RACISM CONCERNING NUCLEAR ISSUES

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Racism has been deeply embedded for decades in nuclear issues, as in all areas, in the U.S. and internationally. This issue must be addressed and attitudes toward it—often subtle but always crucial—must be confronted to resolve this dilemma. In the wake of racial killings in the U.S., a group of authors wrote an article in 2020 exploring the importance yet difficulty of overcoming racism, and expanded their inquiry to the nuclear arena: "[h]owever, the nuclear community may find it difficult to hold its own institutions and community accountable for systemic racism."[1]

I. SYSTEMIC OR INSTITUTIONAL RACISM

Of most recent concern has been epistemic or institutional racism. This may be inferred in the longstanding lack of diversity shown by the predominance of white men in the nuclear arena, in college and graduate school education, and in professional careers.

> [T]he homogeneity in the nuclear community ensures that the way the field is taught, produces research, and makes policy is constricted to a single frame of reference overwhelmingly informed by the experiences and perspectives of a historically dominant class…Black, Hispanic, and Indigenous professionals are underrepresented…especially in management and leadership roles. Of the 67 past presidents of the American Nuclear Society, only one—J. Ernest Wilkins Jr.—identified as African-American. A recent study found that, since 1970, only five women of color (out of 36 total women) have held leadership positions in the nuclear policy field within the U.S. Government. Furthermore, Black, Hispanic, and Indigenous professionals are grossly underrepresented at recurring technical and policy conferences in the nuclear field…Consciously or unconsciously, leaders in the nuclear field perpetuate epistemic racism though these institutionally racist practices, reinforcing the field's narrow logic and paradigms. In that way, these leaders act as gatekeepers of knowledge regarding the racial injustices of the field, and impede epistemic diversity.[2]

As further documented statistically: during the 1970's - 2019, in the Department of State there were 68 members, 11 of whom were women and two were women of color; in the Department of Energy there were 36 members, five of whom were women and only one was a woman of color; in the Arms Control Disarmament Agency from 1961 - 1991 there were 109 members, of whom 13 were women, with no racial data available; and in the Department of Defense, there were five women and no women of color.

Women of color providing outstanding service to U.S. government agencies on nuclear issues have been few and far between and still face outside criticism and personal insecurity. Hazel O'Leary is an early example. "Nominated by Bill Clinton in 1993, O'Leary became the seventh United States Secretary of Energy and the first African-American woman to serve in that office. As secretary, O'Leary changed the Department's Office of Classification to the Office of Declassification, initiated an aggressive clean-up of surplus plutonium, created an Openness Advisory Panel, and encouraged the Clinton Administration to end nuclear testing in the United States."[3]

In a PBS interview, O'Leary eloquently recounts her increasing ambivalence regarding nuclear matters. In addition to rising cost of building nuclear power plants, she describes public safety concerns over issues after nuclear disasters like Chernobyl, and defends the administration's decision against reprocessing plutonium: "This is deadly stuff that must be gotten rid of."

> Q. Do you feel that it's deadly? Deadly for what? A. Weapons…Now, what is the sadness in this thing? The sadness…is that there are two nations who spent these many decades foolishly creating this stuff, when we could have created monuments to science and technology…[and] I have been, I think, unique in wanting to put people who violently disagree with one another, either in terms of technology theology…or passion surrounding these issues, to put them at the table together.[4]

Ambassador Bonnie Jenkins, PhD, has served as U.S. Under Secretary for Arms Control and International Security since 2021. From 2009 until 2017, she served in the Obama Administration as Special Envoy and Coordinator for Threat Reduction Programs in the Bureau of International Security and Nonproliferation. Per her State Department biography:

> Jenkins coordinated U.S. efforts on threat reduction globally and U.S. government programs in chemical, biological, nuclear, and radiological (CBRN) security. She was the State Department lead for all four Nuclear Security Summits held from 2010 to 2016, as well as the U.S. Representative to the G7 Global Partnership Against the Spread of Weapons of Mass Destruction…she also provided legal advice to treaty implementation bodies including the Chemical Weapons Convention, the Comprehensive Test Ban Treaty…and the Biological Weapons Convention.[5]

