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A THESIS APPROVED FOR THE
OU SCHOOL OF VISUAL ARTS

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— Abstract —

In this thesis, I examine artwork made by Indigenous artists who challenge ongoing harms from atomic testing on Indigenous lands. I argue that the visual arts have proven to be an important site for political agency for Indigenous peoples wronged during the Atomic Age. As case studies, I investigate work by artists in the U.S. and Australia such as T.C. Cannon (Kiowa/Caddo), Debbie Hansen (Spinifex), Will Wilson (Diné/Navajo), and Yhonnie Scarce (Kokatha/Nukunu) to illuminate the critical role visual art plays by inserting voices and conversations previously censored out by government propaganda concerning nuclear testing and its consequences. While grounded in art-historical methods for analyzing the form and meaning of artworks, I also situate the art I examine within relevant historical contexts, which involve economic, scientific, ecological, and political factors. The thesis is divided into three chapters, following an introduction. Chapter one focuses on three of T.C. Cannon's artworks that utilize the iconic mushroom cloud, an image made iconic through U.S. government "peaceful atom" propaganda. Chapter two closely analyzes Debbie Hansen's painting *Maralinga*: a composition titled after the most active British nuclear test site in Australia, and designed in the acrylic "dot" style that internationally identifies her as an Aboriginal Australian. Finally, the third chapter compares the local art histories of the previous chapters, initiating a global discussion concerning the ongoing effects and presence of the Atomic Age on Indigenous lands. This chapter also historicizes how Cannon and Hansen's tactics of politicizing art made way for contemporary artists like Will Wilson and Yhonnie Scarce to do so in even more overt capacities. I conclude with a brief survey of other artists and institutions currently using art to rectify misrepresentations and address incomplete understandings of the Atomic Age past and present.

— Introduction —

July 16, 2020 marked the seventy-fifth year since the first atomic detonation: the Trinity test near Alamogordo, NM in 1945. To commemorate, that month the Albuquerque Museum opened an art and visual culture exhibition titled *Trinity: Reflections on the Bomb*. Over fifty responding artists were represented, including Indigenous artists local to sites involved in the Manhattan Project. By contrast, U.S. government censorship of information about atomic programs has focused public attention squarely on the scientific achievement of Trinity's bomb, "The Gadget" and its creators at Los Alamos National Laboratory in Los Alamos, NM. Australia shares a similar history: the British nuclear development program performed its nine major nuclear tests and over 500 minor tests there during the 1950s and 1960s. From 2016-2018, the Australian art exhibition *Black Mist Burnt Country* represented over 30 artists, and toured nationally to promote truths regarding this part of the country's history. Nearly all of the British tests took place at the Maralinga site in the Western Desert, and each of these nuclear development sites relate directly to Indigenous peoples and traditional lands who received no consultation about or compensation for testing on their lands. Decades later, the involved governments and their concealments disregard how human, agricultural, and environmental damages continue in large part because truth has been censored, creating a false narrative in Atomic Age scholarship and public knowledge. Such measures have thus encouraged a general public amnesia, and a free pass to ignore the past or its continuing detriments, but art has proven one place for pushing back against these tendencies.

My thesis investigates the under-represented truths of Indigenous experiences of nuclear colonialism through the art of two Indigenous artists, T.C. Cannon (Kiowa/Caddo) and Debbie

Hansen (Spinifex), who initiated a historical process of discussing these experiences through art, as well as contemporary artists such as Will Wilson (Diné/Navajo) and Yhonnie Scarce (Kokatha/Nukunu), who join the conversation to further discussion of continuing realities today. I argue that these artworks reveal the historical and ongoing effects of U.S., British, and Australian government secrecies and censorships to show how art can insert Indigenous voices into the historical record where governments have concealed them. Furthermore, I argue that in doing so, art has emerged as a privileged vehicle for confronting government secrecy about atomic testing on Indigenous lands and come to the forefront as an unlikely but highly valuable way of contesting the historical record. Proof of the high value and privilege of art as a communicative vehicle further exists today in a recent combination of institutions, nuclear victims, and artists collaborating to declare the visibility of these truths to the general public.

Though the scholarly literature on the Atomic Age is vast, many voices, such as the Indigenous voices discussed in my thesis, remain silenced, disallowing a truthful perception. Recent scholars working to unveil these gaps include Elizabeth Tynan, JD Mittman, N.A.J. Taylor, Christobel Mattingly, Andy Kirk, and Alison Fields. However, Mittman, Taylor, and Fields are some of the very few who discuss the important service done by Indigenous arts

responding to the Atomic Age, and even correcting atomic age scholarship.[1] The literature on T.C. Cannon's mushroom clouds shies from specific reference to the Atomic Age, much less to Trinity and LANL.[2] Hardly any scholarship exists on Debbie Hansen herself because she is a less active Spinifex Arts Project painter, who spends most of her time working on the political behalf of her community.

Because truth is complex and multi-angular, this comparative art history entangles with other disciplines such as visual culture, anthropology, cultural studies, social history, economics, psychology, and medical and nuclear sciences. The art historical methodologies engaged are social, semantic, and feminist approaches within a comparative framework. These tie signifiers, sociopolitical and economic issues, and Indigenous perspectives in these artworks in local and

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[1] Hundreds of publications exist on the atomic age. Though some focus more on the local effects of nuclear explosions to environment and downwinders, these are mostly in article or local newspaper forms. Most sources, however, offer the play-by-plays behind-the-scene of World War II and Cold War international relations. Because these make up the majority of higher profile publications, they are closely linked to how textbooks teach this part of US history. Source examples on local investigations into environment and humans, see Ferenc Morton Szasz, *The Day the Sun Rose Twice: The Story of the Trinity Site Nuclear Explosion July 16, 1945* (Albuquerque: University of New Mexico Press, 1984); Andrew G. Kirk, *Doom Towns: The People and Landscapes of Atomic Testing: A Graphic History*, illus. Kristian Purcell, (New York: Oxford University Press, 2017); A. Constandina Titus, *Bombs in the Backyard: Atomic Testing and American Politics,* (Reno & Las Vegas: University of Nevada Press, 1986); Stewart L. Udall, *The Myths of August: A Personal Exploration of Our Tragic Cold War Affair with the Atom,* (New Brunswick: Rutgers University Press, 1994). Source examples on investigating art and the atomic age, see Robert del Tredici, *At Work in the Fields of the Bomb*, (New York: Perennial Library, 1987); Bryan C. Taylor, "Nuclear Pictures and Metapictures," *American Literary History* 9, no. 3 (August 1997), 567-597; Ferenc Morton Szasz, *Atomic Comics: Cartoonists Confront the Nuclear World*, (Reno: University of Nevada Press, 2012). Source examples investigating local impacts on Indigenous lands and people, see Valerie L. Kuletz, *The Tainted Desert: Environment and Social Ruin in the American West,* (New York: Routledge, 1998); Alison Fields, *Discordant Memories: Atomic Age Narratives and Visual Culture,* (Norman: University of Oklahoma Press, 2020). Source examples of the typical atomic age tone: see Richard Rhodes, *The Making of the Atomic Bomb*, (New York: Simon & Schuster, 1986); Chris Wallace and Mitch Weiss, *Countdown 1945: the extraordinary Story of the Atomic Bomb and the 116 Days that Changed the World,* (New York: Simon and Schuster, 2020).

[2] Though thorough research has come out on Cannon, while scholars do address his mushroom clouds, rarely does the conversation specifically mention the atomic age or nuclear bombs. See *T.C. Cannon: At the Edge of America*, edited by Karen Kramer, (Salem: Peabody Essex Museum, 2018). In particular, see: Kramer, "A Declaration of Love and Guts," 44; Resnikoff, "Untitled [Self-Portrait in Front of Village with Atomic Bomb]" 69; Hyde, "Untitled [Bombs and Circles]," 208.

global contexts. A key part of my semantic analyses in the second and third chapters builds from anthropologist Fred Myers's "doublings" theory. Regarding Aboriginal Australian desert iconography, he argues that doubling meanings within the same design have the ability to wrap the separate meanings together for more detailed information.

By discussing these two different histories' parallels, I do not seek to homogenize, but rather, to reveal how nuclear colonialism is a global issue. Likewise, I do not suggest that the formal compositions of Cannon's and Hansen's works are similar, but rather that the need for giving form to this historical experience is and encompasses self-determination, cultural survivance, Indigenous sovereignty, reconciliation, and historical reform. Their work exemplifies art's role within Aileen Moreton-Robinson's recognition of Indigenous sovereignty's "multiple manifestations," which span from local to global discussions, and from domestic and international law. Cannon and Hansen depict Moreton-Robinson's central point: that postcolonial Australia or United States are yet to be seen, and that " . . . colonisation is a living process."[3] To refrain from appearing to present too much "sameness," sharing and differencing are key to my comparative argument.

I closely analyze a few artworks where artistic concealment tactics actually help to reveal complex truths kept from public knowledge. In chapter one, I examine three examples of Cannon's numerous mushroom cloud works to argue that some of these works refer obliquely to Trinity and LANL through association, implicating government concealment and disregard of Indigenous peoples and lands. This both aligns with and extends from existing scholarship on his representation of the iconic mushroom cloud: a symbol of the Atomic Age censored for

[3] Aileen Moreton-Robinson, ed, *Sovereign Subjects: Indigenous Sovereignty Matters,* (Crows Nest, NSW: Allen & Unwin, 2007), 2.

propagandistic reasons to prioritize scientific success and no harm to people or environment. By beginning with *On Drinking Beer in Vietnam in 1968* (1971) [Fig. 1] as an example in accordance with current discourse, I expose artworks in which the current discourse does not go far enough by then analyzing *As Snow Before a Summer Sun* (c. 1970s) [Fig. 2], and *Untitled [Bombs and Circles]* (1972) [Fig. 3] as examples of Trinity mushroom clouds. *Untitled [Bombs and Circles]* invites discussion of the effects of the United States government's "peaceful atom" propaganda, and its "containment" approach to the Truman Doctrine, and its propagandistic censorship.[4] However, the painting also blatantly depicts the dangers of the Trinity explosion, known as "the day the sun rose twice,"[5] and therefore presenting a play of concealment and exposure within the same composition.

Chapter two focuses on a Western Desert dot-style acrylic painting by a Spinifex elder and community politician Debbie Hansen titled *Maralinga* (c. 2007) [Fig. 4]. This deep investigation of a traditional-looking painting delves into its unique function. I discuss how the composition represents two worlds and how the two worlds overlap: the Western Desert Aboriginal world directly impacted by Maralinga nuclear tests, which was run by the British and Euro-Australian world. My claim largely builds from anthropologists' fieldwork resulting in the semantics of traditional iconography. In particular, Fred Myers's semantical theory of "doublings" is central to my argument. "Doublings" describes the ability for one image to represent not just more than one meaning, but that by existing in the same image, the meanings co-mingle or be overlain to express more detailed information. Using this foundation, I argue

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[4] See Kirk, *Doom Towns*; Kirk, "Rereading the Nature of Atomic Doom Towns;" Fields, *Discordant Memories*; Blume, *Fallout*; and Hales, "The Atomic Sublime."

[5] See Szasz, *The Day the Sun Rose Twice*.

that Hansen's "doublings" overlay the Aboriginal Australian experiences of Maralinga with the Euro-Australian and British history of conducting these tests. This physically places censored voices into the history, where they tell viewers that these tests were not on wasteland vacant of life or without detrimental impact and also that their culture survives despite nuclear impediment.

Chapters one and two both discuss art of concealment and exposure. Both investigate local histories of the Atomic Age through compositional elements, semantics, and titles. In chapter three, I usher these artworks, artists, local art histories, and attendant scholarship into comparison to explore the global conversation more fully. By including past generations of early modern Indigenous artists like Awa Tsireh (San Ildefonso Pueblo) and Albert Namatjira (Arrernte) and contemporary Indigenous artists working today such as Will Wilson (Diné/ Navajo) and Yhonnie Scarce (Kokatha/Nukunu), Cannon and Hansen's artistic political tact materialize as critical links to opening political possibilities for Indigenous artists. Artists like Tsireh and Namatjira cracked the proverbial door open for Indigenous voice in politics through subtle resistance, and artists like Wilson and Scarce have blown the door off the hinges with actively forthright art addressing the poignant and sensitive immediacy of nuclear colonialism that continues today. Cannon and Hansen opened this door by opening boundaries: while carefully utilizing Indigenous concealment as a ploy and as content, they are able to present sensitive political issues in their works, rejecting government censorship and nuclear colonialism that leaves the Indigenous experiences out of the Atomic Age conversation. These comparisons work through the sharing and differencing of different cultures and rejects a homogenizing approach.

In conclusion, recent years have seen an uptick in art and exhibitions blatantly performing Atomic Age history reform. Artists like Cannon, Hansen, Wilson, and Scarce recognize that the ways in which this global age is discussed are imperative to better inform nuclear decisions by major government powers and to reconcile peoples and the environment. Histories of self-determining Indigenous arts show how they paved a road for art to function as political voice on sensitive issues like nuclear colonialism by contending with government censorship and oppression. Though activists have been working hard for acknowledgement and pushing for legislative action as far back as the 1940s, and although they have seen some success, the indigenous experiences of atomic test sites is still far less developed in Atomic Age scholarship, history textbooks, and, therefore, public knowledge than is acceptable. The artists and art projects included in this thesis are only some examples of how artists have worked to address and bridge gaps in the discourse by visually and physically emplacing indigenous experience and voice.[6] These acts of self-determination defy the history of government secrecy and rewrite the history. Unlike government secrecy and censorship, which over-simplify complex truths, these artists continue to teach and invite conversation acknowledging the inherent complexity.

Helpful Terminology

Terminology used in my thesis requires some explanation. Whenever possible, I strive for cultural specificity in my word choices. Therefore, native words vary from tribe to tribe or mob to mob — "mob" being the preferred word over "tribe" in Aboriginal Australian cultures.

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[6] See Fred R. Myers, "Emplacement and Displacement," *Ethnos* 78, no. 4 (2013): 435-463.

Because my knowledge of the Pitjantjatjara language is better exercised and Hansen is a Pitjantjatjara-speaking woman, and because no English translation of Dreamings is very accurate, I refer to these in Hansen's language: *Tjukurrpa*. However, I only do this when discussing a Pitjantjatjara person's work. If discussing the Dreamings of an artist from another language group, I use "Dreamings" because I am not sure of the translation in most other Indigenous languages in Australia. Similarly, *Anangu* is Pitjantjatjara for Aboriginal peoples of the Western Desert area. When referring to such populations, I use Anangu. When discussing Aboriginal populations from other language groups and other parts of Australia, I use the more general "Aboriginal Australians."

When discussing the general Indigenous population on the continent-island of Australia, I use "Indigenous" and not "Aboriginal", because Torres Strait Islander peoples do not identify as "Aboriginal". When discussing the broad Aboriginal population, I use "Aboriginal." Though there are many language groups, mob names, such as Spinifex, Pintupi, and Walpiri (Walbiri), are more specific. Therefore, I use these whenever possible versus the language group or the general "Aboriginal". Note that anthropologists phonetically spell these group names and language words, that not all share the same phonetical choices, and that languages have slight variance in dialects. Therefore, in quotes, there may be a "b" instead of a "p," for example. I have made the effort to be very specific with spellings to represent these differences and sensitivities.

"Welfare colonialism," "nuclear colonialism," and "settler colonialism" are big terms that, though related, should not to be used interchangeably as they refer to specific types of colonialism. "Settler colonialism"refers specifically to the overtaking of land, resources, and

peoples without permission or right, and permanently settling.[7] Examples include Spanish and British settlement in the United States and Australia and the building of transcontinental railroads and assimilation programs. In the U.S., examples include Manifest Destiny, the nineteenth-century battles to take native lands, and the Trail of Tears. In Australia, examples include "Terra Nullius" and a similar history of massacres.[8]

"Welfare colonialism" was implemented by each of these governments as an economic tactic to keep Indigenous peoples underfoot.[9] As neither Native Americans nor Aboriginal Australians traditionally used cash economies, when forced into that necessity designed by western concepts of "work," "education," or "skill," chances were against them from the start to succeed, and, in actuality, the cycle of paternalistic government welfare denies autonomy. This is a particularly critical point in chapter three when discussing the role of the art market and its reverse-exploitation to pursue self-determination and cultural survivance.

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[7] See Lorenzo Veracini, "Introducing, Settler Colonial Studies" in *Settler Colonial Studies* 1, no. 1 (2011): 1-12; Patrick Wolfe, "Settler Colonialism and the Elimination of the Native" in *Journal of Genocide Research* 8, no. 4 (2006): 387–409; Patrick Wolfe, *Settler Colonialism and the Transformation of Anthropology: The Politics and Poetics of an Ethnographic Event,* (London & New York: Cassell, 1999).

[8] The colonizing British belief that the land of Australia was "an unowned or unsettled land," therefore taking and using for British use with no acknowledgement of Indigenous ownership until *Mabo Decision* in 1992. See Scott Cane, "Terra Nullius and Ngura Tjantu," in *Pila Nguru: The Spinifex People,* (Fremantle:Fremantle Art Centre Press, 2002), 115-156.

[9] See Sarah Maddison, "Indigenous Autonomy Matters "Indigenous Autonomy Matters: What's Wrong with the Australian Government's 'Intervention' in Aboriginal Communities" in *Australian Journal of Human Rights* 14, no. 1 (December 2008): 41-61; Moreton-Robinson, *Sovereign Subjects*; Jeremy Beckett, "Welfare Colonialism: A Reply to Jeremy Long." In *Oceania* 60, no. 3 (March 1990): 238.

Similar to settler colonialism, "nuclear colonialism"[10] refers to the taking and misuse of peoples, lands, and resources to benefit nuclear development. This category of colonialism is a keystone to the art I explore in this body of research. Examples include using Indigenous lands and people for uranium mining, nuclear waste sites, water and agricultural contamination, and hiring employees without informing them of the risks or providing them with protective equipment and unfair pay. Another example is declaring others' lands as "wastelands" and using them for nuclear test sites. As Kirk points out: "The [Indigenous residents] of the testing zones … shared the common goal of better explaining the nature of their home places that had been chosen for testing because of widespread assumptions about wastelands."[11] Furthermore, the nuclear colonialism mindset makes allowances for concealment of these occurrences and the effects they have on people and environment.[12]

Because the artists in my thesis respond so centrally to nuclear colonialism's activities and mindset towards Indigenous peoples, mentioning one of the more aggressive minds behind early nuclear development is worthwhile as a point of entry into the body of the thesis that makes plain its stakes. Lieutenant General Leslie Groves, Jr. was the U.S. Army Corps of Engineers officer overseeing the Manhattan Project and Los Alamos National Laboratory (LANL), including the Trinity test. An examination of Groves offers two key examples of the mindset at

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[10] "Nuclear colonialism" was coined as a term in 1992 by Jennifer Viereck, a US activist of anti-nuclear weapons testing. For definition, see Elizabeth Tynan, *Atomic Thunder: The Maralinga Story*, (Sydney: NewSouth Publishing, 2016), 3: "the taking (or destructing) of other peoples' natural resources, lands, and well-being for one's own, in the furtherance of nuclear development." See also Voyles, *Wastelanding: Legacies of Uranium Mining in Navajo Country,*(Minneapolis & London: University of Minnesota Press, 2015); Pasternak, *Yellow Dirt: A Poisoned Land and the Betrayal of the Navajos,* (New York: Free Press, 2011).

[11] Kirk, *Doom Towns*, 123.

[12] For more on this mindset and the determining of "wastelands," see Voyles, "Empty Except for Indians: Early Impressions of Navajo Rangeland," in *Wastelanding*, 27-54.

hand: the story of acquiring the land to build LANL, and the sentimental prose closing his memoir of LANL.

In Groves's 1962 memoir *Now It Can Be Told: The Story of the Manhattan Project*, he recognizes the headmaster of the small Los Alamos Boys Ranch School as owner of the land that Groves and Oppenheimer wished to set up as their headquarters. The little school was the only establishment present at that time on the mesa, though for hundreds of years, Pueblo Indians and the Spanish utilized, lived, and battled on the land. LANL scientist Robert Jungk contends and indemnifies Groves's rendition of the story. Groves simply states that the boys ranch school was handed over happily while omitting the neighboring Pueblos entirely.[13] Jungk provides a different recollection, and one of more detail: "When the founder of the Ranch School leased the surrounding land from its Indian owners he agreed not to build on the little piece of ground in question and to make no road through it."[14] Jungk also acknowledges that ceremonial sites were present on the Los Alamos mesa, and that the headmaster understood them to be off-limits.

Again, Jungk's account of the land transaction contradicts Groves and better details why the headmaster agreed to relinquish the land: "under current wartime emergency legislation the headmaster of the Ranch School could do nothing to prevent the mesa and all its buildings being requisitioned for war purposes. He vacated Los Alamos, sent the boys home and cashed his indemnity check. Shortly afterwards he died, of a broken heart, as it was rumored in Santa Fe,

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[13] Groves, *Now It Can Be Told: The Story of the Manhattan Project,* (New York: Harper & Brothers Publishers, 1962), 67.

[14] Jungk, *Brighter than a Thousand Suns: A Personal History of the Atomic Scientists,* 2nd ed, (New York; London: Harcourt Brace Jovanich, Inc., 1958), 129.

the nearest town to Los Alamos."[15] According to these statements, the school director should not have been paid out, and the San Ildefonso Pueblo landowners should have been consulted. However, there is no evidence of any consultation with the Pueblos of any kind on such matters, and LANL's still lies on part of San Ildefonso lands today.

In his final words of the memoir, Groves testifies to the lack of consideration for Indigenous people and exemplifies the epitome of nuclear colonialist mentality — one that clearly connects to that of the settler colonialist:

> When I was a boy, I lived with my father at a number of the Army posts that had sprung up during the Indian wars throughout the western United States. There I came to know many of the old soldiers and scouts who had devoted their active lives to winning the West. And as I listened to the stories of their deeds, I grew somewhat dismayed, wondering what was left for me to do now that the West was won. I am sure that many others of my generation shared this feeling.
>
> Yet those of us who saw the dawn of the Atomic Age that early morning at Alamogordo will never hold such doubts again. We know now that when man is willing to make the effort, he is capable of accomplishing virtually anything.
>
> In answer to the question, "Was the development of the atomic bomb by the United States necessary?" I reply unequivocally, "Yes." To the question, "Is atomic energy a force for good or for evil?" I can only say, "As mankind wills it."[16]

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[15] Jungk, 130.

