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Atomic Totem: Australian Settler Nuclearism, the Disavowal of Aboriginality, and Morbid Reconciliation

Abstract: Although the actual welfare of nearby A<u>n</u>angu populations was so clearly disregarded throughout the period of British nuclear testing in South Australia in the 1950s and 60s, curiously, the aesthetics of the nuclear testing project itself were awash with Aboriginal-derived symbolism, imagery, and language. From the names of testing sites and operations, to the declaration by a member of the surveying crew to the media that a mushroom cloud was "a perfect portrait of a myall blackfeller written with atomic dust," the nuclear testing was repeatedly associated with Aboriginality. This was not a practice unique to Australia; as Jessica Hurley notes, other nuclear-armed nations shared this "compulsion to name nuclear laboratories and technologies after [Indigenous] nations, practices and spaces" (2018, 97). In this essay, I draw on a range of textual sources — a memoir by government surveyor and raconteur Len Beadell, as well as less traditionally 'literary' texts (such as place-naming practices) — to examine the ways in which this appropriative act points to a complex process of disavowal that takes place in the settler imaginary. Focusing on the mid-century Australian context, I find that where the existential anxieties of the nuclear age meet the unconfronted violence and dispossession of colonialism, confused and uncanny visions arise; partial acknowledgements of the primacy of First Nations' claims to country arise in the moment at which all the possibilities of nuclearism — megadeath, the new atomic potential for massive violence and destruction — are also present. In this field, a strange and morbid vision of settler/Indigenous reconciliation emerges from the settler cultural imaginary.

Keywords: British nuclear testing in Australia; disavowal; totemism; nuclearism; settler imaginary; reconciliation.

Introduction: First Nations People and the British Nuclear Testing Program in Australia

As tensions escalated along Europe's Iron Curtain at the onset of the Cold War, the United Kingdom sought to consolidate its position in the nuclear arms race with the Soviet Union. Denied access to testing grounds in the United States after an instance of espionage in the Manhattan Project damaged the alliance between the two nations, the UK began to turn to its colonies in search of land to host its own nuclear weapons testing program (Tynan 2016, 4–7). From 1952 to 1963, the British government tested plutonium bombs, nuclear warheads, and other devices on Australian territory; firstly, at the Monte Bello Islands off the coast of Western Australia, and subsequently at Emu Field and Maralinga, two sites in the Great Victoria Desert in South Australia. This arrangement was made possible by the strangely unquestioning compliance of Australian prime minister Robert Menzies, who hoped to secure a proxy position for Australia in the Cold War arms race; however, in the end Australia did not even benefit from the scientific knowledge the tests afforded, much of which Britain retained (Tynan 2016, 4). Operations ceased in 1963, and in 1968, after a series of clean-up operations which science historian Elizabeth Tynan (2016) has described as "lazy," (231) "cursory," (237) and "inadequate," (244) Britain reached an agreement with Australia to sign away its responsibilities to the testing sites.

However, the political fallout from the testing continued. In the mid-seventies, a group of nuclear veterans began to make allegations about veteran deaths and disease which resulted in media attention and public criticism (Cross and Hudson 2005). Several years later, in the wake of activism by leaders from affected Aboriginal communities such as Yankunytjatjara man Yami Lester, and after a follow-up investigation in which millions of fragments of radioactive plutonium were discovered still present in the soil at Maralinga, the Australian government announced a Royal Commission into British nuclear testing in Australia (Tynan 2016). The characterisation of the nuclear testing project in the report of the 1985 Royal Commission relied on a vocabulary of failure and inadequacy, describing the performance of the government as "unsatisfactory," (Royal Commission 1985a, 11) "dangerous," "negligent," (15), and "deceitful" (9). The Commission found that the public "was not informed of the true nature of the hazards involved," (9) and given that fallout from the major trials spread variously across the continent, they argued that it was "probable that cancers which would not otherwise have occurred have been caused in the Australian population" (15). The whole episode was inexplicably marked by

shameful political failures, instances of dangerous ineptitude and avoidance, and an apparent shocking willingness on behalf of the government to expose the greater Australian population to risk of harm.