Jenkins founded Women of Color Advancing Peace, Security and Conflict Transformation (WCAPS) and wrote:

> Many people of color in America have historical experiences that shape their perception of security [which] may not align with the dominant definition of security for Americans overall….[T]hreats to one's security can also come from other individuals (e.g. white supremacists), the government (e.g. the police), or organized/illicit crime (e.g. human trafficking)…. There is a disconnect in conversations about national security between

> what those most vulnerable may view as a threat and what security truly means, on the one hand; and how threat—and therefore security—is defined by the dominant culture, on the other.…We should reassess how spending on issues like nuclear weapons and automatic spending on defense will address issues like better infrastructure to ensure we all have clean water, or better resources to ensure homeless young people are not victims of trafficking, or on alternatives to combat climate change…[6]

Despite her accomplishments, Jenkins "reported that she often dealt with specific acts of discrimination, whether from her age, race and/or gender. She also stressed the structural discrimination…she saw as she watched people of color, and women of color, leave because there are not many opportunities for advancement." She noted that "you have two things that you have on your mind when you are part of policy discussions and you are one of a few, if not the only person representing your gender or racial group: that I might not adequately represent women and that I might not adequately represent women of color? And also, did I do a good job representing African-Americans?" But then she counters, "These issues do not concern me much anymore since I choose not to carry on my shoulders someone else's stereotypes."[7]

As one author wrote, "it's always struck me, as a person of color, that it's often brown and black people who are on the receiving end of a lot of our national security policies.…We detonated some of our strongest weapons in Bikini Atoll and in Micronesia and the Marshall Islands.… Whether it's criminal justice policy or national security policy, when we talk about who is a valuable life, black and brown people are the last in the line of that list."[8]

II. RACE-BASED IMPACT OF NUCLEAR WEAPONS DEVELOPMENT .

Historically, nuclear weapons development has involved racism. In the 1940's, racism was inherent in the U.S. Manhattan Project's three "Secret Cities" to build and develop the atomic bomb: Oak Ridge, Tennessee; Los Alamos, New Mexico; and Hanford/Richland, Washington. A curator of the Secret Cities project wrote:

> Although these places were…conceived as forward-looking communities… segregation was designed in from the start…[at Oak Ridge] the initial plan called for a 'negro village' at the eastern end of town, furthest from the work sites, which was to include housing similar to those provided for white residents. But as Oak Ridge grew quicker than expected, those plans were abandoned and most African Americans were relegated to 'hutments': rudimentary plywood structures barely superior to tents. They were frigid in winter—heated with crude stoves—and sweltering in the summer and offered little privacy. They lacked internal plumbing so residents had to use collective toilet facilities…And residents were routinely subjected to more surveillance from security authorities…By the end of the war, most of the white families had been moved out. But many of the African American families continued to live in the basic dwellings until the early 1950s.[9]

Racism on the Reservation at Oak Ridge regarding recreation is described:

> Black employees…were segregated and forced to live without their children and apart from their spouses in small hutments…Segregation forbade black Oak Ridgers from swimming in the pool and infiltrated most forms of recreation on the Reservation. Black and white pin boys couldn't work in the same bowling alleys…if there were not separate bathroom facilities available…Black residents could not attend the movie theaters… though now there were several throughout the Reservation. Occasionally at the rec hall near the black hutment area 16 mm 'race' films were shown. For 35 cents, viewers could sit on crates and watch stories—produced predominantly by white movie studios—about poor southern blacks making their way to the north for a new life.[10]

Racism has permeated Native American communities for decades, concerning issues of both nuclear power and nuclear weapons development. A 1993 article explores this subject:

> The involvement of nuclear energy in Indian country began with the atomic bomb development in the 1950's. Uranium mining and bomb test fallout were the most significant nuclear developments for Native Americans. The Southwest reservations and pueblos of the Four Corners Region (…of Arizona, Colorado, New Mexico and Utah) were major centers of mining and weapons development…today the abandoned mines and tailings (the waste products of mining and tests) remain, much of them in Indian country…Many nearby communities used available mining wastes to construct their homes. Indian children often played in abandoned uranium mine pit sand and the radioactive sand piles…The health effects of radiation exposure on Indian communities… [include] lung cancers…bone, reproductive and gastric cancers; and heart disease deaths.[11]