[16] Groves, *Now It Can Be Told*, 415.

To Groves, nuclear success at all cost was the equivalent of"winning the West" under Manifest Destiny. The Indian wars massacred Native Americans, removed them from homelands, struck their autonomous lives, threatened cultures, and promoted the "vanishing race" concept. Though the Manhattan Project sought out safely secret and distanced locations from U.S. citizens, LANL still occupies Indigenous land acquired with no compensation, located only twelve miles from the nearest pueblo and within near distance of other pueblos as well. A number of these are downriver from LANL, exposing them to water contamination. Many of the Puebloans were hired by LANL without risk awareness or protective equipment. Uranium mines occupied Navajo lands with minimum wage and, again, no education or equipment to keep them from risk. These blatant examples of nuclear colonialism show the direct harms lain to Indigenous people when considerations were made to protect Euro-American populations.

Because government concealment has proven to be so effective, art like *Maralinga, Bomb and Circles*, and *As Snow Before a Summer Sun* directly challenge the false — or at best, incomplete — histories in Atomic Age scholarship through specific representations of Trinity and Maralinga. These paintings express cultural identity and display cultural survivance. Each evokes the complex nature of figurative and literal atomic fallout: nuclear colonialism does not singularly affect land or people, but both in separate and interconnected visible and invisible ways. Furthermore, because these collective and personal experiences are both locally unique and globally relatable, comparatively discussing such local art histories illuminates the broader global context of what Cannon referred to as the "still silent, invisible, and 'expendable'" Indigenous voice in atomic age history and show that artists have been creating the archive that

researcher N.A.J. Taylor calls a responsibility of this nuclear age: an “Archive of Nuclear Harm.” Essentially, this body of work demonstrates how artists have been creating and preserving Taylor’s manifesto of nuclear knowledges:

> Such an Archive of Nuclear Harm would collect and exhibit material on life and death in the nuclear age. Items in the collection would include art-works and other cultural artifacts that explore the full range of harms — both human and ecological — that are inflicted by nuclear weapons, accidents, and waste. This institution’s mission would be to create an accessible resource deep into the nuclear future. Since the legacy of the nuclear age must be conceived on timescales of up to one million years and threatens the continued safe operating conditions of Earth’s biosphere, the Archive of Nuclear Harm will be a memory institution like no other.
>
> This Archive of Nuclear Harm must not only disseminate nuclear knowledges but democratize it across space and time.[17]

[17] N.A.J. Taylor, “Manifesto for an Archive of Nuclear Harm,” in *Resilience: A Journal of the Environmental Humanities* 7, no. 1 (Winter 2019): 66. Note: Paragraph structure and indentation follows the original text.

— Chapter One —

Mushrooms in the Sky: T.C. Cannon

During World War II, the Manhattan Project moved its secret research headquarters to Los Alamos, NM. It was 1943, and the top-secret Los Alamos National Laboratory (LANL) was nestled on top of a mesa and isolated, except for the nearby Pueblos. It was here that the world's first successful atomic bombs were built: code-named "The Gadget," "Little Boy," and "Fat Man." The first was "The Gadget" at Trinity Site in Alamogordo, NM, with "Little Boy" and Fat man" detonated over Hiroshima and Nagasaki a couple weeks later. In 1962, a decade and a half following the Trinity explosion, a new multi-tribal school opened in Santa Fe, the Institute of American Indian Arts (IAIA). About 40 miles away, and with a number of students from the surrounding Pueblos, the Institute conducted field trips to Los Alamos. These field trips link specific critical commentary between the iconic mushroom clouds, Trinity Site, and LANL in the art of IAIA student T.C. Cannon.

Tommy Wayne "T.C." Cannon — whose Kiowa name was Pai-doung-u-day, or "One Who Stands in the Sun" — was born in 1946 in rural Gracemont, Oklahoma to Kiowa and Caddo parents. Cannon was a generational product of tribal traditions and histories full of cross-cultural conflict. Generational trauma of the Kiowa and Caddo peoples' forced removal onto Oklahoma reservations under the Indian Removal Act of 1830 and Indian Wars appear in paintings like *Soldiers* (1970) [Fig. 5]. Likewise, knowledge of his parents' attendance in government assimilation militaristic boarding schools influenced his work. During his childhood, he would have lived the effects of the Indian Relocation Act of 1956, which affected job opportunities and funding on many reservations inducing greater economic hardship.

However, Cannon was also just as much a product of the political and racial tensions of post-World War II America. Such drastic shifts and global chaos closely tied to his life include the first decades of the Atomic Age, the Cold War, the Civil Rights movement, and the Vietnam War. Karen Kramer describes Cannon's self-awareness of his duality: he lived "at the edge of America as a marginalized Native person and at the nexus of modernity where the past is always present," and that "[b]y celebrating indigenous survivance and rallying against intolerance and historical amnesia, [Cannon] demonstrated that Native American history and culture are integral to the American experience."[18] Across multiple works, Cannon addressed the under-discussed government nuclear tests and research that were performed with little regard to locals — specifically indigenous locals. Cannon's works are just as pertinent today, hitting on issues only recently finding their way into mainstream scholarship about the Atomic Age and its impact on Indigenous culture and land.

Scholarship glosses over Cannon's use of the iconic mushroom cloud motif reminiscent of popularized photographs of nuclear tests. Common interpretations stick to large, existential questions regarding the modern age such as commentary on weapons of mass destruction — the effects of which he experienced as a Vietnam soldier, Cold War tensions, or his complicated relationships with the military and colonial nationalism as a Native American U.S. soldier.[19] While I do not pose that these connotations are incorrect, I suggest they are incomplete depending on the work under discussion. I also argue that there is much overlap. While some

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[18] Kramer, "A Declaration of Love and Guts: T.C. Cannon's Visual Language and the Art of Survivance" in Kramer, *T.C. Cannon: At the Edge of America,* (Salem: Peabody Essex Museum, 2018): 52.

[19] For examples of these, see Hyde "Untitled [Bombs and Circles] (1972)," in Kramer, *T.C. Cannon: At the Edge of America,* (Salem: Peabody Essex Museum, 2018): 208; and Kramer, "A Declaration of Love and Guts," 44.

cloud imagery, like that in *On Drinking Beer in Vietnam in 1967* (1971) [Fig. 1], is intended to ignite big questions and perhaps indirectly reference atomic tests or Trinity specifically, other works like *As Snow Before a Summer Sun* (c. 1970s) [Fig. 2] and *Bombs and Circles* (1972) [Fig. 3] explicitly address the legacy of the Trinity explosion: a specific historical occurrence as a gateway to broader questions about nuclear colonialism and how history is understood.

Unravelling History

Scholarship often discusses Trinity in one-dimensional history: it was successful; there are important names and dates; and its success directly led to the Allies' victory over Japan in World War II. This type of history available in text books and consumed by the general public is woefully shallow, and it negates the significantly more complex history that is full of ongoing conflict and trauma involving indigenous people.

A general account of Trinity uses a simple timeline conveniently constructed out of basic facts. For example, after a tedious search for a remote and concealed location to relocate the top-secret Manhattan Project, the government acquired land on the Los Alamos mesa in 1942 from its inhabitants: the small and financially strapped Los Alamos Boys Ranch School. In 1943, scientists, their families, and military personnel moved to the new and secret town surrounding the Los Alamos National Laboratory. In 1945, they reached the climax of their efforts: the Trinity test was the world's first atomic explosion, occurring at 5:29am on July 16, 1945 in the Jornada del Muerto desert near Alamogordo, NM. Due to the test's success, President Harry Truman delivered the Potsdam ultimatum to Japanese Emperor Hirohito on July 26. On August 6, the "Little Boy" bomb was deployed on Hiroshima, and "Fat Man" on Nagasaki on August 9,

1945. On August 15, Hirohito publicly announced to Japan his unconditional surrender in agreement with the Potsdam Declaration. Finally, on September 2, 1945, Hirohito formally surrendered on the *USS Missouri.*

In comparison to this one-dimensional synopsis, a look at Cannon's paintings *As Snow Before a Summer Sun* and *Untitled [Bombs and Circles]*, for example, removes the blindfolds to unveil a more thorough story. This history involves unanswered questions, unmentioned people and events, innocents' deaths, competing emotions and beliefs, damaged health, and generational trauma. This history is untidy, but it is true, for, as John P. Lukavic writes: "[a]authenticity and truth are guiding principles of Cannon's art."[20] Indeed, Cannon's truth-seeking is a protest against simplistic history-telling, which inevitably ignores important voices and facts to create false narratives. Truthfully, there is no one over-all truth of the atomic age. There are many. As Kramer puts it, "[Cannon] puts Native and American history up against each other and they overlap. It's not just about binaries, not just us and them. It becomes a larger conversation that has to do with politics and humanity."[21]

How To (Re)Use An Icon

The emphasis of mushroom clouds in the young Oklahoman's art reflects his education at IAIA from 1964-1966. Whether through the field-trips to Los Alamos, or the multi-tribal

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[20] John P. Lukavic, "Tee Cee: The IAIA Years." In *Of God and Mortal men: T.C. Cannon*, Ann E. Marshall and Diana F. Pardue, eds, (Santa Fe: Museum of New Mexico Press, 2017): 58.

[21] Gussie Fauntleroy, "T.C. Cannon [1946-1978]: In his short time in the sun, this Kiowa-Caddo artist brought Native American painting into a modern realm", *Western Art & Architecture: from Cowboy to Contemporary*, 12, no. 4 (August-September 2018): 94.

institute where many of the students were from Pueblos most affected by LANL, or both, Cannon learned about the local Native American concerns surrounding LANL and Trinity. The evidence in this chapter argues that he was greatly influence by these concerns in his mushroom cloud works. Some IAIA students were from San Ildefonso Pueblo, whose ancestral lands are partially occupied by LANL and nuclear waste depositories.[22] The pueblo itself lies a mere 12 miles downriver from Los Alamos rendering views of waste barrels containing radioactive material, and extremely close proximity to LANL's economic opportunities that caused many health risks, and close proximity to environmental contamination. Apache students also may have attended from the Mescalero Apache Reservation, the border of which lies only 40 miles from Trinity Site. Then-director of IAIA, Lloyd Kiva New, was a major influence on the school's overall approach to the art of the modern Indian, which influenced all of the students, Cannon included. IAIA Archivist Ryan Flahive points out that New frequently encouraged students to understand and take pride in their "Indian-ness" in conjunction with the rest of the past and present art worlds: "Traditional arts as well as avant-garde movements from the East and West coasts were represented by IAIA instructors, while the many-cultured mix of Native students learned immeasurably from each other."[23]

In this environment, conversations with two of Cannon's friends, Alfred Young Man (Cree) and William "Billy" Soza Warsoldier (Cahuilla/Apache), encouraged him to expose truths of history through protest and activism in art. Soza recalls, "We created new images of Indians -

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[22] See Pava, "Tribal and Error: Beyond Consultation: Los Alamos National Laboratory and Its' Native Neighbors," power point presentation on August 7, 2018 at the Western Planner/Tribal Planning Conference in Ft. Hall, Idaho, 5, 11, 15.

[23] Fauntleroy, "T.C. Cannon [1946-1978]," 93-4.

raising our protest in paint. We had to make those paintings so no one would ever forget how our blood stained our lands."[24] Protest and activism can oftentimes be driven by binaries: the black and the whites of issues. But Cannon was more inclined to explore and expose the complex grey areas of historical truths that standard accounts conveniently overlook, over-simplify, or forget. In his art, he questions his own convoluted experiences as a Native American and a modern American by oftentimes exploring the two histories within the context of each other.

One way he conflates the two worlds into one history is by including the iconic mushroom clouds, which he began utilizing around 1971 shortly after his return from Vietnam. This falls in the middle of a quiet period of public interest around atomic testing issues, which declined between 1963-1976. This decline was due to the Partial Test Ban Treaty of 1963, which restricted testing to underground-only — meaning out of sight, as well as the heightened immediacy of debates over the current Vietnam War.[25] This suggests Cannon had a deeper connection to atomic tests than the majority of the general public. To explore his different usages of the cloud, I will examine *On Drinking Beer in Vietnam in 1967* (1971), which exemplifies Cannon's more general use of the mushroom cloud: the usage that is fairly well discussed by scholars. This discussion helps to emphasize the difference in Cannon's methods in works like *As Snow Before a Summer Sun* and *Bombs with Circles*, through which I argue that Cannon reveals specific issues and people surrounding Trinity and LANL. While all three works practice self-determination and cultural survivance utilizing the iconic mushroom cloud as a tool, there are differences in the discussion due to the varying cloud applications.

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[24] Lukavic, "Tee Cee: The IAIA Years," 48.

[25] A. Constandina Titus, *Bombs in the Backyard: Atomic Testing and American Politics,* (Reno & Las Vegas: University of Nevada Press, 1986), 101.

On Drinking Beer in Vietnam in 1967 depicts two Native American soldiers from the Vietnam War era in uniform with a couple cans of beer, cigarettes, and hair beyond their shoulders and braided with feathers. The two men look directly at the viewer as if we are a camera and they are friends at a bar posing. But they do not smile, suggesting a seriousness to the environment. This print refers to an encounter that took place in a Vietnamese bar between Cannon and his good friend from IAIA, Kirby Feathers. After the meeting, Cannon wrote to Bob Harcourt, another close IAIA friend back in Santa Fe: "Yes it was a long and joy-filled and sometimes sorrowful talk we had this day on this mountain..in this country..close to the sea..full of war . . ."[26] Directly behind them, Cannon indicates two windows through their contours. Through the windows we see a mushroom cloud that billows horizontally along the ground, shoots up vertically, and billows again in a more horizontally expansive cloud.

The non-military hairstyles and uniforms positioned in a place and time of war present the two men as both military heroes and Native warriors.[27] Of course, such hair length would not be allowed in the military deliberating a pointed liberty Cannon takes to proudly include their "Indian-ness." Cannon's choice of Native American hairstyles and U.S. military uniforms enhance a message of cultural survivance and sovereignty two-fold. One: military uniforms signify a selfless conformity for a common cause under a government, yet these men proudly state their identity as historically oppressed minorities under a settler colonialist government yet active members of its military. Two: the history of government-run assimilation programs — including boarding schools like those that Cannon's family attended — have often been

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[26] Letter from T.C. Cannon to Robert Harcourt, April 23 1968.

[27] Kramer, "A Declaration of Love and Guts," 44.

described as "militaristic" with haircuts and uniforms among other things, which these hairstyles resist.

The cloud hovers just over and between the friends' heads where the cloud's horizontal breadth ends. The explosion overtly echoes Cannon's "full of war" notation in the letter, yet is a sole explosion with no people other than Feathers and Cannon "under" or impacted by the explosion. This references government propaganda involving post-World War II nuclear research, the Cold War, and the Vietnam War, all of which relied heavily on visual imagery as a key tool. Alison Fields points out how the iconic mushroom cloud developed out of photographs usually captured from safe, designated distances on test sites, establishing a focus on the scientific achievement and leaving the images devoid of any damage to people or environment.[28] The use of propagandized images created for insidious effect insists a focus on scientific achievement that links to settler colonialist drive for domination. Looking again at the cloud between the men's heads placed conspicuously so, the cloud further reflects the long history of this settler colonialist drive and the shorter history of nuclear colonialism specifically on Native Americans.

Though both napalm and nuclear bomb explosions build mushroom clouds, the iconic mushroom cloud began with the atomic bomb, and therefore, Cannon's use of it dually plays on the literal and the general. Literally, this mushroom cloud specific to the Vietnam War likely references napalm explosions. Generally, the iconicity of the cloud stirs photographs of both atomic destructive force and scientific achievement at others' expense. By combining both, he

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[28] Alison Fields, *Discordant Memories: Atomic Age Narratives and Visual Culture,* (Norman: University of Oklahoma Press, 2020), 159. See also Peter B. Hales, "The Atomic Sublime" in *American Studies* 32, no. 1 (Spring 1991): 5-31; and Andrew G. Kirk, "Rereading the Nature of Atomic Doom Towns," in *Environmental History* 17, no. 3 (July 2012): 635-647.

more broadly digs into questions and concerns of mass violence and destruction, and global tensions of overlapping hot and cold wars that are both seemingly endless and endlessly brutal. The cloud's position suggests concerns of the fragility of life and the colonialist need for dominance — oftentimes over Indigenous people — whether from a capitalist or communist government.[29]

Cannon specifically interjects the hypocracy of American anti-imperialist protests against the Vietnam War through specific details. The print and title specifically refer to Cannon's time in Vietnam - a war where napalm bombs were used, but no atomic bombs, and an imperialist war where the U.S. used military force to command the Vietnamese and their politics. He also specifically references Native Americans and the U.S. government through the propagandized mushroom cloud, U.S. military uniforms, and the two Native American men. Because U.S. government propaganda created the iconicity of the mushroom cloud image and Cannon places the cloud over the two Native men, Cannon queries: what about the U.S. government's imperialist war on Native Americans on home soil? Around the same year, the compositional configuration of an iconic mushroom cloud overtop of Native American persons starting straight at the viewer is shared in his painting *As Snow Before a Summer Sun*.

This is Trinity

Though art historians tend to overlook any direct connection to Trinity or LANL in Cannon's mushroom clouds, William Wallo, his good friend and Oklahoma art professor at the

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[29] See Kramer, "A Declaration of Love and Guts," 44-5, for partial analytical overlap.

University of Central Oklahoma,[30] recollects a car ride with Cannon during which, "[Cannon] discussed the impact of the 'neighboring' Los Alamos National Laboratory and how its secret nuclear testing of the bomb in America was done in the midst of the still silent, invisible, and 'expendable' Native American world, and why the haunting mushroom cloud imagery appears across a number of his works."[31] This firsthand report supports my claim that in some of his mushroom cloud works, Cannon directly references the Trinity test and the work at Los Alamos. I suggest that in *As Snow Before a Summer Sun* and *Untitled [Bombs with Circles]*, Cannon does just this.

The uncensored, lush color in *As Snow Before a Summer Sun* is organized to aggravate the visual senses by forming two complimentary tension-building fields split in half horizontally. Each field is filled with large, flat swaths of his vibrant, straight-out-of-the-tube colors: the green against the red-red-orange, and the blue against the orange-red-orange. The lack of texturing or blending pronounces the stark effect of the colors' potential when run directly up against one another. Central and vertical, the only forms crossing the horizon or receiving any modeling attention are a Native American woman holding a baby in a cradleboard. The only other vertical form in the painting, the central part of a cloud before it mushrooms out, continues up this same vertical line.

The green dots flashing in the cloud resemble trinitite, the mildly radioactive green glass unique to and formed by the intense heat from Trinity's detonation that exploded a mere 100-feet from the desert soil, sending intense heat down onto it. The desert soil there contains a high

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[30] Cannon attended the University of Central Oklahoma after returning from Vietnam.

[31] William Wallo, "Hello Goodbye Oklahoma," in Kramer, *T.C. Cannon: At the Edge of America,* (Salem: Peabody Essex Museum, 2018), 169.

quantum of sand. An atomic blast reaches about 1 million degrees Celsius, matching the temperature of the sun's interior.[32] As a result, sand liquified and radioactive glasses formed at Trinity Site. Until the 1952 government clean-up effort at Trinity, pieces of trinitite often became souvenirs for locals who were unaware of their radioactivity or how to handle them safely.[33] Trinitite depicted or referenced in Cannon's mushroom cloud is a critical inclusion that unmistakably clues us in to the Trinity explosion. Because trinitite is specific only to Trinity Site, Cannon's green dots articulate that this is indeed (1) an atomic mushroom cloud and explosion, and (2) the world's first atom explosion. As Hiroshima and Nagasaki continue living the aftermath atomic bombs out of which truths continue being revealed, Trinity accrued its own ongoing and convoluted history of effects of government censorship and nuclear colonialism.

The green dots in the cloud and the white scatterings on the ground and woman portray the radioactive materials created by the explosion including the fallout that spread for hundreds of miles exposing countless people to radiation poisoning. With Cannon's close ties to Santa Fe, he would have been aware of cancers, deaths, and local conversations about their ties to atomic testing. His central placement of the woman and baby under the cloud with suggested fallout matter on them provides strong evidence to link these conversations to Cannon's painting. Therefore, though trinitite did not drift as part of fallout, the green dots signify the radioactive glass, which in turn signifies radioactive fallout. Furthermore, Cannon juxtaposes the abrasive mushroom cloud billowing directly above the woman and baby creating a central focus on the

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[32] "Thermal Radiation," *Atomic Archive* website: https://www.atomicarchive.com/science/effects/thermalradiation.html#:~:text=A%20primary%20form%20of%20energy,and%20produce%20a%20brilliant%20fireball

[33] Conversation with Tina Cordova, Tularosa Basin Downwinders Consortium co-founder.

narrative of Trinity's effects upon Indigenous people, including younger, perhaps even future, generations.

The bomb's low explosion from a 100-foot tower, and its poor efficiency were major players in the amount and potency of fallout created, causing these high rates of infant mortality and many later health impairments. Only three of the thirteen pounds of plutonium (isotopes 239 and 40) fissured in the explosion. The low-detonation level allowed the 80% remaining unfissured plutonium to mix with soil and debris. These materials were carried up by the explosion's cloud, and then by winds to fallout wherever they may: into waterways and cisterns, onto skin, and onto animals, gardens, and farms.[34]

In the 1940s, cisterns were a common water source in the largely rural and arid state of New Mexico. Because the region is so dry and cisterns provided the main water supply, bathing everyday was impractical. Because no one outside of LANL knew what this material floating down was, in some cases it stayed on people's skin for a few days. Even then, the water collected by the cisterns was potentially contaminated, creating alternative ways for absorbing radioactive materials, and thus endangering those bathing or drinking. Without easily accessible refrigeration equipment in many areas of the state, not only were animals and gardens the main food sources in 1945, but livestock and farms were also the main sources of income.[35] Downwinders ingested the radioactive fallout through the three possible ways: topically, orally,

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[34] Robert Alvarez and Kathleen M. Tucker, "Trinity: The most significant hazard of the entire Manhattan Project," July 5, 2019 https://thebulletin.org/2019/07/trinity-the-most-significant-hazard-of-the-entire-manhattan-project#_edn1. Also, conversation with Tina Cordova, see footnote #33.