The British nuclear testing in Australia had particularly dire consequences for local Aboriginal populations, consisting primarily of Aṉangu (Ngaanyatjarra, Pitjantjatjara, and Yankunytjatjara) people, whose "distinctive lifestyle" made them "specially vulnerable" to its hazardous effects (Royal Commission 1985a, 16). Although some efforts were made to notify Aboriginal communities in the vicinity of the test sites, notably by a poorly resourced 'native patrol officer', some Aboriginal people were still unaware that the testing was taking place; as Tynan comments, "[a]mple evidence suggests […] that individuals and small groups [of Aboriginal people] walked across the lands after the tests began" (2016, 174). The Royal Commission was scathing about what it saw as the failure of the Menzies government to ensure the safety of nearby Aṉangu populations, describing it as the result of political "ignorance, incompetence and cynicism," (1985a, 20) and finding that if Aboriginal people "were not injured or killed as a result of the explosions, this is a matter of luck rather than adequate organisation, management and resources allocated to ensuring safety" (1985b, 323). Beyond the immediate dangers of exposure to radioactive fallout, however, Aṉangu people suffered a host of other major and devastating impacts — perhaps most significantly, many people were forced to relocate from their ancestral lands prior to the testing taking place, and these lands were subsequently contaminated (and may remain so for an indefinite period of time) (Tynan, 2016). These were not primary concerns for the British or Australian governments. Infamously, Department of Supply chief scientist Alan Butement responded to concerns about Aboriginal welfare with the accusation that such concerns demonstrated a "lamentable lack of balance" in "apparently placing the affairs of a handful of natives above those of the British Commonwealth of Nations" (as cited in Morton 1989, 84).

While the actual welfare of First Nations populations was so clearly disregarded throughout the nuclear testing episode, curiously, the aesthetics of the nuclear testing project itself were awash with Aboriginal-derived symbolism, imagery, and language. In the naming practices that repurposed words from disparate Aboriginal languages to designate nuclear test sites and operations, and in the imagery that populates official accounts of the testing and the testimony of various other non-Aboriginal military personnel and civilians, it seems that there was a clear — but unacknowledged — propensity to associate the nuclear testing with Aboriginality. Of course, Aboriginal imagery has long been subject to appropriation by settler Aus-

tralia for various ideological purposes; decades ago anthropologist Eric Michaels noted that "the production of Aboriginal images for mass consumption [is considered] a right, if not a responsibility, of a nation consumed with the manufacture of its own mythology," (1994, 41) and legal scholar Marcia Langton observed that "the most dense relationship" in Aboriginal affairs "is not between actual people, but between white Australians and the symbols created by their predecessors" (1993, 33). However, this appropriation of an aesthetics of Aboriginality is striking given that it occurred during an era in which Indigenous issues were almost absent from public discourse. Although this was a period of significant and fierce activism from First Nations communities, including anti-protectionist lobbying, Charles Perkins' 1965 'Freedom Rides', and pastoral walk-offs (see, for example, Attwood and Markus, 1999), in the broader political sphere there was a widespread indifference when it came to examining the settler colony's relationship with First Nations peoples. Indeed, in 1968 the anthropologist W. E. H. Stanner famously dubbed this phenomenon "the great Australian silence" (Stanner 1969, 25). Why, at a time when there was such silence about Aboriginal people in the settler political arena, was an iconography of Aboriginality apparently so important to the representation of the British nuclear testing program?

In this article, I use tools from literary and cultural studies to explore some ways in which this apparent drive to appropriate icons of Aboriginality to characterise or imagine the nuclear bomb demonstrates something about the place of the testing in the mid-century Australian settler cultural imaginary. There is, I will argue, a bleak and morbid impulse at play here. I draw on a range of textual sources—a memoir by government surveyor Len Beadell, as well as less traditionally 'literary' texts (such as place-naming practices)—to examine the ways in which this appropriative act points to a complex process of disavowal that takes place in the settler imaginary. Where the existential anxieties of the nuclear age meet the unconfronted violence and dispossession of colonialism, confused and uncanny visions arise.

Blast the Bush: Disavowing Aboriginality

One of the most detailed accounts of the first mainland nuclear tests—two plutonium bomb trials codenamed 'Totem' that took place at Emu Field in 1953—is found in a memoir by government surveyor Len Beadell.[1] A bushman, builder of roads, writer, cartoonist, and raconteur, Beadell was a key figure in the British nuclear testing project in Australia. He

1 Len Beadell is not necessarily regarded as a reliable memoirist (for instance, see Gara (2020)). *Blast the Bush* is examined here for what it reveals about discourses of Aboriginality in settler culture and its imaginary, not because the text represents an authoritative source on the historical details of the nuclear testing program.

was initially involved in surveying activity for the Long Range Weapons Establishment and the Woomera rocket range in the late 1940s, surveying tens of thousands of square kilometres of land for defence weapons testing purposes, and establishing the pathway for rocket and missile traffic known as the 'Centre-line Corridor' that stretches several thousand kilometres across central Australia. In the early 1950s, the Australian government once again enlisted Beadell's services on a classified mission to find a suitable site for nuclear weapons testing—this story of the mission to survey Emu Field and conduct the first two atomic tests on the Australian mainland is the subject of *Blast the Bush* (originally published in 1967).