The authors then condemn the nuclear industry's failure to inform Indian communities of the health risks of uranium milling and mining:

> Perhaps the greatest 'radioactive wrong' is that the majority of miners and communities directly exposed, or downwind, or downriver from radioactive releases were unknowing victims. In particular, the health effects of uranium mining and radiation exposure have been studied for over forty years, yet few miners were ever made aware of the extent of risks involved. In the recent study of forty-three Navajo miners and seven millers, 100% reported never being informed of radiation hazards or rights to benefits, having no personal knowledge about radiation, and never being provided with personal protective equipment prior to 1970…All of the surveyed miners reported working in unventilated mines, and all of the millers reported handling yellowcake (milled uranium) without personal protective equipment.[12]

Environmental racism—a term first used in 1982—continues surrounding nuclear issues. After citing salient causes of environmental racism, such as "[u]nderrepresentation of people of color in government, the legal profession, and business contribute to the disproportionate pollution burden on communities of color,"[13] a 2017 article explores the impacts of the nuclear fuel cycle on environmental justice communities. It describes how the nuclear fuel chain impacts low-income communities and communities of color during its six stages, one of which is the electricity generation stage in the operation of nuclear power plants:

> Recent research has indicated that nuclear reactors are most likely to be located in ZIP codes that are predominantly poor and African-American than in affluent, White communities. As a result, those communities are put at risk [from routine activities such as] low-level emissions which include…venting radioactive gases…and discharging … tritium-laced coolant into nearby water sources. Routine risks also include radiation exposure from cooling system leaks, plant fires, and other small-scale accidents that have become part of an aging reactor fleet. These radioactive emissions are associated with cancers, especially in children. Second, environmental racism manifests as inadequate planning for catastrophic accidents. The NRC [Nuclear Regulatory Commission] requires a fifty-mile radius Emergency Planning Zone [EPZ] around every nuclear power plant… [and requires each to have] evacuation and disaster mitigation plans for communities within the EPZ. A recent study concluded that a larger percentage of African-Americans [than Whites] live within EPZs at sixty-one nuclear power plants…This [puts] African-Americans at greater risk in the event of a catastrophic accident, such as those at Chernobyl and Fukushima.[14]

Internationally, racism and colonialism were bound up with nuclear testing. The U.S., which took control of the Marshall Islands after World War II in 1944, manifested egregious and deliberate racism during its sixty-seven atmospheric nuclear tests there between 1946 and 1958. The U.S. conducted the largest nuclear detonation ever, Castle Bravo, at Bikini Atoll, on March 1, 1954. It was 1,000 times more powerful than the atomic bomb dropped on Hiroshima, and was the first test of a deliverable hydrogen bomb. Due to its unexpectedly high blast— and the unexpected changes in weather conditions of wind patterns and ocean currents—radiation fallout and debris spread over the nearby atolls of Rongelap, Utirik, and Aihinea,

Darlene Keju-Johnson from Wotje Atoll, who died from breast cancer in 1996, wrote:

> We are in touch with [one of the American men] who was studying the tests. He told us that the United States knew that the wind was blowing towards islands where people lived but that they went ahead and tested anyway. It was not a mistake…This is why we believe that we have been used as guinea pigs…Since the testing there has been a tremendous increase in health problems. The biggest problem we now have, especially amongst women and children, is cancers…breast cancers…tumor cancers…. Now we have this problem of what we call 'jelly-fish babies.' [They are born without] eyes…

> heads..arms…legs. They [are not shaped] like human beings at all. But they are being born on the labor table…And they breathe. When they die they are buried right away… Many women are frightened of having these 'jelly-fish babies'. I have had two tumors taken out of me recently and I fear that if I have children they will be 'jelly-fish babies' also."[15]