[35] "Report from Santa Fe, Produced by KENW: Tina Cordova," website of *PBS*. Season 2020 Episode 22, July 12, 2020, https://www.pbs.org/video/tina-cordova-usk4bb/, accessed October 8, 2020.

and inhalation.[36] When fallout gets carried into the atmosphere, as it did in Trinity's case, it can take months for its entirety to fall,[37] and because the detonation was so near to the ground, the initial blast collected much more organic material than if it had been detonated at a higher elevation, resulting in much more fallout.

Considering Cannon's intimate ties to the Santa Fe area and the figurative choice of mother and baby under the cloud in *As Snow Before a Summer Sun*, it is possible Cannon was aware of the severely high infant mortality rates following Trinity. Regarding cancers, latency periods often staved off any awareness or connection to the explosion, sometimes for many years. However, infant mortality rates spiked so high in the months following Trinity, that in 1947 local doctors in New Mexico became curious of a connection between the odd explosion and the odd spike in deaths, which increased by 52% in some places.[38] These doctors wrote a letter of inquiry to the radiation safety experts of the US nuclear weapons effort.[39] This, however, was not read and only received a lackadaisical response: "we can find no pertinent data concerning infant deaths; in fact there is no report as to the number of or specific cause or dates and, as far as Alamogordo is concerned . . . [I] want to assure you that the safety and health of the people at large is not in any way endangered."[40]

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[36] Conversation with Tina Cordova.

[37] "Radioactive Fallout," website of *Atomic Archive*. https://www.atomicarchive.com/science/effects/radioactive-fallout.html.

[38] The rate in Roswell, climbed by 52% in 1945, after falling by 27% between 1943-1944. The rate dropped by 56% there in 1946. See Alvarez and Tucker, "Trinity," website of *The Bulletin*.

[39] Alvarez and Tucker.

[40] The doctor's letter sent to Stafford Warren, but replied to by his medical assistant, Fred A. Bryan. See Alvarez and Tucker.

On July 16th, 1945 and days after, this strange material falling from the sky is said to have fallen like snow.[41] Though these accounts compare how the fallout drifted like snow and not the specific color, Cannon's title reflects the simile through the white dots on the woman and ground. This simile is fitting as Cannon also extensively read and wrote poetry, which he incorporated into many of his paintings and drawings. A double-signifier, the title comes from a poem by the Shawnee chief, Tecumseh: "Where today is the Pequot? Where are the Narragansetts, the Mohawks, the Pokanoket, and many other once powerful tribes of our people? They have vanished before the avarice and oppression of the White Man, as snow before a summer sun."[42] Cannon extended Tecumseh's experiences of "oppression of the White Man" to the atomic age as a new chapter of settler colonialism, where colonized Native American lands were used for uranium mining or atomic research and testing, ceremonial sites were used for radioactive waste, and many of the unprotected, unknowing low-grade workers were Native American.

The green dots in the cloud also recall Cannon's obsession with circles in a number of his 1970s paintings, including *Two Guns Arikara* (1974-77) [Fig. 6], *Buffalo Medicine Keeper* (ca. 1974) [Fig. 7], and *His Hair Flows Like a River* (1978) [Fig. 8]. In 1975, he wrote a poem titled "The Circle" that sheds light on his thoughts about this particular shape:

"The circle is the only tangible reason I have
for continuing the work.

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[41] Explained in a conversation with Tina Cordova, the co-founder of The Tularosa Basin Downwinders Consortium.

[42] Joan Frederick in cooperation with Walter Cannon. *T.C. Cannon: He Stood in the Sun*. Northland Publishing Company, 1995. 149.

It is the impetus for my life and its support-
ing roots of religion, art, music, and literature

It is an intensely burning red or green . . .
purple . . . or sun yellow and as truthful as mir-
rored glow.

There are no angles or unkind directions
within a circle. The melodies of the song of har-
mony and life round and round and round and
round!

There is a beautiful honesty about the pre-
sence of a circle in art works of man and the god-
works of nature.

The circle is the essence of forever."[43]

Cannon's regenerative circles symbolically twist the existing elements of the painting like a braid: a strain of protest to the historical amnesia of indigenous presence in Trinity's history, a strain of activism towards environmental racism, and a strain of self-determining indigenous

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[43] Cannon, T.C., "The Circle," 1975. See Frederick, *T.C. Cannon*, xii. Formatting of line breaks follows Cannon's original.

survivance. Green circles in an atomic cloud might not mean much at first glance. But with the trinitite connection, it makes the subject matter site-specific and tangible. It also makes tangible a dangerous subject matter that implies destruction of health, life, and land. This is especially so with the choice to organize the whole image around the innocent figures of the woman and child. With Cannon's favored use of circles, it implies two things. First, that with plutonium-239's half-life of 24,100 years[44], Trinity's radioactive impact on land, water, and people can never be cleaned up entirely. Second, that despite radioactive permanence, including the damages incurred by LANL with little respect for the health or cultural concerns of the neighboring Pueblos, the impacted Native Americans continue as cultures and people.

Government Censorship & Propaganda

Propagandized images, like the mushroom cloud, help control the atomic age narrative, and widely circulated images create icons. Andy Warhol riffed on the icons of U.S. pop culture through repetition and gold-leafing on images of soup cans and people, therefore commenting on the spliced umbilical cord between signified and signifier of consumerism's kitsch icons.[45] Similarly, Cannon utilizes the mushroom cloud's iconicity to riff on the contradiction of the censorship of the "peaceful atom" propaganda, and the actual horrific nature of an atomic explosion on people and environment. However, whereas Warhol makes spectacles of

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[44] "Backgrounder on Plutonium," the website of United States Nuclear Regulatory Commission. Accessed on December 4, 2020. https://www.nrc.gov/reading-rm/doc-collections/fact-sheets/plutonium.html

[45] Grudin, Anthony E. "'A Sign of Good Taste': Andy Warhol and the Rise of Brand Image Advertising." In *Oxford Art Journal* 33, no. 2 (2010), 211-232.

consumerism's empty gaps that create shallow fetishisms of objects and people, Cannon ties together the inter-spaces between government silencing and the silenced real impacts of the atomic age. By specifically detailing what I argue is the Trinity explosion in some of these cloud works, he specifies the discussion on U.S. homelands and peoples, not Japan. Cannon is urging an introspective conversation among Americans over atomic truths on home soil. In his watercolor *Untitled [Bombs and Circles]*, as he reveals the iconic "peaceful" cloud image that has taken up so much space in the atomic age conversation, he simultaneously *makes space* for the other narratives. By making visual space, he therefore makes mental space in the political discourse through exploiting an image already exploited by the government to aid its censorship.

To reflect both the concealing and the concealed in *Bombs and Circles*, Cannon offers pairs of simultaneous references. The soft watercolored mushroom cloud reflects the iconic photographs that reveal the distanced and sterile scientific achievement - and if in color, the true multicolored cloud itself. At the same time, however, the catastrophic atomic blast is presented. The sky is filled with brilliantly abstracted stars, or the jagged marker lines reflect the chaos of the 5:29am detonation at Trinity and the green circles reference trinitite and radioactive fallout. Another critical reading to take note of is the "peaceful atom" and the innocence people found towards the atom bomb through kitsch consumerism, fashion, and the propaganda being fed to the public. Alongside this reading lies the dangerous lengths the government went to in order to maintain control — or "containment".

Cannon makes all of these simultaneously possible beginning with two visual fields that work together and yet as opposites. The portrait direction of the paper is split horizontally a little off-center, in effect creating a heavy top portion filled with a much darker blue and higher

activity. The bottom zone contains a much lighter palette, calmer brushwork, and blended array of color. The portrait composition's emphasis on height is intriguing, since the bottom, smaller portion seems to be the main focus. This bottom, smaller portion of the painting is tightly confined, and it feels like the top portion squeezes down on this cloud as if it is forcing the cloud to mushroom out. While this neatly frames the form, the contrasts between the top's weight and energy versus the bottom's delicateness also disallow tidiness. Together, the bottom creates the form of the iconic cloud, while the top expresses the intense energy of an atomic explosion.

Snuggly surrounding the cloud is a thin bright red marker line. Until it reaches the very top, the red line is indelibly separate from the watery hues and accentuates the form. Along the top, however, Cannon skillfully mixes the red ink with the watercolors so as to make it bleed into the cloud. The now-gradated red combines with the other delicately watered hues that have diluted green flecks that resonate with the larger green circles in the top portion. This multicolor cloud directly references atomic explosion descriptions from reporters and photographers. The delicate artistic treatment of the mushroom cloud also renders a lush tree into a harmless spectacle. Again, this recalls Field's recognition of the absence of people in photographs of atomic destruction in Japan that "actively diminished the visibility of nuclear trauma." Such images would be approved by the U.S. government because it would not want to acknowledge the human suffering that it caused: "During the Allied occupation, the U.S. government banned all photographs of killed or injured Japanese citizens in the American media, and only carefully selected images of destroyed and deserted landscapes were made public."[46] This concealment

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[46] Fields, *Discordant Memories*, 11.

kept the eyes focused on a scene of brilliant scientific and military achievement that led to victory over Japan, ending the horrendous war.

Untitled [Bombs and Circles] integrates the censored, positive subject with a sky full of trinitite, which Cannon again represents with the passive green speckling in the cloud and the brash green circles in the vast blue. Compared to the abrasive coloration in *As Snow Before a Summer Sun*, the use of the watery paints for the cloud acts as a diffuser: the trinitite dots have soft edges and are like faint freckles, and the colors meld together gently in the neatly defined space. I suggest that the top half, which displays a countering chaos, could also be referring to the chaos behind the propagandized containment of information on the atomic bomb. By ambiguously exhibiting fallout, Cannon displays how the iconicity of the explosion has veiled fallout through exclusion tactics in government-approved images. Historian Lesley M.M. Blume's 2020 book titled *Fallout: The Hiroshima Cover-Up and the Reporter who Revealed it to the World* offers examples of the great lengths the government went to on the subject.

Blume exposes General Douglas MacArthur's "Red Scare"-type of tyrannical control to censor U.S. press entourages working in occupied Japan. " . . . General MacArthur - now Supreme Commander of the Allied Powers and effectively Japan's new emperor - and his officers were quickly clamping down on both the Japanese and foreign media."[47] In some instances, he made threats of court-martial to entire entourages. Having to confront firsthand the destruction and the "human guinea pig" corpses, and falling ill with radiation poisoning from limited time in the aftermath, reporters like Wilfred Burchett and George Weller felt that MacArthur's constriction of the press was the opposite of what was needed for the world to

[47] Lesley M.M. Blume, *Fallout: The Hiroshima Cover-up and the Reporter Who Revealed It to the World,* (New York: Simon & Schuster, 2020), 31.

grapple with what access to atomic weapons meant. Burchett later wrote about his disgust at his compatriots who followed the rules to regurgitate Washington's instructed dialogue and realized that "What they had actually been selected for . . . was participation in a cover-up of outsized proportions."[48] Burchett and Weller's attempts to slip stories under the radar resulted in MacArthur immediately withdrawing press accreditation and expelling them from Japan.[49]

Considering the recent publication of Blume's book, extreme lengths to contain the images and words of the truth were not public knowledge in the 1970s when Cannon painted mushroom clouds. However, Native Americans and downwinders connected to Trinity and LANL had their own experiences with government censorship. With trinitite and the light blue sky around the bomb underneath a dark "starry" night cloud full of wild activity, we can gather that this renders the Trinity explosion, also called "the day the sun rose twice."[50] Cannon's *Bomb with Circles* seem to be depicting a nocturnal sunrise with the starkly contrasting dark blue sky above, yet a pale blue sky with some colors from the cloud leaching into it.

I argue Cannon references Trinity specifically and that he uses Trinity's specific history to indulge the legacy of nuclear colonialism "peaceful" Cold War rhetoric as it persisted into his lifetime in international politics and pop culture. In 1953, President Harry Truman said the atom bombs dropped on Japan were necessary to "save hundreds of thousands of American and

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48 Blume, *Fallout*, 30.

49 Blume, 31.

50 The widespread use of the phrase is exemplified in the title of Szasz's book, *The Day the Sun Rose Twice: The Story of the Trinity Site Nuclear Explosion July 16, 1945*. Albuquerque: University of New Mexico Press, 1984.

Japanese lives."[51] In the same speech, however, he responded to civilian letters telling him to end the Cold War by dropping another atomic bomb, revealing his understanding of the true nature of the "peaceful atom": "We are living in the 8th year of the atomic age. We are not the only nation that is learning to unleash the power of the atom. . . . Starting an atomic war is totally unthinkable for rational men."[52] Dwight D. Eisenhower followed in the same year with his "Atoms for Peace" address to the United Nations General Assembly, in which he indicated the utmost necessity to "harness atomic power in productive, peaceful ways."[53] Depicting an atomic explosion in mostly calming colors that flow together through his watercolor technique challenges the harshness of the highly destructive explosion, presenting more of a mesmerizing experience of color. In this way, Cannon juxtaposes the rhetorical disconnect of Truman's unwillingness to drop another atomic bomb, Eisenhower's "Atoms for Peace," and both presidents' continuation of active nuclear development programs spreading across more Native American lands such as in Nevada, the Four Corners region detrimentally affecting more native environments, peoples.

Cannon reflects the U.S. Cold War policy of "containment" literally through the tight red outline of the cloud and the confining, containing edges of the cloud's area within the composition. Through his use of color, he also reflects the Allied governments' drive to sway the public towards the "peaceful atom" rhetoric. In the US, the Cold War foreign policy of the

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[51] Harry S. Truman, "Farewell Address," speech delivered January 15, 1953. Website of *American Rhetoric*: https://www.americanrhetoric.com/speeches/harrystrumantrumanfarewelladdress.html.

[52] Truman, "Farewell Address."

[53] Dwight D. Eisenhower, "Atoms for Peace," speech delivered December 8, 1953 at the United Nations General Assembly. Website of *American Rhetoric.* https://www.americanrhetoric.com/speeches/dwightdeisenhoweratomsforpeace.html.

Truman Doctrine implemented Senator Arthur Vandenberg's suggestion to "'scare the hell out of the American people," making concealment and censorship the name of the game to nullify the public and retain cooperation in containing the Soviets and their threat of "communist tyranny" known as the "Red Scare." Patriotism was expected. "Being patriotic in mid-century America was unquestioning support for military might,"[54] Kirk writes.

Part of this containment tactic to maintain public cooperation was the strict censorship of atomic explosion images, while part of it included skewed court hearings to hush lawsuits from downwinders. Eleven years after Trinity, a 1956 lawsuit exemplifies the government's continued concealment of home-based nuclear realities. In *Bulloch v. United States* (145 F.Supp. 824, US District Court, Utah), ranchers who had experienced staggering numbers of stillborn lambs of sheep that had grazed near nuclear tests in the Nevada Test Site in 1953 sued the government over their economic losses. The district court found, based on the evidence and testimony presented, that the lambs died from other causes, as the amount of radiation exposure to which the sheep were subjected was substantially less than that which would be expected to cause damage. However, in 1981, following Congressional hearings in 1979 relating to the nuclear testing conducted at Trinity, the ranchers went back to court seeking to set aside the prior judgments due to the government's withholding critical information during the original 1956 trial. At this second trial, *Bulloch v. United States* (95 F.R.D. 123, US District Court, Utah, 1982), Judge A. Sherman Christensen, the same judge who presided over the 1956 trial, found that the government had concealed important evidence concerning the amount of radiation to

[54] Kirk, *Doom Towns*, 285.

which the sheep were subjected[55], pressured witnesses to change their opinions[56], gave false or misleading testimony[57], and otherwise concealed or misrepresented critical information. He concluded that the government had committed a fraud upon the court and ordered a new trial.[58] That it took Congressional testimony and over 25 years to discover government malfeasance, indicates the extent to which the government succeeded in containing unpleasant realities from the public's view. Cannon displays such examples by so cleanly framing his watercolor cloud, and closely retaining it in the red fitted outline — an aggressive red that highly contrasts the soft, watery mutation of light blues, yellows, and greens, and therefore denotes a violent edge to the explosion's cloud.

The government's drive for a peaceable atom penetrated kitsch and fashion in the U.S. and Europe. Though from rural Oklahoma, Cannon was well aware of his position as a modern member of society and an artist who visited and did particularly well in momentously modern

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[55] *Bulloch*, 95F.R.D. at 131-132. For example, in the same "official AEC staff report (604/3. Nov. 4, 1953) by the Director of Biology and Medicine, Dr. Paul Pearson, it was reported that the infinite gamma dosage where the sheep were located 'would not exceed 5 roentgens,'" and information "which when placed in its true context would indicate that exposure was in the range of 30 to 1000 roentgens and possibly higher." Also, other important radiation readings were completely omitted. The AEC's 1949-1952 experiments on sheep in Hanford, Washington was conducted by Dr. Bustad, who remarked that "the Utah sheep showed no evidence of the radiation damage observed in experimentally treated sheep." However, Judge Christensen — and later supported by the dissenting Judges McKay and Seymour in their 1985 dissent of the Tenth Circuit's major opinion [*Bulloch*, 763 F.2d (McKay, J., dissenting 1 985) at 1122]— that the new evidence revealed that the plaintiffs' sheep "in fact developed signs and conditions almost identical in appearance . . . particularly with reference to the new-born."

[56] *Ibid.* at 134-137. Numerous pieces of evidence reveal that AEC's Dr. Pearson and Dr. Bernard Trum significantly pressured Dr. Robert Veenstra and Dr. Bob Thompsett to change their opinions and "disqualify themselves" in trial over previous affirmations linking radiation and causal death and injury of the sheep.

[57] See *Ibid.* at 133-134; and *Bulloch*, 763 F.2d (McKay, J., dissenting 1 985) at 1123-1125.

[58] The government appealed Judge Christensen's ruling granting a new trial and, in 1985, the Tenth Circuit Court of Appeals reversed Judge Christensen's ruling. *Bulloch v. United States* (763 F.2d 1115). In reversing, the Court of Appeals found that the government had not, in fact, committed a "fraud on the court," giving that term a constrictive and limited reading. Two judges, in dissent thoroughly criticized the majority for its constrained interpretation of "fraud on the court" and would have upheld Judge Christensen's ruling.

cities like Washington, D.C., New York City, Santa Fe, and San Francisco. The influence of the atom bomb in pop-culture stretched from multicolored mushroom cloud night-lamps to jewelry and Christian Dior fashion, and it showed an obsessed and ready adoption of the atomic age in everyday — even celebrated — life in Allied countries. In *Bombs and Circles*, Cannon's cloud even resembles the soft multicolored light of a mushroom cloud night lamp — an object typically intended to ease children's fears of the dark resulting in feelings of safety. Similarly, dark sky bedazzled with emerald green circles might recall atomic jewelry of high fashion. Where there is high fashion, there is costume jewelry to accommodate the less wealthy consumer's desire to appear wealthy and beautiful, as high fashion — and especially glamorous jewelry — is a sign meant to indicate wealth and beauty, therefore epitomizing the success of peaceful atom rhetoric.

Fields writes: "Such practices of consumerism reflect a deep investment in notions of American innocence."[59] *Vogue* magazine's April 15, 1958 issue had an article on the 1958 World's Fair in Brussels's titled "Belgium 1958 — the Land, the New World's Fair, and Us — an On-the-spot-Report."[60] A model stands elegantly underneath the Atomium structure behind her. The Atomium's 335-foot structure was hollow with escalators and connecting tubes for the Fair's attendants to physically inhabit the "peaceful atom." Titus explains how, "the mushroom cloud

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[59] Donna Alexandra Bilak, "Blast from the Past: Atomic Age Jewelry and the Feminine Ideal: Fashion in the 1950s embraced the bewildering changes that characterized the Atomic Age." Website of *Science History Institute*. April 19, 2015. https://www.sciencehistory.org/distillations/blast-from-the-past-atomic-age-jewelry-and-the-feminine-ideal.

[60] "Belgium 1958 — the Land, the New World's Fair, and Us — an On-the-spot-Report," website of *Vogue Magazine*, April 15, 1958. https://archive.vogue.com/article/1958/4/belgium-1958-the-land-the-new-worlds-fair-and-us-an-on-the-spot-report.

itself has become one excellent example of American kitsch and 'ironically, is viewed somewhat wistfully as a nostalgic icon reminiscent of simpler, safer times.'"[61] This innocence is what Cannon reflects and challenges through his violent-yet-peaceful mushroom cloud in *Bomb and Circles*. Simultaneously, he depicts the "successful" image of containment and the unsuccessful harms, even absurdity, of containing an atomic explosion, weapon, or age.

Conclusion

Today, nearly seventy-six years after Trinity, a page on the Department of Interior's website on the Trinity Site reads: "The remote, government-owned land provided safety and secrecy for the test, code-named Project Trinity."[62] But artists like T.C. Cannon help us to understand: it is not that simple. Cannon's explicit mushroom cloud paintings referencing Trinity directly protest the persistent silence of atomic age history. As a Native American appropriating an American propaganda icon, he flips the history books and government concealment inside out to expose the false narrative. Cannon riffs on this icon and its centrality to atomic culture[63], and the inhumane explosions of dehumanized violence central to modern warfare. "Today it has become so deeply imprinted in the myths and matrices of the postwar era that it has come to seem natural, a fundamental, even a necessary aspect of everyday life," writes Peter B. Hales.[64] By utilizing this visual tool that is so ingrained in and so thickly shrouding the

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[61] Titus, "The Mushroom Cloud as Kitsch," 102.

[62] The National Park Service U.S. Department of the Interior, "White Sands Missile Range an Trinity Site" p 1 of PDF (last revised 04/06/2016) on National Park Service U.S. Department of the Interior, White Sands National Monument website: https://www.nps.gov/whsa/learn/historyculture/upload White_Sands_Missile_Range_and_Trinity_ Site_04_06_16_-666KB_PDF.pdf

[63] Hales, "The Atomic Sublime," 5: "The central icon of the atomic culture is the mushroom cloud."

