in internment camps and active across the Civil Rights Movement, anti-war protests, and the Gay Liberation Front. This footnote—literally in the novel, metaphorically "in history"—recalls a protest spearheaded by Kuroyima at the University of Pennsylvania in 1968:

> When your guy Aoki was working with (or entrapping) the Third World Liberation Front, Kuroyima pulled off this stunt at the University of Pennsylvania. It's 1968, and the U.S. is using biological and chemical weapons on the Vietnamese. Napalm, Agent Orange. Leaflets start to circulate on campus saying that a group calling itself Americong is going to burn an innocent dog in front of the library. You can imagine the reaction. Two thousand people show up. Veterinarians and dog owners show up. The mayor announces that anyone who harms a dog is going to jail. It's later described as the largest anti-war demonstration in the school's history. Another leaflet starts being passed around this well-meaning, liberal crowd. It says, 'Congratulations, you've saved the life of an innocent dog. How about the hundreds of thousands of Vietnamese that

[77] For more historical context on Richard Aoki's significance in the cross-racial solidarity and Asian American social movements of the 1960s, as well as allegations of his undercover allegiance to the FBI, see Diane C. Fujino, *Samurai among Panthers: Richard Aoki on Race, Resistance, and a Paradoxical Life* (Minneapolis, MN: University of Minnesota Press, 2012); Diane C. Fujino, "Where's the evidence Aoki was FBI informant? On Richard Aoki," *SF Gate* (2012). https://www.sfgate.com/opinion/openforum/article/Where-s-the-evidence-Aoki-was-FBI-informant-3808396.php

> have been burned alive? What are you doing to do about it?' Kuroyima was the author of both pamphlets.[78]

While it may be simple to read Kuroyima's protest as a commentary on the process of dehumanization that casts Asian life as lesser in value than dogs as a valorized American animal species, I want to resist this reading precisely because it reinscribes an animacy hierarchy that revolves around what Claire Jean Kim describes as a "taxonomy of power, [wherein] race has been elaborated in the United States in intimate connection with species and nature."[79] Instead, I follow Zakiyyah Iman Jackson's call to understand characterizations of blackness through animality not as a *denied humanity*, but a form of plasticity of race that enables it to adopt different forms and experiments.[80] Indeed, race operates in multiple valences—at once casting the Asian as beneath the animal in terms of value of life in the face of napalm but also as the quintessential assimilable human in the case of Kim Phuc's reconciliation in forgetting war's aftermath. There is something about both the dog in Kuroyima's protest and Kim Phuc's scarred body in Nick Ut's "The Terror of War" that evokes sympathetic liberalism in the protest of violence, one that binds the animal and the Asian girl as figures of vulnerability in a world that ignores so much violence. As Kuroyima astutely exposes, these protests fail to sustain beyond individualized instances of violence; the unquenching reality is that liberalism's fixation on atomized violence—militarized or otherwise—elides the material conditions of vulnerability shared across our mutual ecologies of relation. If race is infrastructural, this fact is equally true

[78] Eugene Lim, *Dear Cyborgs: A Novel* (New York: Farrar, Straus and Giroux, 2017), 136
[79] Writing about political encounters between white animal rights activists and people of color's cultural practices that harm animals, Kim's argument hinges on the *denial* of racialized humanity vis-à-vis the figure of the animal, and the need to think relationally across species and race to develop a "multi-optic vision" that allows us to mutually avow multiple injustices inflicted against subjugated populations. See Claire Jean Kim, *Dangerous Crossings: Race, Species, and Nature in a Multicultural Age* (Cambridge, UK: Cambridge University Press, 2015), 60
[80] See Zakiyyah Iman Jackson, *Becoming Human: Matter and Meaning in an Antiblack World* (New York: New York University Press, 2020)

for violence—distributed unevenly across bodies and ecologies that nonetheless share deep relations in networks of solidarity.