Lion Eknilang, from Rongelap, and who represented the Marshall Islands in the International Court of Justice in its 1995 Advisory Proceedings on the Legality of the Threat or Use of Nuclear Weapons, testified:

> I was eight years old at the time of the Bravo test…The fallout was in the air we breathed, in the fresh water we drank, and in the food we ate…we were evacuated to the American base on Kwajalein Atoll…then we moved to Majuro for three years. In 1957 the U.S. Atomic Energy Commission doctor came to tell us it was safe for us to return home [to Rongelap].…When we did return…[s]ome of our food crops, such as arrowroot, had completely disappeared. Makmok, or tapioca plants, stopped bearing fruit.What we ate gave us blisters on our lips and in our mouths and we suffered terrible stomach problems and nausea. Some of the fish we caught caused the same problems.[16]

The U.S. brought John Anjain, Mayor of Rongelap, to Chicago for medical tests in March 1957. He later got thyroid cancer himself, and described the intergenerational legacy of his exposure to radiation: "My daughter Dorothy also got thyroid cancer; two of my sons, George and Zicriat, also got thyroid cancer; my son Lekoj, died of leukemia; and one of my grandsons got thyroid cancer also."[17]

In clips from the video "Nuclear Savage," the portentous stentorian voice and patronizing, condescending words of the narrator reek with racism:

> At the AEC Argon Labs in Chicago last week came seven men native to the Marshall Islands. These are fishing people, *savages by our standards*. John is mayor of Rongelap, 100 miles from Bikini…The Marshallese caught by radiation got 175 roentgens of radiation; most humans are exposed to less than 20 roentgens in a lifetime. So a delegation was brought to Chicago for testing. The first was John… *[who], as we said, is a Savage, but a happy amenable Savage. His grandfather ran almost naked on his coral atoll. John reads, knows about God, and is a pretty good mayor*. John, whose first visit to the *White Man's country* meant the [Radiation Detector] Iron Room. *A Savage governs his life by rituals, and he understands this, because he thinks of it as a new ritual: sitting alone, inside the room; outside, a strange kind of priest in a long white coat.* A long lonely wait inside the room while outside, the new ritual is completed. *It was all very interesting and worth talking about.* When the ritual was over for John, it began for the others… As each finished, he was told he could go, *and they were given apples and other*

good things to eat…The seven men put on the suits and topcoats they had been lent in Hawaii, which they would return on their way back.[18] [Italics added]

Nuclear testing was also conducted by France, the U.K., Russia, and China. The poisoned legacy of all these tests conducted by colonialist nations on countries with populations of ethnic and racial minorities, drew international outrage, but the underlying stain of racism persists.

III. RACISM EMBEDDED IN THE LAW

Racism is entrenched and deeply embedded in treaties and other legal instruments. For example, racism is implicit and deep-rooted in the history and implementation of the Nuclear Non-Proliferation Treaty.

The inherently discriminatory nature of the Treaty, in which the non-nuclear weapon states (NNWS) agree never to acquire nuclear weapons, and the nuclear weapon states (NWS) agree to share the 'peaceful uses' of nuclear technology, involves racism in that it severely impacts the ethnic populations of the Global South which comprise most of the NNWS.

The flawed rationale concerning the 'peaceful' uses of nuclear energy include its drawbacks, which share with nuclear weapons the risks of sabotage and diversion, and the unsolved dilemma of finding safe longterm storage for radioactive wastes.

Also, the so-called 'benefits' involve inequality: "While the ostensible goal of Eisenhower's 1953 'Atoms for Peace' program..was to share and spread the benefits of nuclear technology, it was also to control its distribution…[This] served as a premise for the United States to purposely structure the subsequent nuclear governing bodies, in particular the International Atomic Energy Agency…to uphold its preferred global order, which was advantageous to Western nations."[19]

Racism can be inferred in the deliberate and continuing non-compliance of all the nuclear weapon states to their legal obligation, under Article VI of the NPT, to negotiate in good faith toward nuclear disarmament. This can be seen in their failure to execute the promises they made during all the NPT Review Conferences, such as progressive efforts to comply with their 'determined pursuit' of good-faith negotiations from the 1995 NPT Review Conference, and their continuing disregard of their pledge from the 2000 NPT Review conference of an 'unequivocal' undertaking for the total elimination of their nuclear arsenals.