[64] Hales, 5.

public's mind, Cannon crafts compositions in unexpected ways to force people to begin noticing the shroud, and then challenges them to begin lifting it.

Though these paintings are from the early-to-mid 1970s and he passed away in 1978, Kramer accurately claims that, "With national conversations about ethnic identity, social justice, land rights, and cultural appropriation, Cannon's works encounter issues that are as relevant now as they were fifty years ago."[65] *As Snow Before a Summer Sun* and *Untitled [Bomb and Circles]* exemplify his artistic activism that investigates the complex interstitial zones between Native *and* American atomic age histories, and his critique of the universalism of modernism between the two.

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[65] Kramer, "A Declaration of Love and Guts," 52.

— Chapter Two —

Bombs Bombs Everywhere: Debbie Hansen

Much of Australia has only recently become aware of the history of British nuclear development efforts in Australia during the 1950s and 1960s, of which Maralinga nuclear test site has become representative of the endeavor as a whole. Beginning in 1976, whistleblowers like Avon Hudson[66] and Yami Lester[67] spurred on investigative journalism, which put the secret history on front pages leading to the 1984 Royal Commission investigation. The Commission's 1985 report declared harsh criticism of the handling, performance, and clean-up of radioactive weaponry that had been so well-shrouded from public view. It specifically criticized the disregard for the traditionally nomadic Aboriginal peoples of the area, some of whom were still traversing the testing zones unaware of the activities.[68] Yet, despite the momentous decade of whistleblowers and the Royal Commission report, many Australians today are again unaware of the history. Maralinga occupies a section of the Spinifex people's traditional homelands, and Spinifex artist, politician, and elder Debbie Hansen's (b. c. 1957) painting *Maralinga* (c. 2007) [Fig. 4] invokes color and composition to emphasize her perspective of the layered depth of concealment, traumas, and nuclear colonialism suffered by the Spinifex. Her painting opens a

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[66] Hudson was a Maralinga veteran and had served as a Leading Aircraftman in the Royal Australian Air Force. His avid activism continues today. He participated in the *Nuclear Futures* project that will be discussed in Chapter Three, and was the subject of Nuclear Photographers Guild artist Jesse Boylan's 2011-2015 series *Portrait of a Whistleblower*.

[67] Lester was a Yankunytjatjara desert man who was blinded around the age of ten by fallout. Before losing his sight, he got very ill as did many of those around him, and some died. Others lost sight as well. He went on to be an avid land rights and anti-nuclear activist.

[68] See Elizabeth Tynan and ed. Jan Dirk Mittman in *Black Mist Burnt Country Black Mist Burnt Country: Testing the Bomb: Maralinga and Australian Art,* (Victoria: Burrinja, 2016); Greg Castillo, "Spinifex People as Cold War Moderns," in *Explosion: Masterpieces from the Spinifex Arts Project*, ed. by Spinifex Arts Project, (Bruxelles: Aboriginal Signature Estrangin Gallery, 2019); and Scott Cane, *Pila Nguru: The Spinifex People,* (Fremantle:Fremantle Art Centre Press, 2002).

more full and complex history of truth-telling, and rejects simple propagandist censoring that continues to under-represent Indigenous voices in Australia's Atomic Age history.

Like the previous chapter on Cannon, this chapter draws out the imagery and semantical ontology in Hansen's Western Desert-style "dot" acrylic painting. Because the scholarship on desert Aboriginal images comes from eighty years of anthropological fieldwork, my art historical investigation builds from these anthropological ontologies. By in large, anthropologists Francoise Dussart, Peter Sutton, Howard Morphy, John Carty, and Fred Myers build from the likes of pioneering anthropologist Nancy Munn's structuralist approach: Munn sought to read Warlpiri people's designs to better understand the ethnography of the people. As I draw from these scholars, I mix in my art historical approaches of visual analysis and aesthetic theories and work from a grey zone of ontologies through which to historicize and understand the transcultural exchange represented in Hansen's *Maralinga*. Doing so opens up a new line of art historical inquiry to include social and cultural histories, and formal and aesthetic qualities of the different histories and cultures Hansen presents.

It's Complicated

Maralinga site lays witness to seven of the nine major nuclear trials — the kinds that manifest mushroom clouds and widespread radioactive fallout, and over 500 minor nuclear trials — the kind that produce shorter plumes and a higher concentrated radioactive contamination in the immediate vicinity. The Anangu voices of those directly impacted by these tests were not left out of the history by mistake; their concealment was part of deliberate, insidious propaganda. Due to historic government censorship and concealment, the scholarship and textbooks

oversimplify this history and leave critically contextual voices minute at best, and this concealment persists today as do the traumas tied to nuclear colonialism. A typical synopsis of the British nuclear development efforts might read like this:

In 1950, British Prime Minister Clement Attlee requested of Australian Prime Minister Bob Menzies the use of some land to develop and test their new nuclear weapons in order to hold a spot in the current arms race. Due to a number of high profile espionage catastrophes in the U.S.'s Manhattan Project, the British were cut off from US testing areas or other compliance in these matters, and Canada refused any of its land to the crown. Menzies, however, gave full permission without even consulting with Congress. According to historian Elizabeth Tynan, three key factors influenced Menzie's willing response: Australia's toying debate of becoming a nuclear power itself; maximizing the value of its newfound uranium; and in the event of a nuclear war, he recognized this as an opportunity to assure British, and possibly US, protection.[69] The archipelago of Monte Bello Islands hosted the first British nuclear tests in1952, then the effort moved inland to Emu Fields in 1953, and then to Maralinga in 1955. Emu Fields and Maralinga are located in the Western Desert. Because of better water resources and vast space, Maralinga became the choice site in what the government considered "desert wasteland."

The above paragraph is straightforward with names, dates, and locations. It is neat. Linear. It is also conveniently in the past. However, it is devoid of any people other than key governmental figures and the implied presence of military and scientist entourages necessary to conduct the tests. Though the names and facts hold merit, they are severely lacking in context, which is messy. People outside of the nuclear effort were also very much present, and had been

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[69] Elizabeth Tynan, *Atomic Thunder:The Maralinga Story,* (Sydney: NewSouth Publishing, 2016), 6.

for somewhere between 40,000 and 65,000 years, specifically the many Aboriginal Australian mobs in the Western Desert, including the Spinifex mob. Hansen's community and political involvement as an elder, an educator, and a spokesperson bring forth her artistic agency to use art to reconcile missing contexts of Maralinga's history as a site of nuclear colonialism.

Dots & Bombs

Hansen was born off of Spinifex homelands at Cundeelee Mission in 1964. Her parents and older brothers were forcibly removed from the bush in 1958 in the repeated military efforts to keep Anangu out of the lands around the test site, which was active from 1955-1963. When the state granted part of the Spinifex homelands back in the Maralinga Tjarutja Land Rights Act of 1984, many, including Hansen and her family, moved back and started Tjuntjuntjara Community in the Great Victorian Desert.[70] With her training in education, Hansen played a critical community role in starting and staffing a school for the community.[71] She was an involved younger painter in the Anangu-owned and run Spinifex Arts Project Aboriginal Corporation upon establishment in 1997, and she went on to serve as Chairperson. Other boards

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[70] See Short Street Gallery's artist profile on Debbie Hansen, a document made available to me from the Gallery personnel upon request. For more on the three stages of Maralinga Tjarutja Land Rights (1984, 2004, and 2014), see essays by Mittman and Tynan in *Black Mist Burnt Country*; Tynan *Atomic Thunder*. These rights are separate from the federal Native Title Claims won by the Spinifex people in 2000. See Cane, *Pila Nguru*; and Carty, "Seeing the desert for the trees," in *Spinifex*, 38-50.

[71] See Short Street Gallery's artist profile on Debbie Hansen: Hansen went through school at Cundeelee Mission and Government schools for primary education, then boarded in an aboriginal hostel to attend Norseman High School. She was then employed as an Aboriginal Education Worker at Cundeelee school until 1984, then moving with her family back to homelands when the state granted Land Rights back for most of Spinifex Land in the Great Victoria Desert. During this re-settlement for the community they called Tjuntjuntjara, Hansen was very involved, and resumed her education career when a school opened in community in 1997. In 2000-2001, Hansen completed training for Certificates 3 and 4 in Aboriginal and Torres Strait Islander Education at Notre Dame University in Broome, Western Australia. With this training, she became a key actor in the staffing for Tjuntjuntjara Remote Area School.

and projects she has worked with include 10 Deserts Project, Alinytjara Wilurara NRM Board on which she represents Oak Valley community and Maralinga Tjarutja lands, Pila Nguru Aboriginal Corporation, Maralinga Tjarutja, Maralinga Lands Unnamed Conservation Park Co-management Board, and Paupiyala Tjarutja Aboriginal Corporation. Her political concerns include natural and cultural heritage land management and knowledge, speaking for community as a link to influence more appropriate government policies, and opportunities for youth and younger community members to develop skills in governance and leadership to perpetuate positive policy-making.[72]

Hansen's active presence in Aboriginal politics means that her solo painting portfolio does not compare in size to those of many other Spinifex artists. However, she is a contributor to a number of senior women's collaborative compositions such as *Tjintirtjintir (Willy wagtail)* (2008) [Fig. 9], bequested to the National Gallery of Victoria in 2011. Furthermore, her activity more as a collaborative than a solo canvas painter is not an anomaly in Spinifex Arts Project works where many canvases are conducted on group bush trips to country with focus on the keystone of Spinifex and many other Aboriginal communities: collaboration to sustain land and culture. "[L]iving and working collaboratively has been essential to sustaining and transmitting

[72] See Short Street Gallery artist profile on Debbie Hansen, Hansen's profile for her position as a Councillor for Rural Ward in the Shire of Menzies district, and her profile page on the website for *10 Deserts Project*.

life," write Louise Allerton and Peter Twigg, explaining why collaborative men's and women's paintings continue to be a "feature" of Spinifex Arts Project since its founding in 1997.[73]

Hansen is clearly respected by her community as a member and artist. In 2010, she was the only painter who represented her cohort with then-Spinifex Arts Manager Louise Allerton[74] at an exhibition in Santa Fe at Chiaroscuro Gallery in collaboration with the Vivien Anderson Gallery in Victoria.[75] Rather than excuse her smaller output of solo works, Hansen's political involvement greatly informs the works she does produce, as well as her perspective to utilize art as a transcultural mode with possibilities of reconciliation and political evidence. After all, Hansen is an important figure within Spinifex mob and in the political space between her mob and the Australian government. In *Maralinga*, she reflects this whitefella history of nuclear testing in context of her Anangu perspective — an under-represented perspective though directly involved.

The long, narrow canvas explodes with aesthetic tension between concentric circles of yellow and white dots hovering over concentric black rings, all of which are backlit by a flat, earthy-red base layer of color. The simple pallet references traditional ochre and dye pigments used for body painting for *inma*, or ceremony: red from red ochre, yellow from yellow ochre,

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[73] Louise Allerton and Peter Twigg with additional biographical details by Ian Baird, "Spinifex Arts Project," *Australian Contemporary Indigenous Art* NOW, 16. Full quote: "Paintings are typically produced on bush trips to country which emphasises the collaborative obligations inherent in a kinship based land ownership system, and the deep connections and responsibilities at work behind an active traditional culture. In Spinifex culture as in many other Aboriginal kinship systems, living and working collaboratively has been essential to sustaining and transmitting life. As a result, collaborative artworks by Spinifex men and women have been a feature of the Spinifex Arts Project since it began in 1997."

[74] Information shared in conversation between the author and Louise Allerton on March 2, 2021.

[75] In 2010, 2012, and 2014, Chiaroscuro Gallery's owner John Addison and Vivien Anderson collaborated to hold exhibits in Santa Fe. The exhibitions were titled *Australian Contemporary Indigenous Art Now (I, II, and III)*. Spinifex was represented in 2010 And 2014.

white from pipeclay chalk, and black from charcoal. The flat red base and black rings offset by precise and individual yellow and white dots create a dynamic composition that pushes and pulls the eye. The concentric systems vary in size. The largest and most embellished roundel system is relatively centered. Immediately surrounding that are seven small, crowded systems. The rest of the canvas is crowded with the rest of the roundels, which are mostly medium-sized relevant to the central big roundel and its immediately surrounding seven small roundels.

Each circle is organic, morphing to fit within the canvas's edges leaving only a couple roundels are cut off. Notably, Hansen organically morphs many of these black roundels ensuring that no black lines are overlapping. This implies a squashing malleability to the roundels, and a free-flowing sense around the entire composition. The eye is immediately and repetitively drawn to the central, largest system where white dots further embellish the numerous rings of red, black, and yellow. Other than the striking presence of the only white, which dots the largest roundel system, the artist has not instigated a strict pathway for the eye. Instead, the eye runs as rampantly as do the crowded, repetitive peel of concentric systems. Though the splash of roundels is repetitive, each roundel is unmistakably unique. The concentricity of each system funnels the eye randomly from center to center all around the painting; sometimes getting stuck, and sometimes returning to the central system. The few bold, flat colors are poignant, and they pronounce the peeling circles that give a visceral effect like a rhythmic beat — like the rhythm of the steady repetition of dots, circles, and colors. The contrast of the flat red and the dots, which are all fairly uniform in size, unify the composition.[76]

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[76] Such uniformity in dotting is typically either from hand-painting with a paintbrush (likely one with cut bristles), or the point of a stick.

The Spinifex "Dot" Style

Hansen's compositional elements colloquial the Spinifex "dot" style where negative space is left exposed and used to offset the dots, and prominant traditional Anangu iconography, such as concentric rings, burst through the composition's edges. The style connects her to the politically driven history of Spinifex acrylics and of self-determination within the broader Western Desert art movement. The revealed negative space and iconography recall the early Western Desert art movement compositions from the early 1970s at Papunya, the settlement understood to be where the movement originated, a movement discussed further in chapter three. Though the early acrylic sites of Papunya and Yuendumu began painting as commercial enterprises, they were not devoid of politics. On the contrary, the transculturation[77] of these paintings practiced self-determination of cultural survivance as well as the opportunity to break from constricting welfare holds through self-sustaining economics — two functions that are far from apolitical. Early Aboriginal painters at Papunya understood that their paintings contained something of value for the state, "something through which they could negotiate a meaning for their presence," writes Myers, "They were giving or showing to [the state] images of intrinsic, ontological value, even images that asserted their Aboriginal right of being on the land. While other groups had skills, or labor, and so on, Aborigines had art and land."[78]

The economic factor denotes the art market as a critical influence on the early years of the movement because a certain amount of monetary success within that institution would

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[77] See McLean, "Theories: A Transcultural Theory of Indigenous Contemporary Art," *Double Desires*, 38-41. Desert Aboriginal acrylics are "transcultural" because they transcend cultural barriers to declare cultural survivance and to share culture.

[78] Fred R. Myers, *Painting Culture: The Making of an Aboriginal High Art,* (Durham and London: Duke University Press, 2002), 208.

potentially allow autonomy from the government's welfare system.[79] It is here, at the junction where commercial art centers choose to appeal or to not appeal to the art market, that the trajectory of Spinifex style differentiates from many of the desert schools, and a further political emphasis in Hansen's painting presents itself. In many of the earlier schools the painters had increasing interaction with the national and overseas markets and personnel, such as brokers, critics, patrons, and collectors. These interactions opened certain issues, not least of which being the "extreme schematizations of New York minimalism," writes former Yuendumu art advisor Eric Michaels.[80] Myers describes art critic Terence Maloon's 1982 review in the *Sydney Morning Herald* as an example of how pivotal the influence of 1950s and 1960s New York minimalism was on the 1970s and 1980s artworld's reception of desert paintings:

> " . . . Maloon wrote 'of the difficulty of assessing new Aboriginal paintings': they were exhibited in modernist style, in the white-walled interior of a Syndey art gallery, untitled, and 'nobody has explained either the artist' intetions or what the paintings are about.' Maloon realized the difficulty of assessing these paintings within the criteria of contemporary Western art: 'It is curious, then, to see how they survive the dislocation from their present culture and how they adapt from the sunlight of the western desert to the white walls of a Sydney art gallery. For better or for worse, it is the strongest and most beautiful show of abstract paintings I have seen in a long time. But I

[79] See Maddison, "Indigenous Autonomy Matters;" Moreton-Robinson, *Sovereign Subjects*; Beckett, "Welfare Colonialism."

[80] Eric Michaels, "Bad Aboriginal Art," in *Bad Aboriginal Art: Tradition, Media, and Technological Horizons*. Theory Out of Bounds, v. 3., (Minneapolis: University of Minnesota Press, 1994), 153,4.

> want to resist dazzlement for a moment and reflect on some of the problems the show raises' (Maloon 1982). Yet the paintings' value lies largely in their answer to the crisis of belief that plagues modern art. Thus, Maloon argued, 'The gap between the origination and the unsuccessful reception of the artist's message doesn't ultimately matter. . . . The best art survives such dislocations. The artist's imaginative investment, his belief, gives the work an energy, an aura, an urgency that can be sensed regardless of his specific meanings.'"[81]

As Myers and Maloon indicate, "meaning" is not of critical importance in the market of modernism, whereas "looking" overrides in essentials for marketing success.[82] Maloon unknowingly preempts the emphasis of aesthetic abstraction the market had on desert painters.[83] Still today, the extension of abstraction never seems to find its end and iconography ceases to begin, so it appears to a non-desert Aboriginal audience. An example is Mantua Nangala's 2018 *Women's ceremonies at Marrapinti* [Fig. 10], exhibited in the 2019 MAGNT/Telstra exhibit, the main exhibit of the 2019 Darwin Aboriginal Art Fair.[84] More recently, John Carty echoes this continuing impact to indicate that by becoming so successful at the Western construct marketing

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[81] Myers, *Painting Culture*, 197-198. See also Terence Maloon, "Aboriginal Paintings" in *Sydney Morning Herald*.

[82] Myers, 199. He writes: "The official discourse of aesthetic modernism is, after all, 'looking' rather than 'knowing.'"

[83] For a more recent reference to this (2012), showing its relevance still today, see Carty, "Seeing the desert for the trees," 38. Carty writes: "So much desert painting has become successful because the expressive and minimalist qualities of the work resonate with particular western art traditions and tastes in the Australian art market."

[84] The curatorial decision at the 2019 Darwin Aboriginal Art Fair with Nangala's piece exemplifies the stark difference between these highly abstracted dot paintings and the Spinifex dot paintings. The two paintings on the wall were of similar dimensions, and hung fairly close to each other: Nangala's and Spinifex artist Fred Grant's 2019 painting *Kupanya munu Pirilyi*.

game, the loss of meaning potentially undermines the powerful self-determination available through iconography. Though the fabulously abstract canvases fill offices and upholstery, they threaten to also abstract the "unsettled" and unsettling politics behind desert acrylics, allowing the audience to escape the unease of the issues.[85]

In stark contrast to these bounds in abstraction, Spinifex artists continue to regularly place iconography front and center in their compositions, and to use dotting more as an accentuation and less as a convoluter, even though they began painting around 1997, when high abstraction was prevalent across the desert movement and popular on the international art market. In fact, the early-to-mid-1990s was the period of Emily Kame Kngwarreye's uncanny and unmatched success on the international market. In her dot acrylics such as *Earth's Creation 1* (1994)[86] [Fig. 11], her dotting style even abstracted her abstracting dots by blunting her brush-hairs and pressing in slightly dragging intervals — a half-brushstroke, half-pressing motion that connected the dots while leaving texture and on occasion, unblended-blending streaks of nearby vibrant, untraditional colors. Despite her wild style's success, Spinifex painters stick to more blatant — if not outright — iconography.

Though commercial art centers began developing in the early 1970s in Central Australia, Spinifex Arts Project predated commercial art centers on the lands of the Ngaanytjarra, Pitjantjantjara, and Yankunytjatjara people, known as the NPY Lands that span 350,000 square kilometers (217,480 square miles) and include 26 remote communities.[87] "Spinifex paintings are

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[85] Carty, "Seeing the desert for the trees," 38.

[86] In 2017, the review of the auction says it all in its title: "Emily Kame Kngwarreye painting sells for $2.1m in Sydney: Earth's Creation 1 breaks its own record for a painting by an Australian woman after it last sold for just over $1m in 2007," *The Guardian*.

[87] Carty, "Seeing the desert for the trees," 41.

infused with the politics of native title," Carty writes, as their primary purpose in painting was to provide legal evidence to transcend the cultural and language barriers proving to drag out negotiations and legal procedures for years over Native Title claim in the federal High Court.[88] Therefore, the pressure of the art market was not as relevant in the Spinifex context as many other desert commercial art centers. The first Spinifex acrylics, known as the "government paintings," help to indicate the difference between style initially influenced by the art market — or economic-focused self-determination, and style initially influenced by the need for legal evidence — or politically-focused self-determination. This body of work consists of fifty-four small canvases by individuals painting their birth country to show the court. The "government paintings" are still held in the community's collection and no work has been offered for sale. Economic gain on the market did become a major purpose of the corporation, but the style's political beginning continues to influence the style in visually different ways than other desert centers.[89]

In addition to a blatant iconographic style, Spinifex Arts Project continues to be one of the more conservative desert art centers when it comes to Tjukurrpa subject matter. Tjukurrpa, also commonly referred to as "the Dreaming," is the system of beliefs guiding spiritual, practical, legal, and moral life of Aboriginal Australians across the continent. Anthropologist Peter Sutton writes, "As maps of political geography — only one of their many roles — these works are conservative statements about relationships between people and land, relationships sanctioned by

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[88] Carty, 38, 41. See also Cane, *Pila Nguru*.

[89] This continuation of style is likely heavily influenced by the remaining elders who conducted the Native Title negotiation, were born and perhaps lived in the bush until adulthood, and desired to begin an art center. Younger or future generations will likely naturally shift the style, because they will have their own collective background. See Carty, "Seeing the desert for the trees."

the Dreaming."[90] Though Sutton was writing in 1988, this speaks to the conservatism of Spinifex acrylics and the unique shift in Hansen's painting *Maralinga*. Maralinga's boundaries were set and named by the Australian and British governments - not Spinifex People. In fact, the word "Maralinga" means "thunder" from an extinct Aboriginal language from over 2,000 miles to the North, excluding it from any Ngaanytjatjara, Yankunitjatjara or Pitjantjatjara vocabularies — the related language groups of the NPY Lands. So, while semblance of acrylic dots and roundels suggests a Tjukurrpa painting — at least to the outside viewer, the title breaks from this expectation. The simplified palette and iconography resonant of traditional *inma* and storytelling, and the whitefella name of whitefella boundaries of a whitefella endeavor and mindset tether non-Anangu and Anangu histories to each other in discussion.