The publication of *Blast the Bush* was contemporaneous with the historic 1967 constitutional referendum that sought to permit the Australian Commonwealth to make laws that applied to Aboriginal people, and to allow Aboriginal people to be counted in the census. While its legacy is complex, the referendum is still regarded by many as a notable political achievement and a precursor to the current impetus towards Indigenous constitutional recognition; Russell Taylor, for instance, CEO of the Australian Institute of Aboriginal and Torres Strait Islander Studies, has described the 1967 referendum as "the historic high point in our [Indigenous people's] relationship with the nation," and claims that First Nations people "take considerable comfort, confidence and moral strength" from its outcome (2017). In another parallel, a cornerstone of the referendum's 'yes' campaign was built around the public controversy surrounding the plight of a group of "impoverished and dispossessed" Aboriginal Wongi people in the Warburton Ranges, who had been driven off their country in preparation for the British nuclear testing at Maralinga (Attwood and Markus 2007, 15). When the Commonwealth government was petitioned with requests to intervene for the welfare of the group, it responded with the suggestion that Aboriginal welfare was a state matter. 'Yes' campaign activists went on to leverage the controversy generated by this incident to strengthen their calls for the Commonwealth government to assume greater legal and financial responsibility for Aboriginal people (16–17).

The cultural proximity of the events of 1967 goes unacknowledged in *Blast the Bush*. Indeed, as suggested by Beadell's vocabulary for the landscape—with its emphasis on openness, emptiness, and availability—the text is not concerned with Aboriginal experience at all. Living Aboriginal people do not feature in *Blast the Bush*; instead, a kind of Aboriginal absence is read into archaeological material, relics, and traces in the sand. In the opening pages, Beadell describes the requirements for the bomb site in terms of its remoteness from urban centres, declaring: "It was important that the deadly radioactive fallout be carried away harmlessly

into the desert" (1986, 9). The desert, as blank space, a site outside of the networks of causation and moral obligation, is a work of settler fantasy. As established above, Tynan notes in her authoritative history of the nuclear testing that "there could be no denying that Aboriginal people were in the vicinity" of Emu Field; they were "there for all to see, if they cared to look" (2016, 173), and there are many accounts from Aṉangu people in the surrounding region who witnessed the fallout from the Totem tests, including Jessie Lennon, Lallie Lennon, and Yami Lester (who went on to publish their witness accounts),[2] as well as the numerous Aboriginal people who subsequently gave evidence for the Royal Commission. Elsewhere in the memoir, the possibility of this Aboriginal presence is invoked and then swiftly denied; returning from a long and difficult excursion, Beadell recounts a scene in which he is met by a security officer who has been spooked by the discovery of a "bare footprint" in the sand near the testing site:

> Everyone concerned in the camp was in a near panic, convinced that some unsuspecting nomadic natives were ambling about in danger. […] I burst out laughing. When I could speak I explained to the astonished officer that the track belonged to me (1986, 158).

The laughter here seems to be prompted by the relief of an anxiety about harming Aboriginal people, brought about with the discovery that Aboriginal people do not, after all, exist in the present; they have been pre-historicised, relocated temporally to a distant past. Later, Beadell comes across evidence of what he believes to be an ancient sacred Aboriginal site: "And this only five miles from where the first atomic bomb was to be tested in Australia! I couldn't help wondering what these long-dead tribes would have thought about it all" (102). The discovery of 'archaeological' sites like this leads Beadell to be fascinated by what he frames as the "ironic clash of old and new;" gathering shards of charcoal from an 'ancient' fire for the purposes of carbon dating, he observes that "it was by-products of this very [nuclear] weapon which could be used for determining the age of the charcoal" (176). The link between nuclear testing and carbon dating establishes this ideologically important juxtaposition between an ancient, absent Aboriginality and the modern nuclear-affiliated settler state.

Somewhat paradoxically, these scenes of Aboriginal absence coincide with a particular kind of symbolic Aboriginal presence. As recounted in *Blast the Bush*, the living and working spaces of the Emu Field test site were pervaded by icons of Aboriginality. Beadell describes a mural he painted himself along one long wall of the mess hall that features two

2 See Lennon (2000), Lennon (2010), and Lester (2000).

characters: the first "a typical Englishman wearing pince-nez glasses and wing collar" who peers "through the window at the typical Australian bush," and the second "a wild myall Aborigine" who "looked right back, laughing at all the frenzied effort going on inside" (129). The encounter depicted in this mural is clearly ideologically crucial enough to be pictured at the heart of the test site's daily activities. Likewise, Beadell recounts that William Penney, head of the British Atomic Weapons Research Establishment (AWRE), commissioned Beadell to make him a memento of the testing in the form of "a watercolour painting of an Australian Aborigine," which Penney planned to hang "among typical souvenirs of bomb trials in their official mess back in the U.K." (102); once again, the image is intended for display in a mess hall as though to ideologically orient the everyday, domestic environment that materially supports the testing program, even at its base in Britain. But perhaps the most striking and paradigmatic example of this is the metaphor in the rehearsed speech that Beadell reports was delivered by a member of Beadell's surveying crew to a small group of journalists in the moments following the initial Totem explosion; pointing to a ballooning mushroom cloud, he declares: "A perfect portrait of a myall blackfeller written with atomic dust; the new and the old have come together today" (210–11).