Racism is also implicit in negotiations surrounding the Treaty on the Prohibition of Nuclear Weapons (TPNW). This treaty, which evolved in part from concern about the humanitarian consequences of nuclear war, was signed on July 7, 2017 by 122 NNWS. The treaty contains new and critical humanitarian provisions, such as offering assistance to individuals, and environmental remediation to places affected by the use or testing of nuclear weapons. The TPNW could be strengthened by including provisions on verification from the 1997 Model

Nuclear Weapons Convention (updated in 2007); however, lack of good faith by the nuclear weapon states can be inferred from the composition of the TPNW signatories—mostly non-nuclear weapon states from the Global South, and by the blatant and persistent rejection of the treaty by all the nuclear weapon states.

IV. CONCLUSION

What can each of us do to overcome the covered-over, complex, and longstanding dilemma of racism in the nuclear field? I come full circle to refer again to the article with which I opened this paper, which has made the following excellent suggestions:

> Antiracism begins with accountability, honesty, and vulnerability…We need to not only push for epistemic and institutional reform within the nuclear field, but to look within our own institutions and personal lives to oust whiteness from its privileged position within the nuclear community…It is time for organizations to take on a committed, multi-year prioritization of racial inclusion. ..To prioritize [this], we need to consider how policies within our institutions impede the success of a diverse nuclear community…At the individual level, there are many actions we can take be allies to Black and non-Black professionals of color…We must actively create a culture where our colleagues of color are safe, welcome, and encouraged to call attention to racism in the workplace…These suggestions are just a starting point for a profound, and long overdue reckoning with the racist and colonialist past and present of the nuclear field."[20]

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[1] Turner, Katlyn; Borja, Lauren; Djokic, Denia; Munk, Madicken; Verma, Aditi, “A Call for Antiracist Action and Accountability in the US Nuclear Community,” Bulletin of the Atomic Scientists, August 24, 2020.

[2] Id.

[3] Id.

[4] PBS Interview, Frontline, https://www.pbs.org/wgbh/pages/frontline/shows/reaction/interviews/oleary.html

[5] U.S. Department of State, Ambassador Bonnie Denise Jenkins, Undersecretary for Arms Control and International Security July 22, 2021 - present, state.gov/biographies/bonnie-denise-jenkins

[6] Jenkins, Bonnie, "Redefining our concept of security," Brookings, December 4, 2019.

[7] Hurlburt, Weingarten, Stark, "The 'Consensual Straitjacket': Four Decades of Women in Nuclear Security," New America, March 5, 2019.

[8] Turner, Borja, Djokic, Munk, Verma, “A Call for Antiracist Action and Accountability in the US Nuclear Community."

[9] Smith, David, “Off the Map: the Secret Cities behind the Atomic Bomb Manhattan Project,” The Guardian, May 2003.

[10] Kiernan, Denise, The Girls of Atomic City, Simon & Schuster, 2013, pp.97, 144 - 145.

[11] Erickson, Jon D. and Chapman, Duane, “Sovereignty for Sale: Nuclear Waste in Indian Country,” Awekon Journal, Fall 1993, p.4.

[12] Id.

[13] Jantz, Eric, “Environmental Racism with a Faint Green Glow,” 58 Nat. Resources J 247 (2017), p.6.

[14] Ibid.

[15] Keju-Johnson, Darlene, For the Good of Mankind: Pacific Women Speak Out for Independence and Denuclearization, The Raven Press, 1998, pp.17 - 19.

[16] Eknilang, Lijon, Id., pp.21 - 23.

[17] “Nuclear Savage, The Islands of Secret Project 4.1,” 2011 documentary film, https://www.nuclearsavage.com

[18] Id.

[19] Turner, Borja, Djokic, Munk, Verma, “A Call for Antiracist Action and Accountability in the US Nuclear Community."

[20] Id.