Desert Iconography in Double Vision

Because the Spinifex style emphasizes conservative iconography, a brief historiography of desert Aboriginal semantics needs to be addressed. In context, an exploration into Hansen's concentric roundels of *Maralinga* — which *are* the composition — transforms a canvas of circles and dots into a display of connective tissue, thus tying Anangu history into that of the Atomic Age, and webbing a stronger structure towards reconciliation.

Anthropologists Francoise Dussart and Chris Anderson clearly state that the semantics of roundels typically denotes campsites or rockholes. Nancy Munn explains that in sand storytelling, each line of nesting circles in a concentric system can have its own meaning. "For example," writes Munn, "a line of women dancing around an upright fighting stick" can be

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[90] Peter Sutton, ed., "The Morphology of Feeling," in *Dreamings: The Art of Aboriginal Australia,* (New York: G. Braziller in association with Asia Society Galleries, 1988), 80.

represented by two concentric lines, one nesting within the other, each circle-component signifying one of the two pieces of content.[91] Then, when put together, the system reveals more detailed information. Though Munn specifies these usages in the context of sand storytelling, Carty specifies that in the example of early Balgo painting, functions of the concentric roundel were carried over from sand storytelling into acrylic storytelling.[92] Furthering these semantic agilities, a number of rounded physical forms can be indicated by concentric circles, such as women's breasts. But more complexly, they can depict a hole in the ground, water filling or drying up a rock hole, or different food resources in a given area, all of which indicate meanings indicative of depth, time-lapse, and quantities imperative to the object's context. For instance, a painting can display a landscape of rockholes permanently filled with water next to drying claypans.[93]

Fred Myers expands on these varying functions and calls it "doubling" when multiple functions simultaneously exist within the same icon's representation in a way that morphs perspectives together. By allowing two simultaneous reads, Myers explains how an image can combine "two perspectives, or be both past and present at once and not just shifting between two points of view."[94] Whereas the previous example of drying claypans and permanently full rockholes are represented *next to* each other using adjacent — and therefore separate — imagery,

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[91] Nancy D. Munn, *Walbiri Iconography: Graphic Representation and Cultural Symbolism in a Central Australian Society,* Symbol, Myth, and Ritual Series, (Ithaca: Cornell University Press, 1973), 67.

[92] John Carty, *Creating Country: Abstraction, Economics and the Social Life of Style in Balgo Art*, dissertation, (The Australian National University: Research School of Humanities and the Arts, 2011), 229. Balgo is another central desert community and art center.

[93] Carty, *Creating Country*.

[94] Myers, "Doublings," in *Everywhen: The Eternal Present in Indigenous Art from Australia*, edited by Stephen Gilchrest, 36-43, (Cambridge: Harvard Art Museums, 2016), 38-9.

Myers describes a doubling as one image with multiple meanings that "[do] not subtract one exposure from another but combines them, overlays them, finds some way to put the different exposures together — a kind of 'everywhen'."[95] For example, a doubling can display the inside *and* outside of a cave, or drying *and* filling water sources. These overlaying semantics or doubling signifiers discusses time, ceremonial routine, resources or lack thereof, etc., and sometimes all of these at once.

Myers's "doublings" combine Munn, Dussart, Carty, Anderson, and Sutton's interpretations to indicate even more may be at hand in a desert acrylic's concentricity. I argue that Hansen's painting should be discussed in this framework of complex overlapping perspectives. But in this case, discussion is not only of Anangu history, but also that of non-Anangu; and not only of Tjukurrpa, but also of non-Tjukurrpa. In doing so, Hansen's style reaches further into the space in which art historian Terry Smith believes the transcultural potential of Aboriginal Australian art truly exists: "Aboriginal contemporary art is alert to the warring between the reconcilable and the unreconciled that roils Australian polity and affects the everyday life of all Australians . . . Indigenous art offers long and deep pathways for negotiation."[96]

Asserting Dussart and Anderson's notes, Hansen's circles signify rockholes and/or campsites possibly around a large soak. The large roundel could also signify a big gathering, as there would be for important ceremony. Including a non-Aboriginal read, however, these also look like a birds'-eye view of bomb blasts. Connoting a doubling here of colors and

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[95] Myers, "Doublings," 42.

[96] Smith, *Art to Come: Histories of Contemporary Art,* (Durham: Duke University Press, 2019), 46.

iconography develops the narrative significantly. Literally, the colors work in both contexts. Each is a display of the same area — we know this because of the specific title, a place that exists in a demonstratively red sand desert. In both, the red base layer is a literal reference for the ground, signifying two landscapes. One landscape is that of the settler- and nuclear-colonialist mindset: a "wasteland" available for nuclear testing given non-Aboriginal boundaries and name. The other landscape is that of the Anangu landowners.

Because we are looking at the ground, both interpretations are to be surmised from a birds-eye view. Bomb blasts produce reds, yellows, oranges, blacks and whites, and the leftover charred materials often remain in black and white. In the case of nuclear blasts, a black-ish radioactive glass was left when blasts were low enough to the ground to produce enough heat to melt the sand. Hansen's dots burst off the canvas leaving black rings lagging behind yet still imposing on the red base. Spinifex Arts Project's first arts manager, Louise Allerton, was manager when Hansen painted this. In a 2012 interview, Allerton explained how a number of artists preferred a red base, on which they used black for the main Tjukurrpa design, then layered with details.[97] In this case, Hansen's color scheme is consistent with Allerton's explanation, abstracted bomb explosions, the black radioactive glass left by the explosions, campsites, rockholes, and potentially Tjukurrpa.

As mentioned before, nine major nuclear trials and over 500 minor trials were carried out at Maralinga. The numerous smaller roundels resonate with the minor trials, and the one large roundel resonates with a major trial. Simultaneously, the minor trial roundels signify rockholes and campsites where resources were once gathered and shelter was made, but now are

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[97] Louise Allerton, "Recollections of the Spinifex Arts Project," 32.

contaminated and cannot be used. Waterholes that once were drunk from, camping areas where seeds were once harvested, gum trees once grew and accommodated the shelter of *wiltjas* — or temporary shelters made of sticks, and campfires were once made for warmth, light, and cooking. If indicative of a large soak, there is a strong argument that the history of Ooldea Soak is referenced here. A large permanent water source essential to multiple mobs' survival in the worst of desert droughts, Ooldea was of ceremonial significance for those mobs for over 40,000 years. Therefore, I posit Hansen's largest roundel could signify Ooldea Soak and ceremonies around it, indicating the importance of the Soak to Western Desert mobs. When the transcontinental railroad discovered Ooldea, it set up a station there, leading to permanent settlement, Ooldea Mission, and several bores. The Mission lured in Aboriginal Australians with sweets and alcohol, curating a dependency essential to curing them of their sinful beliefs and naked bodies. Within 40 years of Euro-Australian settlement, Ooldea Soak was nearly empty, leaving one bore with any output, which produced brackish water. Forced removal was initiated by the state due to the dire situation of the drying soak, but was within Maralinga's boundaries, meaning continued forced removal and refusal of any Anangu trying to return there.[98]

A number of Anangu continued living traditional nomadic lives during the testing period. Many had never encountered whitefellas yet including Hansen's parents and older siblings until they were found in 1958 and forcibly sent to Cundeelee Mission, which is on foreign land to Spinifex people. The last family believed to have been forced out of the bush was not until 1986 — a Spinifex family of seven, afterwards given the family name of Rictor (with the exception of Angelina Tjaruwa Woods). In that sense, Hansen's roundels represent campsites and rockholes

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[98] See Mittman, *Jonathan Kumintjara Brown*, and Mattingley, *Maralinga*.

being used at the same time as the tests. Anangu who saw explosions hurried to hide in the sand from the odd explosions.[99] The British and Australian militaries had "keep out" signs around the area, but these were people who had not heard of, much less seen, the English language. This reading utilizes the function of time in concentric roundels for past, present, and future all together at once; not linearly.

Aside from the larger diameter from other roundels, the major trial is shown to have a great depth, width, and height signifying the catastrophic height and width of a nuclear mushroom cloud, as well as the crater left behind. One such crater in particular could be the Marcoo crater. This particular crater significantly refers to the "Pom Pom incident" recorded in the 1984 McClelland Royal Commission, which probed the British nuclear program in Australia seeking to uncover concealed truths first unleashed by whistleblowers in 1976. The commission's 1985 report revealed a number of attacks on the tests as well as evidence of thoughtless and hushed harm to Anangu of which the Pom Pom incident is the most thoroughly documented.[100]

In 1957, the Milpuddie family happened to camp on the edge of the Marcoo crater created by one of the major tests, Operation Buffalo, carried out just eight months prior. Traveling in the traditional nomadic ways with no clothing means walking everywhere barefoot on highly radioactive sand, sleeping naked on it, hunting meat and collecting seeds that live in it, inhaling its dust, and cooking in it. Edie Milpuddie was pregnant. She lost the baby soon after and suffered more miscarriages later. She lost a son at two of a brain tumor, a daughter at six

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[99] See Mittman, *Jonathan Kumintjara Brown*, and Mattingley, *Maralinga*.

[100] See Mittman, *Jonathan Kumintjara Brown*; Mattingley, *Maralinga*, and Tynan, "Thunder on the Plain," *Black Mist Burnt Country*, 20-35.

months, and a premature daughter weighing in at less than one kilogram (less than 2.2 pounds) who developed epilepsy. Painful sicknesses befell the whole family and consequent generations. Edie and Charlie Milpuddie's son and daughter around ages two and eleven developed severe heart and breathing conditions. That daughter had miscarriages, and then had a daughter born with congenital dislocation of the hips as well as heart problems, and a son with a club foot. Charlie Milpuddie left the family almost blind and "talking silly" and died camping alone of pneumonia and heart failure.[101]

At a closer look directly around the large roundel, there are seven small concentric systems. Though there were not exactly seven members of the Milpuddie family, these could be indicative of campsites on the edge of a nuclear bomb's crater. Perhaps these campsites reference the Milppudies' camp in the Pom Pom incident, perhaps the Rictor family of seven living nomadically through all of the tests, perhaps Ooldea Soak and large ceremonial gatherings there, and/or perhaps reference a section of the *Minyma Tjuta*, or Seven Sisters Tjukurrpa. Minyma Tjuta is a far reaching major Tjukurrpa story that many men and women share custodianship of in order to look after the Tjukurrpa's entire breadth of land and sites.[102] The Tjukurrpa does pass through Maralinga area, and because this Tjukurrpa is common among many desert mobs, it is likely that it was one of Lucy Hogan's, a senior Spinifex woman and Hansen's close aunt. Because Hansen was born off Spinifex land, she did not have her own Tjukurrpa — which one mainly acquires through birth site and the site where one's umbilical

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[101] Tynan, "Thunder on the Plain," 27-8; Mattingley, *Maralinga*, 44-5. Many of these symptoms overlap with those of the AEC's radiation experiments with sheep and the Utah sheep, both of which are explained in depth in *Bulloch*, 95F.R.D. at 131-133, and *Bulloch*, 763 F.2d (McKay, J., dissenting 1 985) at 1123-1124.

[102] See Margo Neale, *Songlines: Tracking the Seven Sisters,* ed. by National Museum of Australia, (Canberra: National Museum of Australia Press, 2017).

cord falls off. Therefore, when she began painting, she painted her birth place of Cundeelee, but without Tjukurrpa, and she oftentimes assisted Hogan. When Hogan passed away, Hansen inherited Hogan's Tjukurrpa and became a senior Spinifex woman herself.[103]

Minyma Tjuta is a story of seven sisters working together to keep one another safe while on the run from a lustful man named Nyiru. Nyiru possesses magic and shapeshifting abilities. A possible read in this context could be the similar qualities between the Minyma Tjuta and Anangu, and Nyiru and the rising mushroom cloud, crater, fallout, sickness, and death from nuclear colonialism. If Nyiru is a read of the large roundel through the context of his shapeshifting and magical abilities, then this Mynma Tjuta context reflects accounts of Anangu in the desert who saw a terrifying cloud thunder and rise. In the 1970s, Yankunytjatjara land rights and anti-nuclear activist Yami Lester was a leading whistleblower and spokesperson for Aboriginal Australians impacted by the tests. He described the black mist that killed, sickened, and blinded many at Wallatina, where he was when one of the fallout clouds passed over. He was about 10 years old and was eventually fully blinded from the fallout. He recalls hearing the loud bang, and then a rolling black cloud-like formation quietly floated through and above the trees towards them: "The old people were frightened. They reckon it was *mamu*, a pretty hard word to translate into English . . . It could be something that could be bad or evil spirit, or something we are not sure what it is. . . . They used *woomera* (spear-throwers) to make that 'something' to change direction and go away, not to come to the main camp."[104] Tjariya Stanley

[103] The Hogan-Hansen painting relationship relays the major role painting has served in passing down culture to younger generations who were born off traditional homelands, therefore without culture in the traditional sense. This further exemplifies the adaptability of Aboriginal Australians to keep culture alive despite new challenges.

[104] Mittman, "Atomic Testing in Australian Art," 52. For direct Lester quote, see Mattingley, *Survival in our own land*, 92.

lost her parents shortly after the black mist. She told how *ngankarri* (witch doctors) at Ernabella (Pukatja) performed a ceremony to save people: "They performed a ceremony and by removing their *tarka* (bone) from their forearms and throwing it towards the smoke, tried to push it away and stop It from harming the Anangu. But the smoke was too powerful, too strong. Many Anangu died."[105]

The Minyma Tjuta Tjukurrpa further overlaps with Hansen's concentric circle iconography. Tjukurrpa exists in the past, present, and future all at once, much like how time can be warped in iconographic representations, which I argue Hansen divulges through concentricity. Also, by doubling Tjukurrpa and the rockholes, resources, campsites (possible to safely make pre-Maralinga, and no longer available or safe to make post-Maralinga), the discussion expands from a matter of lost resources from a survival-inconvenience perspective, into a self-determining response to nuclear colonialism's severe threat to cultural-survivance. Now, these roundels are also campsites on Tjukurrpa tracks that these custodians walked in order to care for the rockholes and resources — a central activity to retain legal, moral, and spiritual balance in Anangu culture. By doubling the Tjukurrpa across the nuclear test site, Hansen demands that her culture and land ownership remain, despite such threats as radioactive detonation, contamination, sickness, and death.

Tjukurrpa paintings adhere to strict laws of concealment within mobs and between cultures. As Myers says of the transculturation of desert acrylics: "These works suggest, they do

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[105] Mittman, "Atomic Testing in Australian Art," 52. See footnote #20: "Recorded by Margo Birnberg, Ernabella, December 2015.

not tell."[106] Coming from a non-Anangu viewer, such as myself, only so much information can be extracted other than the presence of Minyma Tjuta and its basic characteristics. But that carefully constructed version of a presence serves to inform outsiders of a presence — a presence of a body knowledge that cannot be possessed with only limited, censored information. This simultaneous representation of accessibility and concealment relates to a doubling in and of itself with a political role of self-determination. "Politically, these often-resplendent surfaces act as double-sided screens, at once revealing glimpses of but also concealing secret, sacred content. Hiding in the *rarrk*, or dazzle," writes Smith.[107] *Rarrk* refers to Anthropologist Howard Morphy and his decades of work with Yolngu people in Arnhem Land who produce bark paintings. The family-specific and generationally-specific cross-hatching patterns cover the surface with an effect called *bir'yun*, which translates as "to shimmer brilliantly."

In my formal analysis, I described Hansen's dotting to have the pulsing, visceral effect of peeling bells; bells that connote the hidden history of blasting nuclear bombs, radioactive fallout on Anangu, and a censored Tjukurrpa transcendence moderated for external audiences.[108] As dotting is in desert acrylics, *rarrk* is the most intense and time-consuming part of bark painting, and for good reason. *Rarrk*'s optical effect creates an illusion of movement by making it impossible for the eye to fixate. This creates *and* protectively conceals these manifestations of

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106 Myers, "Doublings," 42. For "transculturation," see Ian McLean, "Theories: A Transcultural Theory of Indigenous Contemporary Art," in *Double Desires*, p 38-41.

107 Smith, *Art to Come*, 46.

108 Fracoise Dussart, "What an acrylic can mean: The meta-ritualistic resonances of a central desert painting," in Boles and Morphy, *Art from the Land: Dialogues with the Kluge-Ruhe Collection of Australian Aboriginal Art,* (Charlottesville: University of Virginia, Kluge-Ruhe Aboriginal Art Collection, 1999), 211: "The nature of the non-indigenous non-natural material declares its accessibility. But it is a special kind of access. It offers versions of the Dreaming that are *war raja* 'open' (expressing qualified information), that are constituted specifically for a non-Warlpiri audience."

an ancestral being and its power, which shine like the ochres and oil used in body painting for ceremony — another act of manifesting ancestral power. The shimmering effect in ceremony and painting is where transcendence occurs.[109]

Carty describes a parallel for dotting in ceremony, where vegetable down is used to dot artifacts, ground designs, but also, bodies in ceremony. These dots of down are "shaken *off* the body in performance as traces of ancestral potency. In such contexts the balls or dots of down are emanations of ancestral power."[110] Regarding bark paintings, Morphy writes: "The connotations in a single painting may be multiple, varying according to different attributes of the ancestral being concerned, the events in its journey, or the purpose for which the image has been made." But Morphy also theorizes that an equivalent of the transformation of *bir'yun* presents itself in the form of dotting on desert acrylics.[111] I argue, then, that dotting has a dual role in Tjukurrpa paintings: a "manifestation" — or self-determination — of culture, and the necessary concealment to protect culture.

Conclusion

Hansen's semantics weave in and out of one another. They shatter any linear commemoration of Maralinga. Instead, she develops the history in its complex forms and channels in an act of self-determination. Through painting, Hansen physically emplaces the displaced Spinifex presence within Australia's history of nuclear development. She has adapted

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[109] Howard Morphy, *Becoming Art: Exploring Cross-Cultural Categories,* (Oxford and New York: Berg, 2007), 92-96.

[110] Carty, *Creating Country*, 232.

[111] Myers, "Doublings," *Everywhen*, 42.

Tjukurrpa painting to demonstrate a new angle of the style's potential purposes. Not only does she establish her land and culture, she bridges Anangu-style of evidence (found through knowledge of Tjukurrpa), and Western-style evidence (which demands hard facts). The Anangu-style of evidence bases itself on at least 50,000 years of culture tied to the land. The western-style is based on a couple thousand years of constant change and relocation, and less than 250 years in Australia exercising a severe disconnect from the land, particularly in comparison to the former. Yet, as both cultures are now inextricably linked, Hansen practices art and politics in methods of adaptation and continuity as ways towards reconciliation through cultural survivance and self-determination in this ever-shifting world and the art market's ever-new audiences.[112] As early Spinifex acrylics did, *Maralinga* renders political evidence, and, as the Western Desert art movement did, *Maralinga* recapitulates self-determination. As a politician and community elder, Hansen embraces her unique position, knowledge, community, and artistic skill to fill in the gaping holes of the public's understanding of British nuclear testing in Australia.

[112] Smith, *Art to Come*, 156: "While being very much of its present time, this art is also founded on beliefs, procedures, and imagery that, despite countless vicissitudes, have been adaptable enough to maintain definitive continuities for at least fifty thousand years."

— Chapter Three —

A Comparative Art History

In the first two chapters of this thesis, I considered work by two Indigenous artists, one from the United States and another from Australia, whose work addresses the history of nuclear testing on Indigenous lands. Those two artists, each in their own context, proved important for opening doors to subsequent generations by politicizing a sensitive topic so that more forthright speech — artistic and otherwise — could gather around it. In order to better situate the full significance of their actions, in this chapter, I describe the deeper histories of Indigenous art in New Mexico and the Western Desert so as to describe the specific sets of circumstances within which each artist intervened. This helps to show what is so remarkable about their particular politics of art because it demonstrates that their accomplishments exceeded what the institutions available to them expected from their work. I also consider these artists' legacies by attending to work by contemporary Indigenous artists who continue to think about the atomic age in ways made possible by what T.C. Cannon and Debbie Hansen each did. Taken all together, I make an argument that Cannon's and Hansen's work relied on the clever and at times cryptic strategies for signifying that I discussed in previous chapters in order to speak on matters shrouded in secrecy, breaking through a culture of silence to enable the resistant discourses of artists who came after them, fundamentally altering consciousness of atomic history where it concerns Indigenous people.

By using the sharing and differencing of a comparative lens in a global framework, these unique stories suddenly reveal a wide-reaching relatability further revealing the need for more discourse on nuclear colonialism today, and the critical stance art takes on in two settler

colonialist countries to this end. This chapter compares Cannon's and Hansen's roles in opening the proverbial door between the slightly-ajar, subtle political resistance of early modern Indigenous art, and the forthright political vocalization of contemporary Indigenous art today. Furthermore, not only was the Atomic Age one of the political issues raised, but it was one of *the* issues prompting this newly awakened political consciousness in late twentieth-century Indigenous art. To better contextualize the comparison, I bring in Awa Tsireh (San Ildefonso Pueblo), Albert Namatjira (Arrernte), Will Wilson (Diné/Navajo), and Yhonnie Scarce (Kokatha/ Nukunu).