As a whole, *Dear Cyborgs* offers a meta-commentary on Asian American politics—fixated on the figure of the "cyborg" as a dehumanizing trope of futurity cast onto Asian bodies. Yet, the crux of the novel hinges upon a more mundane reality: that the cyborg is an everyday Asian American subject programmatically oriented into the routine of liberal capitalism. As Lim notes, these "bodies clothed in steel flowing over highways," our attachment to "exobrains we carry around," and "how even our most intimate relationships occur remotely," all gesture towards our mutual imbrication in human/machine entanglements that encode the function of liberal capitalism into the mundane realities of everyday life.[81] The cyborg, for Donna Haraway, offers an avenue for political repurposing of the machinery of the state into an apparatus of revolutionary possibility,[82] but it also bespeaks the conditions in which the technocratic militarized state captivates bodies into its allure of freedom. The deep entrenchments technologies of war become enmeshed in our bodies signals towards this neoliberal encroachment of the cyborg vis-à-vis late state capitalism. Kuroyima's political focus on the inhuman figure as a site of protest articulated *through* napalm, then, invites a reorientation of Asian American politics. Inhuman entanglements become bound up in the paradox of liberal militarism, wherein the sacrifice of racialized life (the inhuman) in pursuit of the securitization of universal humanity (the premier human) dispenses with ecological relations and ethical responsibilities to one another, yet both inhere in the material and epistemic form of Asian racialization.

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[81] Lim, *Dear Cyborgs*, 148
[82] See Donna Haraway, "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century" in *Simians, Cyborgs, and Women*

In crucial moments when Asian/America continues to solidify itself as a racial group within the landscape of U.S. anti-racist social movements—both in the 1960s and the present moment—reading napalm as an object that materializes Asian racial form also metaphorizes the logics of Asian/American racialization. In a perhaps not-so-insignificant coincidence, napalm was conceived in a military laboratory located within the hallowed halls of an elite university that contemporarily encapsulates the desires of an Asian/American model minority attempting to disenfranchise Affirmative Action that provides pathways to education for other Black and Brown communities.[83] A gelled petrochemical typically constituted of gasoline and polystyrene plastic, napalm straddles two primary states of matter—solid and liquid—as its viscosity gifts it properties of both; materially, napalm jelly exists as a liquid even as it behaves like a solid in terms of its structure and adhesive qualities. This metaphor of Asian/America—a racialized group oftentimes in flux as it navigates a complex racial landscape straddling "model minority" and "yellow peril" subjectivities—exemplifies what Michelle Huang refers to as "Asian American plasticity…a technology of American racial hegemony, a barrier meant to buffer the white majority population from 'bad' minority groups."[84] Deployed in the interest of dispelling communist expansion, napalm's plasticity constitutes a breakage in "Asian" itself as a racial formation—it operates as a barrier that attempts to bifurcate "good" Asians, those that acquiesce to capitalist and liberal powers, from "bad" Asians, the anti-imperialists and communists.

To return to the question that opened this article, defining napalm as an object of warfare is necessarily an incomplete project. The question itself—"what/s napalm?"—is only a partial

[83] For more on this Asian American political discourse surrounding affirmative action, see OiYan Poon and Janelle Wong, "The Generational Divide on Affirmative Action," *Inside Higher Ed* (2019), https://www.insidehighered.com/admissions/views/2019/02/25/views-chinese-americans-affirmative-action-vary-age-opinion

[84] Huang, "Ecologies of Entanglement," 110

inquiry, for napalm's political significance only comes into being and meaning through its relation with other phenomena across militarism's ubiquitous network. Through its material deployment in infrastructural warfare in the Vietnam War, to its aesthetic role in conjuring the imaginary of the refugee object of rescue, and to its affective symbolism to different agents and actors in the memory of war's afterlives, napalm has profoundly altered the landscape of Asian/American racial politics. Framing Asian racial form through objects of warfare does not eschew important concerns expressed in Yến Lê Espiritu and Lan Duong's framing of a "feminist refugee epistemology," which "resist[s] the objectification of refugees and their bodies."[85] Rather, it asserts a more dynamic consideration of objecthood that entails a recognition of capacity for objects, like subjects, to be radically reshaped and refigured by their ecological and political interactions. In doing so, objects of warfare contemplate the material ontology of Asian racialization that shifts focus from subjective interiority towards infrastructures of violence that racial difference subtends. And in turn, they remind us of how objects continually redefine how we come to know and engage Asian/American politics, offering an optic that encourages us to dwell with the multiple cacophonous relationalities that constitute Asian/America. Napalm is the material object of anti-Asian violence par excellence, a congealing of liberal militarism as a racial form that has still yet to fully solidify—and in this liminal state, offers an opening into consolidating Asian America otherwise.