On one level, this 'indigenising' of the nuclear testing could be interpreted as a means of highlighting the testing's ultra-modern international imperialist agenda. Graeme Turner writes that the Australian government "seized on" the testing as a sign of "a transformed modernity, a chance to leap from an agricultural past to a technologized future in the new role of supplier to the major powers" (1993, 182). Aboriginality, perhaps, became a useful concept in this project because it had the effect (from a racist settler perspective) of emphasising, through juxtaposition, the nuclear testing's association with politically expedient qualities like modernity, futurism, and technical and scientific achievement. The need for the testing to be branded as Australian was likely also a consideration, given the Menzies government's hopes of bolstering Australia's position in the context of the Cold War arms race (of course, there are many ironies in using icons of Aboriginality for this purpose). However, taking into account my reading of this imagery's dual function—signifying at once the *absence* and *presence* of Aboriginality—I suggest that another way to understand this imagery is as a means of dealing with settler anxiety around colonial violence, as well as a way of managing an awareness that the nuclear project represents an extension of this same colonial frontier. In the simultaneous denial and acknowledgement of Aboriginality at play here, the outlines of a psychic structure like disavowal begin to assert themselves.

Disavowal is described in Freudian psychoanalytic terms as the rejection of the reality of a perception as a means of defending against its "potentially traumatic associations" (Penot 2005, 415), a "suspension of the function of judgment" to forestall the acceptance of an unbearable reality (416). It is more complex than outright denial in that it involves the simultaneous rejection and acceptance of a reality, as in the formulation "I know quite well how things are, but still…" (Kuldova 2019, 766). As many have noted, this conflicted psychic structure is a major feature of settler Australia's relationship to the First Nations people of the continent. Writer and cultural critic Ross Gibson, for instance, identifies the trademark signs of disavowal in the colony's contradictory impulses towards suppression and recognition of the frontier violence that marked the nation's colonisation, a situation that he describes in gothic terms in *Seven Versions of an Australian Badland* (2002) as "sensing but trying not to see" and "fearing and knowing but trying not to acknowledge" (111); Bob Hodge and Vijay Mishra see this same psychic structure at play in the simultaneous recognition and denial of Aboriginal claims to country, resulting in the creation of the "Aboriginal archipelago," a place "constructed on a double premise, of exclusion (by refusing to acknowledge the Aboriginal presence in society) and ubiquitous presence (so that land rights already exist in some spiritual place, and do not need to be denied)" (1991, 30). Across various cultural sites, the violence of the colonial encounter and the illegitimacy of settler occupation is consistently both invoked and denied.

My reading of Beadell's memoir suggests that the nuclear testing program became a particularly prominent site for the settler project of the disavowal of aboriginality. Where the 'Aboriginal archipelago' meets the massive potential for annihilation of the nuclear age, confused images arise; rather than acknowledge the actuality of Aboriginal presence in the vicinity of the nuclear testing, Aboriginal likenesses are painted on walls and appear in smoke, and evidence of Aboriginal occupation of the land is pre-historicised and temporally displaced. The fact that the British nuclear testing in Australia has been so poorly publicly memorialised and, at least until recent years, largely forgotten (outside of the First Nations and nuclear veteran communities who most immediately bore its impacts) is, perhaps, further evidence of this painful contortion in the national settler psyche, a symptom of psychic difficulty and obstruction. Tynan writes that, until recently, the events at Monte Bello, Emu Field and Maralinga were "a great Australian secret, barely recognised as part of this nation's history," (2016, 14) and historian and literary critic Robin Gerster writes that "looking the other way" was "Australia's version of 'Duck and Cover'" (2020, 3) (the US government Cold War child safety program that taught school-

children to hide under their desks in the event of a Russian nuclear strike). Disavowal, it would seem, is the holding pattern that grips settler Australia, where the unacknowledged contradictions of settler colonialism collide with the unacknowledged contradictions of nuclearism.