Breaking Institutional Boundaries

Comparing the scholarship from the first chapters reveals interesting similarities between the different art styles and histories. For example, Myers's "doublings" theory regarding desert Aboriginal Australian acrylics was a substantial part of my discussion in chapter two. It also provides a more accurate framework for what I referred to as "double signifiers" in Cannon's work. The Saussurian signifier — even as a double — does not connotate the same depth of interlocking significance as Myers's "doublings."[113] For example, in *[Untitled] Bombs and Circles*, Cannon's red-outlined iconic mushroom cloud displays overlain cross-cultural histories that divulge government propaganda for the "peaceful atom" rhetoric through containment of information, censoring of images, cartoonish delivery of information, and use of visual and pop culture, while simultaneously signifying Trinity's radioactive fallout causing generations of

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[113] See Ferdinand de Saussure, *Course in General Linguistics,* ed. by Charles Bally, Albert Schehaye, and Albert Riedlinger, trans. by Roy Harris, (Chicago: Open Court, 1916); and Mieke Bal and Norman Bryson, "Semiotics and Art History," in *The Art Bulletin* 73, no. 2(June 1991): 174-208.

havoc in downwinders lives, and the ongoing effects of uranium mining and LANL's secret presence on nearby Pueblo and Navajo Nation lands. In *Maralinga* and *As Snow Before a Summer Sun*, the most emphatic of political messages is constructed in the central components. Both artists lay clear challenges to the governments' false histories at their center: these nuclear zones are on Indigenous lands and peoples. Physically, Cannon's central vertical axis is built with a Native American woman and baby and a virile mushroom cloud on top of them. Hansen also physically places the main concentric system centrally giving a view of a major nuclear blast with fallout from above that is directly on the red sand of Spinifex land, its resources, and people signified by the rippling concentric circles, like the continuing rippling effect of nuclear testing.

Art as political evidence for specific political gain is not new to my discussion. Spinifex acrylics and Spinifex Arts Project began this way, as referenced in chapter two, specifically in connection with Hansen's *Maralinga*. Cannon and Hansen work from the imbalanced socioeconomic and political structures of their generational histories. For Cannon, these histories are specific to the art histories of Santa Fe-area Pueblos, IAIA, and Kiowa and Caddo peoples in rural southwestern Oklahoma. In Hansen's case, these histories are specific to the art histories of the Spinifex People within the context of the broader Western Desert art history, which was influenced by the Hermannsburg School. Each of these institutions are influenced by the art market, a melting-pot of society, politics, and economics.

Social imbalances show in the forms of oppression, assimilation, language and cultural barriers to understanding, which all lead to economic imbalances that became stuck in the form of welfare colonialism, and the challenge to have paintings displayed as fine art instead of

ethnographic images. Cannon's work should be considered as a generation of art historical lineages of Indigenous arts in western medium including early Pueblo watercolors,[114] the Kiowa Six, and IAIA. Likewise, Hansen's lineage involves Spinifex Arts Project as part of the Western Desert art movement, and the Hermannsburg School. Such focuses and art histories have received the attention of a number of publications and cannot all be covered here. However, the relatability of these multiple modernities and contact zones offers useful background in comparing Hansen's and Cannon's works. These parallels include settler colonialism, government assimilation programs, questions of authenticity, western concepts of art and artist imposed on Indigenous histories of mark-making, secret-sacred challenges of new mediums with new audiences on new platforms, post-World War nationalisms, patronage and cultural primitivism, politics, patrons' roles in politics, economy and the art market, and the influence of art advisors and novel mediums.[115]

Though the history of Indigenous arts and the art market is fraught, in particularly, with exploitation, it is also critical to recognize that the market-Indigenous art relationship is not wholly negative. It is yet another complex history in and of itself. As a staging point for this

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[114] For more on early Pueblo watercolors, see J.J. Brody, *Pueblo Indian Painting: Tradition and Modernism in New Mexico, 1900-1930,* (Santa Fe: School of American Research Press, 1997); Rennard Strickland and Edwin L. Wade, "Native American Painting: Schools, Styles, and Movements," in *The James T. Bialac Native American Art Collection*, edited by Mark White, (Norman: University of Oklahoma Press, 2012), 61-90; Janet Catherine Berlo and Jessica L. Horton, "Pueblo Painting in 1932," in *A Companion to American Art*, ed. John Davis, Jennifer A. Greenhill, and Jason D. LaFountain, (Hoboken: John Wiley & Sons, Inc., 2015), 264-280; Bruce Bernstein and W. Jackson Rushing, III, *Modern by Tradition: American Indian Painting in the Studio Style,* (Santa Fe: Museum of New Mexico Press, 1995).

[115] See Michaels, "Bad Aboriginal Art," 153,4. He discusses the importance of the permanency of acrylic paint on canvas versus the ephemeral, private nature of body painting and sand drawings of traditional desert Aboriginal mark-making: " . . . in Central Australia at least one irreducible source of influence persists: materials . . . marketable painting in the Centre requires a supply of canvas and acrylics, and the painters consider this to be the adviser's first responsibility. As Papunya art became recognized, it obviously received advice on materials justified by arguments of durability and suitability for the museum/collector market it was attracting."

discussion, the highly relevant wind-shifts from assimilation to anti-assimilation in the two countries were directly influenced by post-war nationalism. Both post-World War I U.S. nationalism and post-World War II Australian nationalism shifted attitudes towards Indigenous people during which the Anglo populations of each country "sought an identity grounded less in empire and more in their own local heritage," writes Ian McLean on Aboriginal art.[116] Modernist artists, patrons, and anthropologists in the Santa Fe area and in the Central and Western Desert areas, spurred on by nationalistic rhetoric felt the respective Indigenous arts expressed U.S. and Australian identities as "pure" representations of the colonizers' lands.

For example, out of the Dawes Act of 1887, Santa Fe Indian School (SFIS) began in 1890 as a government-run assimilation boarding school exemplary of the "kill the Indian, save the Man" slogan.[117] Around the early 1920s, with the aforementioned threats to Pueblo ceremonial dances and the Bursar Bill came an insurgence of anti-assimilation Anglo preservationists who "believed that modern Pueblo painters could help to preserve Pueblo culture by recording it and argued that if federal policy supported Native art production, impoverished American Indians would reap many economic benefits while also contributing to the broader American culture."[118] Evidently, this mentality shifted SFIS's focus towards "traditional arts" and in 1932 Dorothy Dunn started the painting Studio on campus. Her strict regimen for what came to be known as

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[116] McLean, *How Aborigines Invented the Idea of Contemporary Art: Writing on Aboriginal Contemporary Art,* (Sydney: Institute of Modern Art and Power Publications, 2011), 26.

[117] Many government-run assimilation schools in the U.S. and Canada used this slogan, and it is referenced in multiple history books, documentaries, and films. See Churchill, *Kill the Indian, Save the Man.*

[118] Sascha Scott, "Awa Tsireh and the Art of Subtle Resistance," in *The Art Bulletin* 95, no. 4 (December 2013), 601.

"the Studio Style" was collectively formed by the San Ildefonso School watercolors and the Kiowa Six group of painters [Fig. 12].

The Studio for Native Painting was "one of the most important . . . institutional changes" that "reflected an ever-growing national interest in the aesthetic values of Native culture," writes art historian W. Jackson Rushing.[119] Coincidentally, Awa Tsireh began painting with watercolors at the San Ildefonso Day School, and the Kiowa Six were a notable group of Plains Indians from Oklahoma who practiced art in the 1930s at the University of Oklahoma. Also notable, Jack Hokeah of the Kiowa Six lived with renowned artists Maria and Julian Martinez in San Ildefonso for ten years, therefore attending SFIS/The Studio, and participating in a Pueblo mural project under Santa Fe muralist Olive Rush's supervision.[120] A 1960 sketch [Fig. 13] shows the Kiowa Six influence on a young Cannon.

By the 1970s, anti-assimilation Anglo preservationists were infiltrating the Australian desert scene as they had in the 1920s around Santa Fe. The Gough Whitlam Labor government was elected in 1972 and put the policy of "self-determination" in motion. Unfortunately, the government's ideal of self-determination came with paternalistic policy and rhetoric — a far cry from the autonomy desired by Indigenous Australians.[121] One specific desire was — and continues to be — for autonomy from the pernicious cycle of welfare colonialism.[122] This

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[119] W. Jackson Rushing, III, "The Legacy of Ledger Book Drawings in Twentieth-Century Native American Art," in *Plains Indian Drawings 1865-1935: Pages from a Visual History*, Janet Catherine Berlo, ed., (New York: Harry N. Abrams, Inc., 1996), 58.

[120] Rushing, 58.

[121] See Sarah Maddison, "Indigenous Autonomy Matters: What's Wrong with the Australian Government's 'Intervention' in Aboriginal Communities" in *Australian Journal of Human Rights* 14, no. 1 (December 2008): 41-61.

[122] See Moreton-Robinson, "Introduction," in *Sovereign Subjects: Indigenous Sovereignty Matters,* (Crows Nest, NSW: Allen & Unwin, 2007), 11.

preservationist mentality played out in a similar manner in 1971, when art teacher Geoffrey Bardon arrived at Papunya settlement and a group of about 20 Aboriginal men started the artist-run company, Papunya Tula Artists to carve a niche in the art market for economic autonomy.

A Western, colonialist construct with a Western, colonialist audience, the art market was a critical player to transcend cultural ambiguities as a vehicle to better survive and have a voice in the imposed environment of cash-economy, legal attacks, and forced assimilation.[123] Exploitation being a thread of these relevant art histories — exploitation of people, land, and economic situation — the reverse-exploitation of the market was used by Indigenous artists as a mode of self-determination. By utilizing the art market, these artists can employ four facets of self-determination: they can self-determine (1) an oppressed and misunderstood culture, (2) sustainable income — as a way out of welfare colonialism, (3) the expression of political voice, and/or (4) experiences and traumas historically suppressed by settler-colonialist government(s) — which, in Hansen and Cannon's cases, are those of nuclear colonialism on Indigenous peoples and lands. While sustainable income might be directed more toward the internal community, the other three facets strive to reach external audiences. In these instances, the art market can act as a bridge of transcultural understanding traversing language barriers when necessary. This does not deny the art market's challenging history as a part of colonialism; rather, that history enhances discussions of self-determination through reverse-exploitation.

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[123] Example, see Roxanne Dunbar-Ortiz, *An Indigenous Peoples' History of the United States*, ReVisioning American History series, (Boston: Beacon Press, 2014), 7: Of the economic situation forced upon Native Americans, historian Roxanne Dunbar-Ortiz writes: Historian Roxanne Dunbar-Ortiz writes: "Through economic penetration of Indigenous societies, the European and Euro-American colonial powers created economic dependency and imbalance of trade, then incorporated the Indigenous nations into spheres of influence and controlled them indirectly or as protectorates, with indispensable use of Christian missionaries and alcohol." She could have been writing about the situation in Australia as well.

An example of art's role in cultural survivance in the face of imbalanced social, political, and economic structures is the art history of early Pueblo watercolors in New Mexico. The relationships built between early Pueblo watercolorists such as Awa Tsireh (San Ildefonso) [Fig. 14] and Tonita Peña (Cochiti) [Fig. 15], and Santa Fe/New York patrons such as John Sloan, Alice Corbin Henderson, and Mabel Dodge Luhan were paramount in the fight against US government assimilation and threats to land rights. In particular, these partnerships worked in stride against instances such as government attempts to ban Pueblo ceremonial dances deemed "immoral" in 1921 and 1923,[124] and the Bursum Bill in 1922, which threatened Pueblo control over their lands.[125] The two groups worked independently and jointly; a conglomerate largely populated by the artists and their paintings, and the patrons and their influential reach in areas like Washington, D.C. and New York City.

While the patrons had tactics like signing petitions, providing interviews, flooding the national popular press on the topic, and creating opportunities to show Pueblo paintings popular to the Euro-American modern aesthetic, Pueblo painters and their communities also partook in efforts to defend land and sovereignty through individual Pueblos, the All-Pueblo Council of combined Northern New Mexico Pueblos during the 1920s, and through the art market. These efforts included sending statements of protest, circulating petitions for fair treatment, and sending delegates to Washington, D.C. who publicized Pueblo concerns in congressional hearings and with outsiders more broadly.

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[124] Circular No. 1665 in 1921 and 1923 threatened Pueblo dances. For more, see Tisa Wenger, "Land, Culture, and Sovereignty in the Pueblo Dance Controversy" in *Journal of the Southwest* 46, no. 2 (Summer 2004), 381–412.

[125] See Scott, "Awa Tsireh" and Brody, *Pueblo Indian Painting*.

As political, economic, and social strategists, Pueblo painters had to negotiate three political bodies, and carefully: tribal, local, and national — negotiations that pronounce the important role of artistic agency playing the art market.[126] During these specific political tensions, modern Pueblo paintings provided visual evidence of existing and thriving Indian culture, and by utilizing their market popularity, brought attention to the imminent threat to the very culture represented. Both preserving and protecting culture, Scott identifies artists' tactics as "adaptive strategies . . . includ[ing] silences, misdirection, coding, and masking." Referring to the example of Awa Tsireh, she explains: "For his paintings to be profitable, they had to signal authenticity to his Anglo patrons, who took on themselves the authority to define the boundaries of this authenticity, but he also had to be careful not to reveal sensitive ritual information."[127] But the art market was not only used for political visibility. As Scott reinforces, "the Pueblos' dire economic situation led many tribal communities to rely on Anglo markets for survival."[128] For both political and economic gain, painters both accommodated the market's audience demands and worked to resist cultural control and exploitation.

One of the best and earliest examples of desert Aboriginal art and art market success is that of Albert Namatjira. In the 1930s, Central Desert artist Albert Namatjira (Arrernte) became hot on Australia's national market for his Hermannsburg School watercolor landscapes. He was famously touted as an assimilation success story: "an Aboriginal who represented the potential

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[126] Scott "Awa Tsireh," 602.

[127] Scott.

[128] Scott "Awa Tsireh," 599.

for success of the federal government's assimilation policy."[129] In 1939, the Art Gallery of South Australia purchased his painting *Haast's Bluff (Ulumbaura)* [Fig. 16] taking the first leap of any major art museum in Australia to acquire an Aboriginal painting. Similar to the "vanishing race" rhetoric of nineteenth-century United States, this was a period in Australia when belief in a quickly fading Aboriginal culture influenced the federal government's Aboriginal affairs. Most Euro-Australians accepted the assimilation policy as a viable solution. This resulted in a misconstrued consideration of Namatjira's work, who achieved such fame that many household living rooms presented reproductions of his works through the 1950s. However, Philip Jones explains that "the knowledge that this work . . . was by an Aborigine prepared the way for later public acceptance of more distinctly traditional forms of Aboriginal art."[130] Furthermore, far from what was deemed "assimilation art," Namatjira still rendered landscape imagery of his country, his Dreaming sites: "Namatjira painted with Western materials and techniques, but he was adapting and appropriating the symbolism of Western landscape painting for his own purposes. His paintings are firmly grounded in Aboriginal tradition, mythology, and place . . . ."[131]

The close relationship connecting Hermannsburg Mission and Papunya settlement reveals that the acrylic artists were well aware that independent income was possible, though insufficient, through artifacts in the tourist economy, but, as Namatjira demonstrated, more

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[129] Steven Hemming, Philip Jones, and Peter Sutton, "Survival, Regeneration, and Impact," in Sutton, *Dreamings: The Art of Aboriginal Australia,* (New York: G. Braziller in association with Asia Society Galleries, 1988), 202.

[130] Philip Jones, "Perceptions of Aboriginal Art," in *Dreamings: The Art of Aboriginal Australia,* (New York: G. Braziller in association with Asia Society Galleries, 1988), 173.

[131] Hemming, Jones, and Sutton, "Survival, Regeneration, and Impact," 201.

realistically attainable by way of paintings on the art market.[132] Many knew Namatjira and his family as he remained a community figure. Many had partaken in carving and painting artifacts for the Hermannsburg tourist market before moving to Papunya — a market long established with the founding of Hermannsburg Mission in 1877. Luke Scholes points out that watercolors were being produced along with artifacts before art advisor Geoffrey Bardon's influence in the novel acrylic paintings: "[t]he manufacture of weapons and carved animals was actively encouraged by the settlement administration, who considered it a viable private enterprise."[133] Many had kinship links between the two locations, traveling between them. What was different with the acrylic dot paintings in 1971, was how they satisfied the preservationist ideal of authentic Aboriginality through the iconography, and the nice semblance they made within high-culture, sophisticated modes of Modernism of the recent mid-twentieth century,[134] suggesting a commonality with the marketability of early Pueblo watercolors.

In 1971, the Papunya Tula Artists cooperative formed, and its specific style of acrylic dotting became known as the Papunya School. The organization worked with a series of Euro-Australian intermediaries to establish a sustainable place on the market. The first of these was Geoffrey Bardon, the art director infamous for introducing acrylic paints to the community. However, a number of other intermediaries significantly helped build the Papunya presence. Scholes uncovered new evidence in 2016 that contended with Bardon's sole David-versus-

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[132] Papunya settlement was established in 1959 and is considered the originating site of the Western Desert art movement.

[133] Luke Scholes, "Unmasking the Myth: The Emergence of Papunya Painting," in *Tjungunutja: From Having Come Together*, 127-61, (Darwin: Museum and Art Gallery of the Northern Territory, 2017), 128.

[134] Chris Anderson and Francoise Dussart, "Dreamings in Acrylic: Western Desert Art," in Sutton, *Dreamings: The Art of Aboriginal Australia,* (New York: G. Braziller in association with Asia Society Galleries, 1988), 96.

Goliath figure that has monopolized the Papunya scholarship. Pat Hogan, for example, was an essential figure with the daunting task of establishing a market for this new art form.[135] Though Bardon's influence was critical, health issues unfortunately kept Bardon from supporting the cooperative at the pace the avid painters needed, ultimately costing him his position.[136]

Because of the pivotal relevance between sales and economic autonomy, marketability was of prominent concern. Myers specifies that these acrylics were produced specifically for outsiders and not for use within the Aboriginal communities.[137] This is also the case with Pueblo watercolors. Fittingly, McLean, Myers, and Brody ascribe the terms "transcultural," "intercultural," and "cross-cultural," respectively, to articulate the real novelty of these artforms, and the interesting socioeconomic and political dialogue between the Anglo and Indigenous influencers. About early Pintupi People's paintings with Papunya Tula, Myers says that they have learned "something about the aesthetics of Europeans and they have responded somewhat to what they believe will sell,"[138] and that "the capacity of Aboriginal acrylic painting to objectify political aspirations and identity, as well as indigenous aesthetic sensibilities."[139] Carty posits that some art centers have fed so far into the abstraction-hungry market desires, that the result risks enabling an "aesthetic amnesia in its audience, who for the most part have forgotten

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[135] Scholes, *Tjungunutja*, 145.

[136] Scholes, 128.

[137] It is also important to mention that these acrylics continue to hold a cultural wealth specific to Aboriginal Tjukurrpa knowledge, not monetary. This can create conflict between an artist who sees the wealth in the knowledge of culture when the art manager sees the wealth the audience is looking for: style and quality. See Myers *Painting Culture*, 3.

[138] Myers *Painting Culture*, 67.

[139] Myers, 5.

where this imagery comes from, what it means, and what it asks."[140] The lesser abstraction of iconography in Spinifex acrylics, he argues, is a characteristic that definitively separates Spinifex from the broader Western Desert art movement. Though Spinifex is now highly active in the market and for the same self-determining reasons as Papunya Tula, Carty makes the argument that their hold on blatant iconography more than other art centers directly owes to the political beginnings instead of the art market beginnings of their paintings.[141] As is true for the whole Western Desert art movement, however, the need for these transcultural paintings to appeal to the market in order to be seen by the audience is two-fold: (1) help achieve and maintain economic autonomy, and (2) share and educate culture. Hansen adds a third goal though: to serve as evidence that challenges the false narrative about Maralinga by physically interjecting (at least with paintbrush) the Spinifex direct presence within the history of *Maralinga*.

Reasons behind the market-popularity of Spinifex acrylics and Pueblo watercolors resound with one another and connect to Hansen and Cannon. Spinifex people won their Native Title Claim [*Anderson v Western Australia* [2000] FCA 1717 (Austl.)] in the federal court system with the aid of their paintings in 2000. In 1924, the Bursum Bill [S. 3855, 67th Cong. (1922)] was overturned in Congress and instead the Pueblo Lands Act (43 Stat. 636) was established with the aid of their paintings, a legislative move that set the table to push for Indian rights.[142] Hansen — similar to early modern Pueblo painters — used her agency to paint a popular market style, ensuring its visibility on the market, which furthers her political reach. Romantically, the Anglo-

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[140] Carty, "Seeing the desert for the trees," 38.

[141] Carty, *Spinifex*, 38.

[142] *Anderson v Western Australia* [2000] FCA 1717 (Austl.); Bursum Bill, S. 3855, 67th Cong. (1922); Pueblo Lands Act, 43 Stat. 636; Scott, "Awa Tsireh;" "Unspoken," website of *PBS Utah*.

audiences saw each as capturing authentic indigeneity — also speaking to post-World War nationalisms leading Euro-Americans and Euro-Australians to seek an artform solely identifiable with the country.[143] Yet, they also perceived these arts to be reverberating with trending modernist styles.[144] Cannon takes a postmodernist approach to these two characteristics of modern Pueblo painting's marketability, stylistically placing himself in the current market and challenging the primitivist demands and expectations held for so long by the market. Because of this, it is worth noting the closeness of Cannon, though from Oklahoma, and the Pueblo watercolorists.

In 1962, Dunn's Studio School closed and, using the same site, the Institute of American Indian Arts was founded. In 1964, an 18-year-old T.C. Cannon moved in as a boarding student. From chapter one, we know IAIA was multi-tribal and encouraged each individual to learn about his/her own Indian-ness while learning from others and from other tribal affiliations. We also know that IAIA offered the full breadth of art history and art medium courses, which Cannon enthusiastically soaked up. The Institute encouraged learning from and pushing away from styles such as the Studio Style and Kiowa Six style, which developed with influence from cultural primitivism. Cannon's artistic agenda, therefore, was greatly informed by these past styles, and therefore, the early Pueblo watercolors. As an example of his postmodernist response, he rejects the primitivist influence of what Native American art should look like as he riffs *between* Fauvism's large, flat planes of vibrant color [Fig. 17] and the identifiable flatness of

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[143] See Brody, *Pueblo Indian Painting*; and Wally Caruana, *Aboriginal Art*, (Melbourne: Thames & Hudson, 1993).

[144] See Scott, "Awa Tsireh;" Sutton, ed., *Dreamings*; Myers, *Painting Culture*; and Brody, *Pueblo Indian Painting*.

the Studio Style and Kiowa Six. He also riffs between Curtis's nineteenth-century "vanishing race" portraits of Indians [Fig. 18], Van Gogh's nineteenth-century portraits of collectors, and Cannon's portraits of Native Americans where the subjects occupy the European collector's chair, defying Curtis simply by their — and Cannon's own — presence as twentieth-century Native Americans. Furthermore, Cannon's collector portraits specifically signify colonialist exploitation entwined with European collecting, such as African masks or Native American rugs, such as in *Self-Portrait in the Studio* (1975) [Fig. 19].