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[85] Yen Le Espiritu and Lan Duong, "Feminist Refugee Epistemology: Reading Displacement in Vietnamese and Syrian Refugee Art, *"Signs: A Journal of Women and Culture in Society* 43, no. 3 (2018): 611.

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CODA: COLD WAR REMAINS

> Dear Cyborgs,
>
> Today's puzzler. Enforced inescapable automatic insidious complicity. On the horizon no viable just alternative and no path toward one. All proposals thus far fanciful, impossible, doomed. Sure, optimism of the will. But—either from the towers or beyond the grid, in the trenches, amongst the ruins, or burb'd—what to do?
>
> Yours most truly,
>
> —Eugene Lim, *Dear Cyborgs*

A rumination on the state of Asian/American politics, Eugene Lim's novel *Dear Cyborgs* (2017) begins with a puzzle, confronting readers with the guiding question of what follows: in the midst of conditions of inhospitable, and inescapable, forms of violence and faced with a deep sense of hopelessness: *what will we do*? Since its emergence in solidarity with Black and Third World liberation movements in the 1960s, the Asian American movement has grappled with this very question. Composed of an eclectic ensemble of political actors—descendants from "coolie" laborers, World War II internees, refugees of war, professionalized post-1965 immigrants, and transnational migrants—Asian/America is characterized by *heterogeneity*, which as Lisa Lowe has famously argued, "indicate[s] the existence of differences and differential relationships within a bounded category."[1] While, historically, Asian/America's shared politics of solidarity and liberation has cohered a sense of pan-Asian ethnic identification that offered a valuable avenue from which to launch a large-scale political movement,[2] the fractured nature of the movement has also created obstacles in the sustained collective mobilization across difference.

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[1] Lisa Lowe, *Immigrant Acts: On Asian American Cultural Politics* (Durham, NC: Duke University Press, 1996), 67

[2] See Yen Le Espiritu, *Asian American Panethnicity: Bridging Institutions and Identities* (Philadelphia, PA: Temple University Press, 1994), 31-41

The concerns of Asian/America are not always aligned with anti-imperialist, anti-capitalist ambitions, for significant segments have coalesced around liberalist attachments to empire. Indeed, as it came of age during the anti-war movements protesting U.S. military intervention in Vietnam, Asian/America's political formation is, I argue, fundamentally structured by the legacy of the Cold War human. Through the ideological and material wars and occupation in Asia and the Pacific, Asian/America has cohered around the malleability of both local subjects *in Asia* and diasporic subjects *in America* that function as both "good" and "bad" subjects of empire.

Confronted with a crossroads in charting pathways forward for Asian/American politics, we simultaneously find ourselves positioned into a world where laws, social norms, and cultural imperatives mandate our complicity with systems of power—whether they be settler colonialism, militarism, heteropatriarchy, white supremacy, and/or liberal and racial capitalism. *Dear Cyborgs'* puzzle assumes a sense of hopelessness, one that hauntingly gestures towards the inevitable collapse of social movements in their desire to endeavor for more just worlds, as "all proposals thus far, fanciful, impossible, doomed." Yet, it continues to insist on our continued mobilization, urging readers to think from their multiplicitous social positions—"from the towers," "beyond the grid," "in the trenches," "amongst the ruins," or "burb'd"—as sites to consider possible forms of dissident action that might emerge *across* social difference that both binds and separates Asian/American collectivities. The cyborg, in this regard, is not merely a technological amalgamation of human and machine, but rather a hybrid subject produced through converging political conditions that shape our material orientation to the world around us. While scholars of techno-Orientalism have observed the "cyborg" as a futuristic rendering of Asiatic capital that represents a *dehumanizing* trope, Huan He argues that this process of binding Asian futurity to liberal capitalist development offers a *humanizing* logic that entwines model

minority racialization with the mythology of technological modernity.[3] Thus, the material fusion that binds Asiatic embodiment to global capital reveals the structural logic of the Cold War human that inheres in U.S. empire's deep entrenchments with transnational circuits of liberal capitalism. *Dear Cyborgs*, in this respect, invites us to consider how the Cold War *remains with us*, an enduring legacy of the regime of the Cold War human that lingers within Asian/American politics.