Thunder: Appropriating Aboriginality to Imagine the Bomb

Some further characteristics of this process of disavowal become apparent in the appropriation of Aboriginal language and concepts as names for some of the program's nuclear testing sites and operations. In 1953, the name 'Maralinga'—which has tended to function as an eponym for the testing program as a whole—was adopted for a new testing site several hundred kilometres to the south of Emu Field, where the majority of the mainland nuclear and other weapons trials were conducted until the program ended in 1963. It was chosen at a meeting of the Commonwealth Department of Supply several weeks after the Totem tests at Emu Field were finalised in October 1953; in the minutes of the meeting, the word is described as belonging to an unidentified Aboriginal language and is reported to mean 'thunder' (Department of Supply 1953a). How the term came to be used for this purpose is unclear. It is not a word from any dialects local to the testing site, such as Pitjantjatjara or Yankunytjatjara—the A<u>n</u>angu word for thunder is *tuuni*, and the resident A<u>n</u>angu people had never heard the word 'maralinga' (Mattingley 2016, 27). In fact, the word is probably from an extinct language called Garik spoken by a people whose country is nearly three thousand kilometres to the north of the South Australian test site: the Ilgar tribe local to the area around Port Essington on the Cobourg Peninsula across the gulf from Darwin (Tynan 2016, 2). It is not known exactly how Chief Scientist Alan Butement—the same figure who argued that concerns about Aboriginal welfare demonstrated a 'lamentable lack of balance'—came across this word, or why he decided to use it to name a nuclear test site.[3]

This appropriative act is right at home in a historical episode marked by forgetfulness and uncertainty about facts. In parallel with the more literal ongoing colonial activity of Aboriginal dispossession, the word 'maralinga' was displaced from its territory and then the history of its displacement was forgotten. This disregard for Aboriginal cultural diversity and linguistic specificity is perhaps not surprising; as Eric Michaels notes, "colonial Australian administration has always refused to recognise that there is not one Aboriginal culture but hundreds of them, as there are

3 In an email correspondence with linguist David Nash, (Dec 2022) he suggested that Butement most likely came across the word 'maralinga' in H. M. Cooper's *Australian Aboriginal words and their meanings* (South Australian Museum, 1949), accessible at: https://viewer.slv.vic.gov.au/?entity=IE2184326&file=FL17572974&mode=browse.

hundreds of distinct languages, all insistently autonomous" (1994, 150). For all that it speaks to the same cognitive murkiness and lack of clarity that plagued the testing project as a whole, however, the choice of this name does seem to have been an intentional decision and, indeed, an aesthetic decision. A confidential 1953 memorandum from the Department of Supply notes: "Maralinga corresponds to the name 'Woomera' for the L. R. W. E. [Long Range Weapons Establishment] Range" (Department of Supply 1953b). Woomera is an Anglicisation of the word *wumara* from the language of the Dharug people from the Sydney basin, the name for an implement used to throw spears (*Macquarie Dictionary* 2021); the word was similarly imported and appropriated to name the town that served as the administrative base for the Australian government's long-range weapons testing program. In noting that 'Woomera' corresponds to 'Maralinga,' the minutes reveal a deliberate attempt to set up patterns of resonant meaning. Examining the appropriative naming practices connected with the nuclear testing and approaching them with the tools of textual analysis allows the content of an ideological program to emerge: a program that continues the work of *Blast the Bush* and its disavowal of Aboriginality in such a way that the end point of the logic of settler nuclearism is exposed.

There is a long history in settler Australia of the appropriation of Aboriginal words as names for sites of settlement, written about extensively by Paul Carter in his study of the geo-spatial poetics of settlement, *The Road to Botany Bay* (1987). Carter situates settler place-naming practices in an early colonial environment in which there was deep ambivalence about the relationship of (the English) language to the Australian landscape, and where there was an anxiety that "in Australia, the laws of association seemed to be suspended," leading to the terrifying proposition that "nothing [...] could be accurately named" (42). The appropriation by settlers of imported, misheard, or inaccurately rendered Aboriginal words as place names, Carter writes, is an attempt to mitigate this ambivalence; the act has the quality of a pun, a "quotation which concealed its origins, a name which cancelled out any traditions attached to it[;] [...] it functioned magically to found a new place" (329). In the mis/use of Aboriginal words as place names, settlers were at once erasing a local and living Aboriginal presence at the same time as they appropriated a sense of legitimate belonging from the more generalised aesthetic of Aboriginality. Ultimately, the word without a known referent other than its vague sense of Aboriginality functioned primarily to refer back to the act of naming, and thus to the naming settler himself:

> In order to speak, place names had to be stripped of their meaning, reduced to mere sounds. If they could be translated, the purportedly aboriginal place names of the early maps might reveal themselves as nothing more than figures of speech for the act of naming, the names of what cannot be said (330).