In *As Snow Before a Summer Sun*, Cannon positions the woman's head in the center of the composition and the vertical column she and the mushroom cloud form. On her forehead looks to be a suggestion of a smaller mushroom cloud rising from her nose-tip and nostrils. She stares directly at us, turning the European art historical "gaze" around — a play that Scott yields critical to modern Pueblo painters' "emphasis on Pueblo self-determination and the politics of self-representation." She explains this in terms of their "'aesthetic agency,' or their attempts to elude and/or transform the colonizing gaze through their art. These artists were engaged in a two-way dialogue with colonial settlers, one conditioned by each participant's political needs and cultural and epistemological values."[145] About early Western Desert acrylics of the Pintupi people at Papunya, Myers says that they have learned "something about the aesthetics of Europeans and they have responded somewhat to what they believe will sell."[146] To implement Australian art historian Ian McLean's work, Cannon's tactics here perform as a "currency of transculturation," explained by the mutual intrigue of Indigenous and Western artists in the

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[145] Scott, "Awa Tsireh," 599.

[146] Myers, *Painting Culture*, 67.

other's art, and the universality of appropriation and mimicry. McLean states, "Since the first contact . . . Indigenous artists have been as interested in Western art as Western artists have been in Indigenous art," albeit from potentially different frameworks of interest.[147] Here, Cannon twists the colonizer's gaze to make it feel uncomfortable, because the truth of this history *is* uncomfortable, and certainly moreso than current textbooks' renderings.

Enter: Will Wilson and Yhonnie Scarce

Cannon and Hansen's main themes of protest reverberate today with the Indigenous peoples living in the silent contamination of nuclear colonization's past and ongoing activities, government silencing's ongoing effects, and generational and accruing traumas. But why use art to tackle such grave and gargantuan themes of which so many people are either unknowingly ignorant or actively denying? Alison Fields asks: "What expressions of public memory would allow open, difficult discourses that give credence to survivor testimonies? And, how can forms of remembrance not only commemorate the past but face present realities and future possibilities?"[148]

Answers to these important questions potentially lie in the forms of art and art exhibitions. For example, from 2016-2018, an art exhibition toured major museums in Australia, *Black Mist Burnt Country*, curated by JD Mittman at Burrinja Dandenong Ranges Cultural Centre Inc. Together, the fifty-five artists of Indigenous and non-Indigenous backgrounds exhibited a survey of responses to British Nuclear Testing history for viewers to contemplate the

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[147] Marina Tyquiengco, "Decoding Double Desire: a Conversation with Ian McLean," in *Contemporaneity: Historical Presence in Visual Culture* 4, no. 1 (2015), 211.

[148] Fields, *Discordant Memories*, 4.

varying experiences of Australia's entrance into the atomic age. In his forward to the accompanying catalog, musician, politician, and environmental and education activist The Hon. Peter Garrett AM deemed the exhibition "an act of remembering and bearing witness to a momentous series of calculated acts that shattered lives, especially the communities of the Pitjantjatjara and Yankunytjatjara lands."[149]

Today, Indigenous artists such as Yhonnie Scarce (Kokatha/Nukunu, b. 1973–) and Will Wilson (Diné/Navajo, b. 1969–) are putting the ongoing realities of nuclear colonialism on display similar to Cannon and Hansen. Wilson and Scarce each employs the sublime visual — creating truly awesome aesthetic experiences layered with technical processes and discussion. Their "atomic sublime" approach reflects and rejects the varying government ploys of the atomic sublime to distract the public from atomic horrors once total secrecy of nuclear testing was impossible. The U.S. popularized atomic explosion watch events on the Nevada Test Site through travelogue advertising as if advertising whale-watching ventures. The focus was always on the spectacle as entertainment and the "latest wonder of a wondrous West." It was promoted as such a safe activity, that the most danger would be of automobile accidents going to and from the site. In a 1957 *New York Times* article [Fig. 20], journalist Gladwin Hill wrote to remind tourists to plan their trip: "the [AEC]'s Nevada test program . . . extends through the summer tourist season, [and] the AEC has released a partial schedule, so that tourists interested in seeing a nuclear explosion can adjust their itineraries accordingly."[150] Accompanied with a cartoon of a mushroom cloud, the iconicity of the visual image "powerfully reaffirms this aestheticism —

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[149] Peter Garrett, "Forward" in *Black Mist Burnt Country*, 7. As the Spinifex People are part of the Pitjantjatjara language group, the lands he specifies include Hansen's.

[150] Hill, "Watching the Bombs Go Off," *New York Times*, June 9, 1957, 353.

from the early photographs and paintings reproduced in virtually every mass-audience pictorial outlet in America, to the boldly graphic sequences that developed as the pictorial magazines fought for 'scoops' on this intensely visual subject, until, finally, the logo of the atomic sublime would be anchored," writes Peter B. Hales.[151]

Wilson and Scarce connect the hushed realities for many Indigenous nuclear victims with the rest of the world today by providing a visible presence — a demonstrative type of presence not offered in the undeniably incomplete atomic age rhetoric. However, cultural concealment is now minimized and overtness is politicized: essentially a flip from Awa Tsireh and Albert Namatjira, and an extension of — and made possibly by — artists such as Cannon and Hansen. Scarce says, "I think I'm in a position of power, I don't usually like to use that term but compared to what my Ancestors and my grandparents had to deal with I think I'm in a really great position to talk about their history and my history."[152] It is worth noting that Wilson served a visiting professor tenure at IAIA from 1999-2000 and continues working in Santa Fe. Similarly, Scarce was born in desert country at Woomera, South Australia, and remains firmly rooted to family there. Woomera is home to the largest land weapons testing range in the world, the Royal Australian Air Force's Woomera Rocket Complex (WRC), and Scarce's family fell victim to nuclear fallout from the British atomic testing program.

Among her other series, Scarce's three-part installation *Thunder Raining Poison* (2015) [Fig. 21], *Death Zephyr* (2017) [Fig. 22], and *Cloud Chamber* (2020) [Fig. 23] responds to

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[151] Peter B. Hales, "The Atomic Sublime," in *American Studies* 32, no. 1(Spring 1991), 24.

[152] Yhonnie Scarce, interview for "Defying Empire: 3rd National Indigenous Art Triennial" exhibition at the National Gallery of Australia, May 26—September 10, 2017. https://nga.gov.au/defyingempireartists.cfmartistirn=42884#:~:text=Yhonnie%20Scarce&text=Thunder%20Raining%20Poison%20is%20a,my%20grandfather's%20and%20my%20Country

nuclear fallout. Each large-scale sculpture is composed of 2,000-hand-blown glass yams hung by wire from the ceiling, casting shadows and glinting reflections in varying formations. Curator Hetti Perkins (Arrernte/Kalkadoon) says of Scarce's works: "It's often the least strident-looking works that can actually pack the most powerful punch because you don't see it coming. And it's just like a king hit,"[153] or a knock-out punch. Mesmerizing plays of light from the fluid configurations of Thousands of softly rounded glass forms, organically molded by breath, move as if breathing with the room's air. The play of light from each fluid, breathing configuration mesmerizes viewers. *Thunder Raining Poison* hangs from ceiling to floor about 5 meters (16-1/2 ft) as a snapshot of the fallout that drifted down from the "black mist" clouds. At several meters wide, *Death Zephyr* stretches wide with wings and an open jaw anthropomorphizing the gentle but unstoppable travel of the black mists. *Cloud Chamber* crawls several meters near the floor and swoons upwards into a mushroom cloud. The title connects the cloud of radioactive contamination to a device used to detect ionized radiation.

Scarce uses yams, which are representative of native food, or "bush tucker," from her area at Woomera. Specifically, yams are a common women's Dreaming throughout desert mobs, and Scarce states that much of her inspiration comes from her personal lineage from strong women. Each wire connects to each yam at the wider end creating an intention to the dangling effect. When viewed up close, the yams resemble lynched bodies, referring to histories of lynching and massacring Aboriginal Australians, including nuclear tests. Furthermore, these 2,000 yams/lynched bodies also resemble little mushroom clouds — mushroom clouds that

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[153] Hannah, "Australian history put through the looking glass by Aboriginal artists Judy Watson and Yhonnie Scarce in new exhibition," online *ABC Arts* / *The Art Show* exhibition review.

contaminated, killed, and threatened resources and vegetation such as yams, Dreaming sites and culture, and bodies.

Each formation refers to the settler colonialist mindset of taking and harming others and their lands under nuclear colonialism. Valeri L. Kuletz writes of nuclear colonialism in the U.S.: "In this Indian country two landscapes - Indian and nuclear - meet at nearly every point of the nuclear cycle, from uranium mining to weapons testing to the disposal of nuclear waste."[154] New Mexico continues today as an active site for "uranium mines, uranium refining, nuclear research and manufacturing, and radioactively contaminated land," and that "more than 2,500 mines and associated mills dotted tribal lands, poisoning the environment and the bodies of approximately three thousand Navajo laborers," writes Fields.[155] Will Wilson reports from the Navajo Nation about these very issues, which resemble the welfare colonialism contended by early Pueblo watercolorists and rural Aboriginal art centers. Many Navajo people took jobs paying the minimum wage or less as miners because of limited economic possibilities for those who wanted to stay on the reservation. Provided with neither information concerning the risks they were taking, nor protective equipment, miners handling the raw ore with bare hands and no protective masks in the mines lay victim to spikes in illnesses, including twenty-eight times the average risk of lung cancer.[156] To make matters even worse, areas in the desert were left with post-mining water contaminated with uranium and arsenic — a "loaded combination," the detriments of which Pasternak explains: "uranium can damage DNA and arsenic can inhibit the

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[154] Valerie L. Kuletz, *The Tainted Desert: Environment and Social Ruin in the American West,* (New York: Routledge, 1998), 12.

[155] Fields, *Discordant Memories*, 174.

[156] Fields, *Discordant Memories*, 174-175

body's ability to repair that damage." To remind the reader, this is *water* contamination in *desert* country. So, when the tribe proposed shutting down such contaminated pumps, the source of unusually high rates of eye and kidney diseases in people, these same people were outraged: "[i]n a desert, the only thing worse than contaminated water was no water at all."[157]

Wilson's layered photographic processes, performance, and sculpture of an apocalyptic time, share a subliminal vibe through scale and mystical aesthetic effects, as does Scarce's works. In his *Auto-Immune Response (AIR)* series, the digitally-altered large-scale photographs combine wet-collodian plate with ground and aerial photography, performance, sculpture, and collaboration. Using his own body, he imagines what survival can look like in a world destroyed by nuclear colonialism by performing as the sole survivor called "the protagonist". The series follows the character through the demolished world who uses his Navajo culture to "re-member" a life of sustenance — to re-assemble the members (both human and non-human) of a survivable world.

Collaboration reifies this concept of reassembling members and memory, where memory is like the spinal cord to "re-membering" how to survive: structurally imperative to forging into the future. In his *AIR Lab* [Fig. 24] installation, he collaborates with Lipan Mescalero Apache Medicine Woman, Marika Alvarado, who cultivates the Indigenous plants and Medicines in the steel-framed greenhouse sculpture in the form of a traditional Diné hogan: a multi-purpose place of shelter, ceremony, and home.[158] Photographic renderings of the sculpture capture it at different stages. In [Fig. 24], plants are thriving. Light reverberates off of the glass and steel.

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[157] Judy Pasternak, *Yellow Dirt: A Poisoned Land and the Betrayal of the Navajos,* (New York: Free Press, 2011), 201-202.

[158] "Will Wilson: AIR / Survey," website for the *University of Texas Visual Arts Center*.

The green life is the only color, popping against the brown steel shadows and the bright white light illuminating the space's edges and glass panels — a beacon of survival and survivance through Indigenous culture and knowledge.

His multiple processes interlock in his art. Each process is an intentional member adding to the frame, functioning as part of the "doublings." In his four-paneled works *AIR, Mexican Hat Disposal Cell, Halchita, Utah, Navajo Nation,* (2019) [Fig. 25] and *AIR / Survey 1,* (2020) [Fig. 26], Wilson joins the archival pigment prints from original tintypes and the digitally captures. Wilson writes, the "digital and historic photographic processes . . . tells its anachronistic tale." This unusual dichotomy of practices is reflected in the subtly colored spaces that fade into black and white in each frame, and in the barren landscapes recalling nineteenth-century survey expedition sketches and photographs, but are occupied by "the protagonist," who often has a mask, and sometimes a drone. Through these blended processes, he asks "How can a project based in a politics of imagination co-exist and inform a documentary survey focused on real-world environmental violations?" In *AIR, Mexican Hat Disposal Cell, Halchita, Utah, Navajo Nation*, Wilson describes the location as beautiful, though it also "leaves you with an intense sense that something very wrong has occurred." In the desert, this wrongness has occurred on banks of the San Juan River: "a vital resource for this arid region. Water is Life and the absurdity of a toxic waste dump in this place is irrepressible. I am compelled to bear witness to the power of the Mexican Hat Disposal Cell and challenged to represent it in a manner that might convey its significance. So many issues intersect at this place, and I have used a variety of

techniques and processes in an effort to develop a kind of new Indigenous cartography to communicate its complexity."[159]

Like Wilson, Cannon and Hansen blended old and new processes to voice their truths. Mixes like Cannon's flat, vibrant colors and shallow spaces of Fauvism and the Kiowa Six, and Hansen's Tukurrpa-dot style with a non-Tjukurrpa, explicit title resemble Wilson's tactic. Likewise, Scarce's use of the same iconic mushroom cloud in *Cloud Chamber* recalls Cannon's *Bomb and Circles* and *As Snow Before a Summer Sun*. As discussed in chapter one, the iconicity of the form purposefully riffs on government propaganda and concealment — an icon developed out of photographic framework promoting images devoid of any downwinder or Native American personal or environmental damage.[160] These artworks beg the question: how does it change an image's meaning when first used by government for influence, and then by an indigenous artist as political and colonial commentary? Scarce and Cannon defy propaganda's erasure campaign.

In chapter one, propaganda's erasure tactics in occupied Japan, visual and Kitsch culture, fashion, and the 1958 Brussels world fair *Expo 58* expose the government's effectiveness, nationally and internationally. If the U.S. government was able to maintain such blinders internationally, it must have been exponentially simpler for it to do so on local test sites because, by their nature, they had to be in extremely rural locations to be "safe," or, more importantly, "secret." These efforts and concerns relate to the British and Australian governments as well. For example, a number of people were involved in the Pom Pom incident. Maralinga personnel

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[159] Wilson, *Will Wilson*, 5.

[160] Fields, *Discordant Memories*, 159.

found the Milpuddie family camped on the on the Marcoo crater, carted them out of the area, and sent them to Yalata. In Yalata, the personnel knew the situation and witnessed the family's generational sicknesses and traumas. However, strict instructions were given to say nothing of the incident.[161] Garrett summarizes that "the fact that a foreign nuclear device could explode in the desert at Maralinga, with little public knowledge and even less understanding of the consequences, is a reminder of the fatal compliance of the colonial mindset, which characterized the era of Prime Minister and Liberal leader Sir Robert Menzies."[162] The U.S., British, and Australian governments tightly censored and withheld information on these top-secret efforts from the media — and therefore the general public — creating a false narrative: a the narrative that Wilson, Scarce, Hansen, and Cannon defy by physically and visibly emplacing Indigenous voices in the narrative.

Whereas Wilson *reveals* enormous swathes of land and environment, the "informational" flyers for the "civil effects" tests of 1953-1957 were efficaciously silencing, though widely publicized. Simple images reflected the simple text intended to produce the only information on atomic testing safety most people received. The message to Americans: to assure Americans that nuclear testing was no big deal and safely controlled. As Kirk states, "Atomic imagery shaped perceptions of the testing region's environment," and "nearly erased the 5,000 square mile continental atomic testing bioregion of the Mojave and Great Basin deserts and its inhabitants from public view, referring to the area as 'landscapes almost as barren as the

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[161] Christobel Mattingley, with Oak Valley and Yalata Communities, *Maralinga: The Anangu Story,* (Crows Nest, NSW: Allen & Undwin Children's, 2008), 45.

[162] Garrett, "Foreword," 7.

moon,' 'wastelands,' and 'submarginal' places sparsely populated by politically 'insignificant' people."[163]

Conclusion

The physical, emotional, and cultural traumas from nuclear colonialism do not just go away over time. The secrecy hushing these truths only heightens the generational trauma even as new traumas accrue. Many find it too difficult to share these experiences, the pain expounded by outsiders asking for scientific evidence to convince the western audience, and then denying it even if such evidence is available. Fears of retribution coincided with the undermining.[164] Yami Lester explains the absurdity of how the Royal Commission investigators wanted to know dates, times, and medical records from 30 years before:

> "We knew what we had seen, but they wanted information we couldn't give them, and they wanted it because they knew white people would ask us questions and wouldn't believe us. It was a long time ago . . . and we didn't know times and dates when the black mist came over. We didn't have calendars or clocks then, and even if we did, we couldn't read them. And we didn't have medical records, because there was no clinic at Wallatina

[163] Andrew Kirk, "Rereading the Nature of Atomic Doom Towns," in *Environmental History* 17, no. 3 (July 2012), 636-637.

[164] Fields, *Discordant Memories*, 23. For example, Titterton rejected the claims flippantly in media even after the Royal commission, see Tynan, *Black Mist Burnt Country*, 27.

and no white doctors treated us."[165]

Keeping in mind that Anangu were not believed to be fully removed from the bush until 1986, it is hard to expect that in the 1950s and 1960s many would have calendars, watches, or medical records, much less be able to read them.

Hansen herself was born without Tjukurrpa because she was born at Cundeelee Mission, which is off Spinifex lands and away from Spinifex Tjukurrpa. The two most important Tjukurrpa to Anangu are one's birth site, and the site where one's umbilical cord falls off. This created a severing with her own culture, which her older brothers and generations were able to partake in — leaving her an outsider in her own family. Only from working on paintings with her close aunt Lucy Hogan, and inheriting Hogan's Tjukurrpa when she passed was Hansen allowed to paint Tjukurrpa and learn the knowledge. It was not until she was 20 years old that she was able to see her ancestral lands when the Land Rights Act of 1984 allowed Spinifex people to move back to their homelands.

Leading trauma expert, Dr. Bessel van der Kolk writes, "The sensory fragments of memory intrude into the present, where they are literally relived."[166] Besides the health traumas including mutated reproductive genetics that pass on through birth, the less visible emotional traumas are just as tangible forms of suffering to the victims and can also be passed on through generations. Through doublings of compositional elements and procedures, Wilson, Scarce, Cannon, and Hansen engage the traumas of the false narrative's threats of physical and cultural erasure. In *As Snow Before a Summer Sun*, he directly references that multiple generations are

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[165] Lester, *Yami: The Autobiography of Yami Lester*. 2nd ed., (Alice Springs: Jukurrpa Books, 2000), 193-94.

[166] Bessel van der Kolk, *The Body Keeps the Score,* (New York: Penguin Books, 2014), 66.

affected by the nuclear colonialism in New Mexico by placing the woman and baby foremost and centered, and as the objects upon which the cloud stands and falls on — an oppressing system of images. Wilson does this through his layered procedures and the apocalypse's sole-survivor. Scarce utilizes yams and Hansen doubles traditional iconography as nuclear blasts to describe contaminated resources, Dreaming, lynched bodies, radioactive bomb blasts, and black mist. While each artist conveys the threats of the false narrative on Indigenous erasure, each also defies the threats with simple Indigenous presence: presence of iconography as with Hansen, of body as Wilson's protagonist (especially as the protagonist himself), of literally living resources as in the *AIR Lab*, and of Cannon's defiantly staring Native American woman.

— Conclusion —

But Why Use Art?

So, why use art? Wilson writes: "artists can be dynamically effective at identifying social and environmental problems and envisioning solutions."[167] Fields discusses the "*active* grief" of mass trauma and how the visual can assist in developing an "active memory," a key ingredient in healing as remembrance *is* the "starting point for inquiry and action."[168] That the visual holds an intrinsic value of reciprocal power for both the giver and receiver is a local concept Myers discusses of the broad Indigenous arts in Australia,[169] yet is not unlike Scott's emphasis on the cultural survivance of Pueblo watercolors, through which knowledge of culture is shared, though protected. In Australia, art has proven to be one of the most successful strategies for Indigenous peoples to survive colonization and to work meaningfully towards reconciliation by taking the Euro-Australian market industry of Aboriginal art and Aboriginalizing it.[170] In my thesis, I have argued that art has likewise proven to be a crucial political tool for Indigenous voices correcting the false history of nuclear colonialism in both Australia and the United States.

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[167] Will Wilson, "Connecting the Dots for a Just Transition Post-Uranium Extraction on Diné Land with App-Activated, Storytelling-Based Portraiture That Emboldens Restorative Economics and Memory Making (Prospectus)," n.d.

[168] Alison Fields, *Discordant Memories: Atomic Age Narratives and Visual Culture,* (Norman: University of Oklahoma Press, 2020), 18-19. Fields writes: "With greater flexibility than narrative prose, visual expressions of memory offer possibilities for resisting linear, closed-off narratives of the past and for reflecting the continuing, and often cyclical, nature of trauma."

[169] Fred R. Myers, *Painting Culture: The Making of an Aboriginal High Art,* (Durham and London: Duke University Press, 2002), 5.

[170] Terry Smith, *Art to Come: Histories of Contemporary Art,* (Durham: Duke University Press, 2019), 160. Smith writes: "their art making . . . is one of the few available strategies for surviving the conditions of colonization and for finding a sustainable mode of reconciliation with the colonizing other," and that Indigenous peoples have not "accepted these conditions lying down, Aboriginal art, as an industry, might be a 'white thing,' . . . but the whole 'white art thing' can be Aboriginalized . . ."