In 1975, my parents were airlifted as children out of Saigon, Vietnam, after the United States military officially withdrew its troops from the capital. On their journey to eventual resettlement in the suburbs outside of Chicago, Illinois, both of my parents moved through refugee camps in the Philippines, Guam, and San Diego. Yen Le Espiritu has denoted this same transpacific pathway as spaces of "militarized refuge," which "challeng[es] the powerful narrative of America(ns) rescuing and caring for Vietnam's 'runaways' that erases the role that U.S. foreign policy and war played in spurring refugee exodus."[4] These military-bases-turned-refugee-camps constituted Vietnamese refugees fleeing Vietnam as *objects of rescue*, upholding narratives of humanitarian benevolence that characterize refugee passages to the United States through a sense of gratitude for the freedoms offered by U.S. liberal democracy, or what Mimi Thi Nguyen calls "the gift of freedom."[5] However, growing up in the suburbs of Chicago and eventually educated at the University of Illinois, Urbana-Champaign—my father as an electrical

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[3] Huan He theorizes this formation through the framework of "minority modeling," which "focus[es] less on the figure of the model minority and more on the *procedure* of representation itself" (33-34). In other words, minority modeling examines how the model minority becomes encoded and figured within the constraints of liberal capitalism, and how the Asian subject becomes a pivotal figure in the structural buttressing of liberal capitalism and technological modernity. See Huan He, "The Racial Interface: The Computational Origins of Minority Modeling," *Media-N* 18, no. 1 (2022): 31-52

[4] Yen Le Espiritu, *Body Counts: The Vietnam War and Militarized Refugees* (Berkeley, CA: University of California Press, 2014), 36

[5] See Mimi Thi Nguyen, *The Gift of Freedom: War, Debt, and Other Refugee Passages* (Durham, NC: Duke University Press, 2012)

engineer and my mother as a software programmer—my parents may have come to the U.S. as refugees of war, but much of their experience parallels that of predominantly East Asian immigrants who migrated to the U.S. after President Lyndon B. Johnson signed into law the Hart-Cellar Immigration and Nationality Act in 1965. The act's provisions, as Christopher Fan argues, "shifted the basis of U.S. immigration policy away from principles of exclusion to principles of economic selection,"[6] marking a professional class of scientists, technologists, engineers, and doctors as "good" Asian subjects of U.S. liberal capitalism.

In this regard, my family's journey from Vietnam to the United States marks an economic ascension from wartime refugee to professional upper-middle class of liberal capitalism—epitomizing the logic of the Cold War human, subjects of war and displacement *remade* into agents of global capitalist development, both in the U.S. and abroad in Asia. In 2005, my father's job—then working as an electrical engineer for Dell Computer—relocated him to Taipei, Taiwan, where my family spent the next eight years. During this period of time, I attended Taipei American School (TAS), an international school founded in 1949 at the end of the Chinese Civil War to provide an international education for the children of foreign diplomats, missionaries, and military personnel stationed on the island. TAS characterizes itself as "the bridge from an island to the world," an axiom that invokes a transpacific passage, or a movement of bodies, ideologies, and knowledges across and through the Pacific that "necessarily calls attention to the very different and unequal circumstances that shape the conditions of these moments of contact, conflict, and exchange."[7] Indeed, the very presence of this "bridge" emerges out of the uneven geopolitical conditions of Taiwan, enduring imperial remains shaped by the