In the bureaucratic decision to name a South Australian nuclear testing site using a word plucked from an extinct far northern Indigenous language, there is something of the same aesthetic logic at work. If it had even been thinkable, the use of a local Pitjantjatjara or Yankunytjatjara word to name the site might have made the possibility of Aṉangu endurance—potential victims of radioactive fallout, potential traditional owners—too literal for comfort. 'Maralinga' was a word meaningless to local Aṉangu people, but which still carried connotations of Aboriginality; stripped of its specificity but still accompanied by implications of prior belonging and legitimate occupation (implications which were, outside of the symbolic sphere, unrecognised), the word could be repurposed as a way of marking a site that was both Australian and a 'new place,' the name for something that 'cannot be said;' a testing place, a site central to the security of Australia's position in the transnational nuclear war games, a parcel of home territory specially designated for nuclear destruction.

Other scholarship has recognised that the appropriation of Indigenous words in colonial naming practices has a particular significance in the context of international nuclear colonialism. For literary studies scholar Jessica Hurley (2018), this appropriative naming practice is a sign that the colonial nuclear testing endeavour has disavowed its relationships with its Indigenous others not only for a refusal to fully recognise the violence of that relationship, but also because the relationship might be more intimate than it can bear. Writing from the context of the United States' nuclear testing in the Pacific, Hurley argues that the quantum logics of nuclear science uncannily resemble Indigenous ways of understanding time, space, and the subject, and that it is this correspondence that nuclear-armed settler colonies seek to disavow with the appropriation of Indigenous language and imagery:

> The compulsion to name nuclear laboratories and technologies after Native American nations, practices and spaces [...] marks the irruption of supposedly repressed Indigenous epistemologies into the heart of colonial science. [It] is a symptom of the profound yet disavowed affiliation between nuclear and Native epistemologies even as the bulk of nuclear violence is visited upon Native peoples. In events like Opera-

> tion Redwing (1956), the West sublimates its own discomfort with the overlap between nuclear and Native epistemologies by naming bombs after Native nations in the Americas and then using them to obliterate contemporary Native Pacific Islander spaces […] in tests designed to move the nuclear from the realm of the Indigenous uncanny into the realm of Western data (2018, 97).

In this paper, Hurley suggests that there is something animistic in the agent-like behaviour of nuclear materials; when considered alongside the quantum confusion of the laws of cause-and-effect (for example, in the 'spooky action at a distance' of quantum entanglement), this poses a major contradiction to Western logics of both the exceptionalism of human agency and of linear temporality. Nuclear materials appear to inhabit a vastly extended timescale; with their radioactive half-life, their influence extends many tens of thousands of years into the future, and they have a capacity to seemingly create effects proleptically, before they have been introduced as a cause (as in the eerie *bukimi* phenomenon that preceded the bombing of Hiroshima).[4] For Hurley, these properties align nuclear physics with Native worldviews and epistemologies that attribute agency to non-human beings and matter, that recognise channels of causation distinct from that of cause and effect, and that understand time in ways that differ from eschatological Western models, including so-called 'spiralic time' (see Hurley 2017). This means that nuclear physics is the basis for the twentieth-century world powers' imperialist ambitions, Hurley argues, at the same time as it is a profound challenge to the rationalist epistemologies that the West is otherwise so dependent upon.

Whether Australian First Nations cultures, as a whole, can properly be described as animist, or whether 'spiralic time' specifically is an applicable concept to describe Australian Indigenous ways of experiencing temporality, is perhaps difficult to assert; as Eric Michaels argued above, making generalisations about the hundreds of distinctive Australian Aboriginal cultures is, to say the least, problematic. However, some First Nations people have articulated Aboriginal philosophical positions that certainly seem roughly coincident with Hurley's characterisation above; Palyku scholars Ambelin Kwaymullina and Blaze Kwaymullina, for instance, have written on Aboriginal understandings of the "relativity and dynamism of time and space" in a way that stresses the centrality of intensive networks of interrelationship to Aboriginal epistemologies and models of subjectivity (2010, 202); they go on to claim that for Aboriginal cultures, time "is relative to the enduring physical and metaphysical context of country" (199) and constitutes a "pull of relationships moving in dynamic interaction"

4 See Saint-Amour (2000); for more on the strange temporality of nuclear materials see Masco (2006).

(200) rather than an absolute principle that manifests in a linear progression of events. Likewise, anthropologist Deborah Bird Rose has written on forms of Aboriginal animism that she identifies as ecological ontologies, in which networks of "mutual life-giving" relationships network human and non-human agents (2017, 496). Perhaps the British nuclear testing program in Australia appropriates an aesthetics of Aboriginality not only in an attempt to avoid the contradictions of its own implication in the ongoing violence of settlement (here appearing in its new nuclear iteration), but also to disallow the prospect that its relationship with the Indigenous Other might be more complicated than a dichotomy. If Indigenous epistemologies resemble nuclear epistemologies, what might that mean for colonial sovereignty?