In contrast to dense scholarly texts, museums today consider better accessibility to be a high priority in order to broaden the potential audience. Therefore, curated exhibitions and art installations have become practical methods of challenging the censored discourse to a wider public. Art can elicit a more personal and digestible mode of knowledge sharing to promote difficult discussions. With the exceptions of poetry and potentially other creative literature forms, written and verbal prose are limited to the boundaries of words in meaning and audience, each containing boundaries of its own. Words lie linearly in sentences constructing rows on the page, or in linearly spoken strands: one. word. after. the. next. The visual constructs of art in my thesis have proven that art allows for far richer and more accurate narrative. Because past, present, and future times are inextricably linked, time and meaning can never be totally divorced to truly exist linearly. Art melds time and meaning through circuitous and overlain trajectories, which transcend and transgress the boundaries of words in different ways for each individual as he/she personally processes in the context of his/her experiences.

Though the 1970s in Australia witnessed whistleblowers and a jump in investigative journalism, following generations reveal a deprived disconnect to nuclear history: they "have practically no idea atom bombs were exploded in their country, why, and what the long-term legacies are," Mittman writes.[171] With the fast-approaching seventy-sixth anniversary of Trinity this July, a similar disconnect exists in the United States. Engaging the discussions of artists such as Hansen, Cannon, Wilson, and Scarce works to remediate missing perspectives in Atomic Age scholarship, and helps to envision a reconciled future by challenging the "process of enculturation," which Hales describes as "the ways in which 'freedom' and 'individualism' are

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[171] Jan Dirk Mittman, ed., *Black Mist Burnt Country: Testing the Bomb: Maralinga and Australian Art,* (Victoria: Burrinja, 2019), 37.

hemmed in and defined by the surrounding net of history, institutions, beliefs and necessities peculiar to a momentary piece of space and time."[172]

These artists are not alone in seeing the advantage of art to convey these truer narratives. Neither is Mittman alone in seeing the advantage of institutions for the same point. Art, artists, and institutions are now in a place to loudly and openly address this issue. And they are. Artists and scholars trying to expose these silenced truths work to collect these stories as evidence of the detrimental and lasting effects of nuclear colonialism and government concealment. Bryan Taylor calls this a "counter-realism," one that "potentially convinces viewers of the negligence and liability of nuclear officials"[173] with a goal of accountability and remediation. Other recent and current art happenings are worth noting to promote the global need for these cross-cultural interactions today. The following list shows a wide range of possibilities for expression and truth-telling through the arts:

Anangu Pitjantjatjara Yankunytjatjara (APY) Art Centre Collective's *Kulata Tjuta* (2014-ongoing) [Fig. 27] is a collaborative culture management project among art centers in the Anangu Pitjantjatjara and Yankunytjatjara Lands (APY)[174] that produces installation works of cultural objects such as traditional *kulata* (spears) and dishes. The 2017 installation in TARNANTHI at the Art Gallery of South Australia in 2017 was composed of 550 *kulata* vertically suspended with spearheads pointing to the ground as a response to the decade of inland nuclear tests at Emu Junction and Maralinga (1953-1963). By creating high-profile spaces to

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[172] Peter B. Hales, "The Atomic Sublime," in *American Studies* 32, no. 1 (Spring 1991), 5.

[173] Brian C. Taylor, "Nuclear Pictures and Metapictures," in *American Literary History* 9, no. 3 (August 1997), 580.

[174] APY Lands stands for "Pitjantjatjara and Yankunytjatjara language-speaking peoples' lands.

promote culture, elders receive more interest and cultural pride from younger generations wanting to learn about their history and traditions through working together to create art.

Ngapartji Ngapartji (2005-2010) is a collaborative project with Spinifex and Big hART, an art organization that works with communities to share their truths of traumas across cultures working towards reconciliation. This project involved a toured award winning play that followed Spinifex man Trevor Jamieson's family history through surviving atomic blasts and insight into the aftermath of trauma. The project also produced a documentary film, community workshops, and the building of a language and culture teaching website with the intention of promoting "National Indigenous Language Policy and recognition for Indigenous victims of the Maralinga atomic testing."[175] When the Pitjantjatjara word "ngapartji" is said twice in a row, it means "exchange and reciprocity."[176] The Australia-originating *Nuclear Future Partnership Initiative (NFPI)* (2014-2016) global nuclear survivors art project works within these realms of "making creative works that reflect both the horror of living with nuclear radiation, and the resilience of communities as they face the nuclear future,"[177] with communities, artists, and multiple organizations in Australia, Britain, Japan, Marshall Islands, Kazakhstan, and India. Exhibitions like aforementioned *Black Mist Burnt Country*, and *Trinity: Reflections on the Bomb* (2020-2021)[178] at the Albuquerque Museum in New Mexico show curatorial and institutional opportunities to promote the discourse.

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[175] "*Ngapartji Ngapartji*," website of *Big hART*.

[176] "*Ngapartji Ngapartji and Namatjira Plays*," website of *Big hArt Shop*.

[177] "About," website of *Nuclear Futures*.

[178] This exhibition is still available to visit through the Albuquerque Museum website with the catalog in PDF form: https://www.cabq.gov/artsculture/albuquerque-museum/exhibitions/trinity-reflections-on-the-bomb

These exhibitions, art projects, and artists work towards Taylor's "counter-realism," but the "realism" they counter is the false narrative created by government propaganda and neglect, and therefore, only an imaginary reality. The real reality is that nuclear colonialism continues to harm the environment and many people today, and that artists, curators, and activists are imagining and moving towards a post-atomic age. For example, the coalition of non-governmental organizations called the International Campaign to Abolish Nuclear Weapons won the 2017 Nobel Peace Prize, and the United Nations Treaty on the Prohibition of Nuclear Weapons was ratified by fifty countries, therefore, entering into force on January 22, 2021. Much like the Spinifex people utilized acrylic paintings as political evidence to legally win their Native Title claim, art, artists, and institutions are providing the education and evidence needed to support awareness and reconciliation of our nuclear world and its Atomic Age.

— Illustrations —

Fig. 1
T.C. Cannon (Kiowa/Caddo), *On Drinking Beer in Vietnam in 1967,* 1971
Lithograph, 4/100
Fred Jones Jr. Museum of Art, The University of Oklahoma, Norman; The James T. Bialac Native American Art Collection, 2010

Fig. 2
T.C. Cannon (Kiowa/Caddo), *As Snow Before a Summer Sun*, c. 1970s
Acrylic on canvas, dimensions unknown
Location unknown

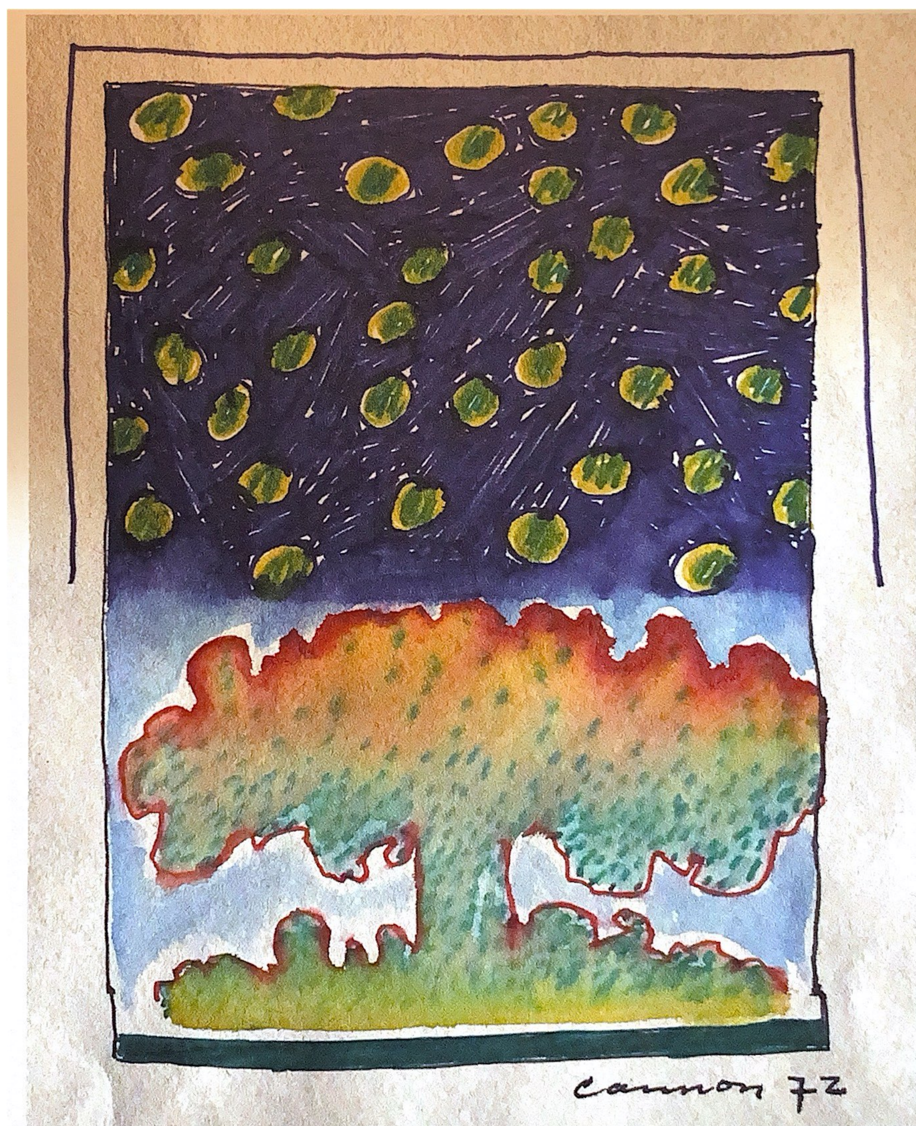

Fig. 3
T.C. Cannon (Kiowa/Caddo), *Untitled [Bombs and Circles]*, 1972,
Watercolor on paper, 8 7/8 x 6 in. (22.5 x 15.2 cm),
Peabody Essex Museum, museum purchase, 2013.30.1

Fig. 4
Debbie Hansen (Spinifex), *Maralinga*, c. 2007
Synthetic polymer on canvas or linen, dimension unkown
Private collection

Fig. 5
T.C. Cannon (Kiowa/Caddo), *Soldiers*, 1970
Oil on canvas, 48 x 36 in. (121.9 x 91.4 cm)
Collection of Arnold and Karen Blair

Fig. 6
T.C. Cannon (Kiowa/Caddo), *Two Guns Arikara*, from *The Memorial Woodcut Suite*, 1978,
Woodcut, 25 1/4 x 20 in. (64 x 50.8 cm)
Tia Collection

Fig. 7
T.C. Cannon (Kiowa/Caddo), *Buffalo Medicine Keeper*, ca. 1974
Acrylic and oil on canvas, 39 1/2 x 39 1/2 in. (100.3 x 100.3 cm)
Buffalo Bill Center of the West, Cody, Wyoming, William E. Weiss Memorial Fund Purchase, 8.02

Fig. 8
T.C. Cannon (Kiowa.Caddo), *His Hair Flows Like a River*, from *The Memorial Woodcut Suite,* 1978
Woodcut, 25 1/4 x 20 in. (64 x 50.8 cm)
Tia Collection

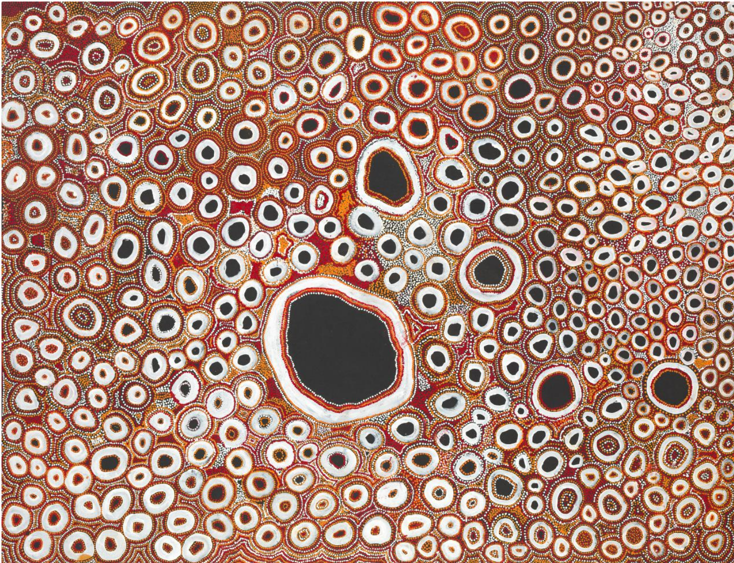

Fig. 9
Spinifex women's collabarative, *Tjintirtjintir (Willy wagtail)*, 2008
Lorraine Davies, Judith Donaldson, Kathleen Donegan, Debbie Hansen, Annette Hogan, Anne Hogan, Estelle Hogan, Myrtle Pennington, Nulbinga Simms, Carlene West, Tjaduwa Woods
Synthetic polymer paint on canvas, 177.3 x 231.5 cm,
National Gallery of Victoria, Melbourne, Felton Bequest, 2011. © the artists, courtesy of Spinifex Arts Project.

Fig. 10
Mantua Nangala (Pintupi), *Women's ceremonies at Marrapinti*, 2018
Synthetic polymer paint on linen, 183 x 244 cm.
2019 exhibition photo by the author

Fig. 11
Emily Kame Kngwarreye, *Earth's Creation 1*, 1994
Synthetic polymer on linen mounted on canvas, four panels
Private collection

Fig. 12
Stephen Mopope, *Eagle Whip and Flute Dancers*, 1937
Mural, east wall of the Anadarko Post Office, OK
Photo: USPS

Fig. 13
T.C. Cannon (Kiowa/Caddo), *Untitled [Sketch]*, 1960
Colored pencil, 9 1/4 x 9 in. (23.5 x 22.9 cm)
KWJ Collection.

Fig. 14
Awa Tsireh (San Ildefonso), *Ram and Antelope,* ca. 1925-1930, watercolor and ink on paper, Smithsonian American Art Museum, Corbin-Henderson Collection, gift of Alice H. Rossin, 1979.144.50

Fig. 15
Peña, Tonita (Cochiti). *Corn Dance*. c. early 20th-century. 0236.540.
Tulsa: Gilcrease Museum. Gift of the Thomas Gilcrease Foundation, 1955.

Fig. 16
Albert Namatjira (Arrernte), *Haast's Bluff (Ulumbaura)*, c. 1940s
Watercolor, 37.0 x 54.2 cm image/sheet
© Namatjira Legacy Trust. Licensed by Copyright Agency, 93.1986.

Fig. 17
Henri Matisse, *The Red Studio*, 1911
Oil on canvas, 71 1/4” x 7’ 2 1/4” (181 x 219.1 cm)
Mrs. Simon Guggenheim Fund, ©2021 Succession H. Matisse/Artists Rights Society (ARS), New York, 8.1949.

Fig. 18
Edward S. Curtis, *The Medicine Man (Slow Bull)*, c. 1907
Photogravure
Edward S. Curtis Collection Library of Congress.

Fig. 19
T.C. Cannon (Kiowa/ Caddo). *Self-Portrait in the Studio*, 1975
Oil on canvas, 72 x 52 in. (182.9 x 132.1 cm)
From the Nancy and Richard Bloch Collection. © 2017 Estate of T.C. Cannon.

WATCHING THE BOMBS GO OFF

Tourists Can See Blasts In Nevada Test Area This Summer

By GLADWIN HILL

LAS VEGAS, Nev.—This is the best year in history for the non-ancient but none the less honorable pastime of atom-bomb watching. For the first time, the Atomic Energy Commission's Nevada test program will extend through the summer tourist season, into September.

It will be the most extensive test series ever held, with upward of fifteen detonations.

And for the first time, the A. E. C. has released a partial schedule, so that tourists interested in seeing a nuclear explosion can adjust itineraries accordingly.

Several of the explosions will be larger than the ones detonated on Japan in World War II, and at least one will be three to four times as large. The detonation point is remote enough from normally traveled areas so that there is no danger of anyone's being blown up.

A major precaution for outside observers, however, which should be noted immediately, is: Don't look in the direction of the explosions through field glasses. More on this later.

Dates for the eight forthcoming detonations which have been announced are June 25 and 27, July 9, 15 and 25, Aug. 8 and 19, and Sept. 1.

These are all subject to minor change if weather is unfavorable. But summer weather prospects are stable enough, and the shots are likely to go off with no more than a day or two's delay at most.

The tests on June 27, July 25 and Aug. 19 will be more powerful than the Japan bombs, which had the explosive force of 20,000 tons of TNT. There may be other big ones.

There will be a half dozen or more additional detonations, probably interspersed in this schedule. They probably will be announced at least a day or two before they go off.

Vantage Points

The scheduled shots are those for which special observers will be admitted to the test site. The general public will not be admitted. But there are many vantage points from which anyone can get an impressive view of the explosions.

The A. E. C. proving ground starts sixty-five miles north of Las Vegas, just off U. S. 95, which runs to Tonopah. The proving ground itself is a rectangle only forty miles long and sixteen miles wide, but it is in the midst of a 4,000-square-mile Air Force bombing and gunnery range from which the public is excluded.

If one is interested simply in proximity, the closest approachable points to the blasts are along U. S. 95 in the vicinity of Indian Springs, forty-five miles north of Las Vegas. A couple of low ranges of mountains lie between this section and the Yucca Flat test area, barring a direct view of the focus of the explosions. But they are huge enough for plenty of light and noise to be perceptible.

Another close approach, on the eastern side of the whole business, is along U. S. 93, which runs north from Glendale, Utah. (Both U. S. 95 and U. S. 93 branch off U. S. 91, the main East-West thoroughfare from Salt Lake City to Los Angeles.)

On U. S. 93, the best vantage points are in the vicinity of

Alamo, Nev., sixty-one miles north of Glendale. Alamo is only about fifty-five miles east of Yucca Flat, but here too there are intervening low mountains.

The best view of the detonations can be obtained from 12,000-foot Mount Charleston, which lies just east of U. S. 95, only an hour's ride from Las Vegas, over good roads. This is only about fifty miles from the detonation point. From here, the bulk of most of the explosions is visible above the distant low-mountains bordering Yucca Flat.

There is an Army radar installation on top of the mountain, and only accredited press representatives will be allowed up to its highest eminence, Angel's Peak. But there are a number of comparable viewing points at slightly lower levels. These can be approached by either of two roads branching off of U. S. 95—State Route 39 branches off fifteen miles north of Las Vegas and Route 52 branches off thirteen miles farther. Both wind up the mountain. The point is to keep one's orientation to the test area during these convolutions.

Most of the firings will be just before dawn, to facilitate test photography, but some will be in daylight. The times of the various tests have not been specified, but will be indicated some time beforehand. This information is available in Las Vegas a day or two before the tests from such sources as hotels, the chamber of commerce, and the State Highway Patrol.

In most of the explosions, the light is brighter than the sun. Off the test site, they can be viewed safely with the naked eye. But binoculars act as magnifiers and can cause eye burns.

With camera lenses, the short length of exposure makes the concentrations of light innocuous. Cameras can be set at the smallest aperture possible, with the fastest exposures. The light from most detonations is bright enough even at fifty miles to trigger photelectric-cell shutter actuators. With pre-dawn detonations, it is dark enough to open shutters a moment before detonation time. The fireballs from the explosions sometimes roll as long as a minute, providing plenty of time for a series of pictures.

Under a Shadow

In the dawn's early light in the wake of a detonation, the atomic cloud can be seen attenuating across the sky. It may come over an observer's head. There is virtually no danger from radioactive fall-out. But anyone who is worried about having been exposed to it can go to the nearest town and inquire about the nearest A. E. C. radiation monitoring team. These teams cover virtually all communities within a 200-mile radius of the test site, and check people and vehicles which have been exposed to fall-out.

Aside from the danger of looking at explosions through field glasses, the chief hazard in atom-bomb-watching is the omnipresent danger of automobile accidents. With detonations which might momentarily blind drivers near by, the A. E. C. issues warnings and sometimes highway patrolmen establish momentary road blocks. A worse danger than the light is that in the excitement of the moment, people get careless in their driving.

The best base for bomb-viewing expeditions is Las Vegas, which has a couple of hundred motels and hotels of all types, with fairly standard rates.

A perennial question from people who do not like pre-dawn expeditions is whether the explosions can be seen from Las Vegas, sixty-five miles away. The answer is that sometimes enough of a flash is visible to permit a person to say he has "seen an atomic bomb." But it is not the same as viewing one from relatively close range, which generally is a breath-taking experience.

The New York Times
Published: June 9, 1957
Copyright © The New York Times

Fig. 20
Gladwin Hill, *New York Times*, June 9, 1957.

Fig. 21
Yhonnie Scarce (Kokatha/Nukunu), *Thunder Raining Poison*, 2015
Hand blown glass yams, nylon and steel armature, dimensions variable.
Purchased 2016. Acquisition by Susan Armitage in recognition of the 50th Anniversary of the 1967 Referendum. Photo by Janelle Low. National Gallery of Australia.

Fig. 22
Yhonnie Scarce (Kokatha/Nukunu), *Death Zephyr*, 2017
Hand blown glass yams, nylon and steel armature, dimensions variable, Art Gallery New South Wales

Fig. 23
Yhonnie Scarce (Kokatha/Nukunu), *Cloud Chamber*, 2020
Hand blown glass yams, nylon and steel armature, dimensions variable, Installation view, TarraWarra Museum of Art. Photo: Andrew Curtis.

Fig. 24
Will Wilson (Diné/Navajo), *AIR Lab (Auto Immune Response Laboratory)*, 2005
Steel, wooden shelves, bailing wire, Indigenous food species.

Fig. 25
Will Wilson (Diné/Navajo), *Auto Immune Response, Mexican Hat Disposal Cell, Halchita, Utah, Navajo Nation*, 2019
Digitype (archival pigment print from original tintypes and digital captures). Size variable.

Fig. 26
Will Wilson (Diné/Navajo), *AIR / Survey 1*, 2020
Digitype (archival pigment print from original tintypes and digital captures). Size variable.

Fig. 27
Kulata Tjuta ("many spears"), 2017 installation image (2014-ongoing project), APY Art Collective artists (Pitjantjatjara/Yankunytjatjara/Luirtja),
550 suspended kulata (spears), each ca. 1.8-2.1 cm (ca. 5.9-6.9 ft), 27 coolamons, dimensions vary; total circumference 6-7 m, diameter x 6, (20 ft) height
Installation at Art Gallery of South Australia

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