[6] Christopher Fan, "Science Fictionality and Post-65 Asian American Literature," *American Literary History* 33, no. 1 (2020): 80
[7] Erin Suzuki, "Transpacific," *The Routledge Companion to Asian American and Pacific Islander Literature* ed. Rachel C. Lee (New York: Routledge, 2014), 352

transnational crosscurrents between Taiwan and the United States during the Cold War. An oral history project commissioned by the school to commemorate its 50th anniversary in 1999—*The Ties that Bind*—echoes a similar sentiment of transpacific connectivity, as editor and former board member Dr. Richard Vuylsteke limns, "Taipei American School and the Republic of China have always needed each other. It has been a symbiotic relationship of the best kind."[8] Both of these metaphors—of the bridge and symbiosis—triangulate TAS as an institutional presence that mediates the geopolitical entrapments that bind Taiwan and the United States, enabling Taiwan's connection to the international world via the remainders of U.S. Cold War presence.

In thinking through questions of Cold War knowledge production central to this dissertation, I am simultaneously unraveling how my family's multiple transpacific journeys—both of militarized displacement and of transnational capitalist migration—is shaped by overlapping and enduring legacies of the Cold War human. Grappling with the legacy of U.S. imperialism in Taiwan, as Chih-ming Wang argues, requires attending to the historical presences and *absences* of U.S. military bases on the island.[9] While U.S. military presence in Asia and the Pacific has been indexed by its multiple military bases that have proliferated occupation in sites such as Okinawa, Guam, Hawai'i, South Korea, and the Philippines, Taiwan has uniquely lived in absence of a direct U.S. military presence since the closure of military bases after its diplomatic derecognition in 1978, when the U.S. adopted diplomatic relations with the People's Republic of China. American derecognition of Taiwan ushered in a new era at TAS, shifting from the "military era" toward what Vuylsteke simply refers to as the "Chinese American era,

[8] Richard R. Vuylsteke ed., *Ties that Bind: Taipei American School, 1949-1999: An Oral History* 2nd ed. (Taipei: Taipei American School, 2007), 13
[9] See Chih-ming Wang, "Teaching American Studies in Taiwan: Military Bases and the Paradox of Peace and Security in East Asia," *American Quarterly* 68, no. 2 (2016): 387-391

with the student body primarily comprising the children of returning overseas Chinese and Taiwanese people with foreign passports seeking an international or American education.[10] In contrast to the military personnel that have long been the primary patrons of international schools across Asia and the Pacific, this new class of returning Taiwanese diasporic populations were composed primarily of prominent businesspeople, an upper echelon of global capitalism that transformed TAS into an elite college-preparatory institution in the international arena.

In this context, it is imperative that we conceive of the "absences" of formal U.S. militarism as a reconfiguration of imperial projects through alternative infrastructures of liberal empire. These international schools, not limited to Taiwan, sustain an *American way of life* within terrains of occupation, cultivating a transnational citizenship of Asian/American subjects that index the material legacy of disappearing U.S. militarism in sites of informal occupation. Thus, my family's presence in Taiwan occasions an opportunity to think across fragmented histories of Asian/America—a convergence of militarized displacement, refugee passages, post-1965 professionalization of Asian immigrants, and transnational capitalist migration that all gesture towards the dissonant ebbs and flows of an enduring legacy of the Cold War human. In this respect, how do we grapple with the unerring fact that the Cold War remains deeply embedded in our very own political subjectivities? War transforms everyday spaces into ideological projects of U.S. empire, spanning the globe not only through physical occupation, but through affective institutions that manufacture attachment to the global expansion of liberal capitalism under the guise of international modernization. War is responsible for multiple ventures in my life—my parent's displacement in the aftermath of the Vietnam War, my own upbringing in Taipei attending an international school bearing Cold War legacies of U.S.

[10] Vuylsteke, *Ties that Bind*, 13

occupation and the continued encroachment of Chinese nationalist expansion, and my brother's own enlistment in the U.S. National Guard as an agent of U.S. militarism. Reckoning with the Cold War human requires us to look inward, to engage our own communities for where the remains of the Cold War continue to be felt. These remains shape our politics, our identities, our attachments, and our ongoing solidarities.

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