Totem: Kinship in Apocalypse and Morbid Reconciliation

Perhaps there is a yet more basic equivalence that is being disavowed here, however. The use of the operational name 'Totem' in connection with the two plutonium bomb tests held at Emu Field suggests some further dimensions to this process of disavowal. Totem is another word that was transliterated from an Indigenous language — in this case, the language of the Algonquian group of Native American peoples (*Macquarie Dictionary*) — and has been used to describe forms of "multispecies kin groups" in Aboriginal cultures (Rose 2017, 496). Anthropologist W. E. H. Stanner described totemism in the 1970s more fully as "a belief that all living people, clan by clan, or lineage by lineage, were linked patrilineally with ancestral beings by inherent and imperishable bonds through territories and totems which were either the handiwork or parts of the continuing being of the ancestors themselves" (as cited in Williams 2008, 382). Australian Aboriginal Arrernte elder Margaret Kemarre Turner has characterised totemism as follows:

> Animals and other Species are in the kinship too. These come from our Land, and they're what our 'totem' is, as English calls it. And what those kids call that Species is by their grandfather, or their mother, or their father's father, or their mother's father. That's how we relate (2010, 9).

The adoption of this word by the British authorities as the name for the two Emu Field plutonium bomb trials (which were initially referred to in public as 'Operation X200,' or as 'Woomera' or 'Emu' tests) (Tynan

2022, 188–212) is another chapter in a story muddied by misremembrance and additionally obscured by layers of government classification and censorship. Its usage in this context is tinged with more than a little irony, especially considering that government agents were known to remove ritual objects, including 'totem poles,' from sacred places near testing sites in an effort to deter Aṉangu people from visiting their ancestral country (Tynan 2016, 182). Most pertinently, however, the naming of this test site has the primary effect of invoking totemism, as an Aboriginal way of organising and ritualising relationships — including ancestral relationships that network human and non-human subjects — in connection with the nuclear testing event at Emu Field.

What does this symbolic association between Indigenous ancestral kinship networks and nuclear imperial ambition signify for the settler cultural imaginary? The purpose of the Totem series was to conduct testing of atomic plutonium devices that were compact enough to be deployed on planes, and that had been produced using cheaper mass production methods relative to previous devices (Tynan 2016, 74). One juxtaposition that emerges here places the principles of mid-century post-war Fordist economics (with the emphasis on the device's transportability, cheapness, adaptability, and ease of replicability) side by side with the Aboriginal cultural emphasis on the endurance and inalienability of ancient lines of lineage that network human sociality to non-human kin and country, and of the social, legal, and epistemological restrictions and rigidity that surround the maintenance of the connections to this lineage. Aboriginality and Western modernity are once again organised into a dichotomous relationship, with implications along the lines of the 'Stone Age meets the Atomic Age' trope that Beadell was reliant upon; the significance of atomic weaponry here as a marker of racial, civilisational, and national identity recalls Arundhati Roy's formulation of nuclear weaponry as "the ultimate colonizer" and "the heart of whiteness" (2002, 11; see also Paul Williams 2011). This reading, too, invokes the racist and colonialist roots of totemism as a psychoanalytic concept; referencing nineteenth-century anthropologist James G. Frazer's account of Australian Aboriginal cultural practices, Freud's original study conceived of totemism as the characteristic of a 'primitive' stage of psychic development (Freud 2001 [1913]; see also Swartz 2023).

However, a further implication of this naming act (reinforced by the consonance between the words 'atom' and 'totem') is the atomic device's own status as a totemic object. The bomb is an object of extraordinary cultural, symbolic, and mythic meaning; indeed, according to nuclear anthropologist Joseph Masco, given that the principal usage of the nuclear

weapon is (in theory) as a tactical deterrent rather than an eventuality, its "primary modality is psychological and cultural" (as cited in Maguire 2013, 392). Since its power lies in its threatened rather than its actual use, the nuclear weapon is ripe for investment with all kinds of social fears and symbolism, meaning that nuclear weaponry becomes "an unprecedented tool for psychological and emotional engineering," and "a highly overdetermined form that takes on a fetishistic structure" (Maguire 2013, 392). In the Australian context, as mentioned earlier, the nuclear weapon was of great symbolic import to nationalist agendas and foundational to the nation's sense of security and international standing in the mid-twentieth-century global political climate; Masco suggests that symbolic investments like these have charged the bomb with potent cultural significance in a way that likens it to a fetish object. Fetishism and totemism are concepts which overlap somewhat and the terms are occasionally used almost interchangeably, given that both describe similar forms of object relations (see, for example, Worrell and Krier 2018); furthermore, like totemism, the concept of fetishism emerged from the colonialist and racist frameworks of early psychoanalytic theory, which framed the attribution of power and agency to objects as a remnant and primitive phase of psychic development (Swartz 2023).[5] But, while the fetish is broadly understood as an object that invites reverence or desire because it is a materialisation of some form of symbolic or divine power, the emphasis in totemism is on the totemic object's capacity to structure relationships around itself, to designate kin groups and ancestors—as Margaret Kemarre Turner puts it above, the totem has something to do with 'how we relate.' Perhaps, in this case, the bomb is not only an objectification of a range of social fears and hopes, but is also being positioned as the organiser of a kinship network. In other words, in the settler imaginary, *the totem of the atomic bomb binds First Nations and settler Australians together in a kin-like relationship*. But the totem in this instance is also the device that has, as its defining feature, the capacity to extinguish both cultures indiscriminately—and if this is the case, the kind of relationship that the nuclear weapon seems to embody is one of mutual annihilation: a kinship of apocalypse.

This acknowledgement of cognation, bleak as it is, is surprising when considered in the context of the cultural environment that supported the British nuclear testing project in Australia. As explored earlier, an important feature of the ideology of the nuclear testing project was the contrast it delineated between an ancient, 'long-gone' Aboriginality and the powerfully hyper-modern nuclear-affiliated Australian state; the affinity between these two cultures that is hiding here in plain sight is

5 Although there is not space to consider this in detail here, the racist/colonialist roots of the psychoanalytic concepts of totemism and fetishism (as outlined in Swartz 2023 and in Anderson, Jenson, and Keller 2011) are an important dimension of this process of appropriation and disavowal, adding another layer of complexity. A more extended treatment of this line of enquiry is warranted.

obviously a contradiction to this ideological position. What are the features of this disavowed kinship—what kinds of affiliation are being both underscored and denied here? To begin with, the atomic totem seems to highlight some parallels that are apparent between the West's confrontation with a new sense of mortality brought about in the nuclear era, and the confrontation with mass death that Indigenous peoples across the world have already faced (and continue to face). Scholarship on the aesthetics of the nuclear age notes that following the events of Hiroshima and the global threat of the Cold War, "the nature and scope of death" underwent a "fundamental and irrevocable shift" in the West; the paradigm of the nuclear age was a "sense of terminalism and a permanent encounter with irrational, grotesque and profoundly unacceptable death" (James 1994). This was new—it severed cultures of modernity from their sense of immortality—the assumption of the continuation of culture and meaning. In some visual representations of the atomic bomb, such as in paintings by Australian artist Arthur Boyd, there is a particular attention to the intensity of the light and heat of the bomb, signalling its capacity for 'atomisation,' or complete disintegration; the result is a kind of extreme bleaching and harrowing of the subject (James 1994). These fears of cultural terminalism and the disintegration of the subject, I suggest, may have invoked in the settler imaginary an imagined affinity with the mass death, displacement and disruption visited on Aboriginal peoples under colonisation. While Indigenous ontologies themselves do not necessarily recognise self-extinction—as First Nations legal scholar Irene Watson writes, "there is no principle within Aboriginal jurisprudence which enables extinguishment" (2022, 357)—the presumption that First Nations people were 'dying out' or 'long-gone' was active in settler discourses about Aboriginality (as made clear by Beadell's characterisation of the 'ancient,' 'absent' figure of the First Nations subject). In the appropriation of icons of Aboriginality to characterise the nuclear bomb, and particularly in the invocation of totemism, this implicit equivalence is apparent in the settler cultural imaginary: that Aboriginal Australia and settler Australia are connected—are drawn into a kin-like relationship—by a shared vulnerability to nuclear extinction. And in the process of disavowing this unacceptable equivalence in the settler imaginary, the figure of the Aboriginal person has been 'atomised' into the mushroom clouds of plutonium bombs, into antiquity, into absence, into words from which meaning has been evacuated.

The atomic totem, then, an icon of mutually assured destruction, is a response to the irreconcilable contradictions presented to settler Australia by the endurance of Aboriginal peoples in spite of the violence and illegitimacy of colonisation and settler occupation, including in its new

nuclear iteration.[6] It is not only an acknowledgement of a disavowed form of kinship—given that the atomic totem is accompanied by an as yet unrealised threat of complete annihilation, it also seems to be one of the few devices by which the settler imaginary can conceive of a shared future. The struggle to articulate a vision for the future in Australian political discourse—particularly a vision that can accommodate Indigenous and non-Indigenous Australia—has been written about in terms of the failure of national narratives to either confront or evade the nation's difficult history. Australian literary scholar Philip Mead, for instance, writes of the Australian settler colony's fixation on finding and telling national narratives in terms of a "pathology" and argues that the "suffering" evident in "these distorted and distorting public expressions is about the deep deformations of collective storytelling, a psychic economy of unspeakable histories, and the spectre of a story-less future, or chaos" (Mead 2018, 526). The chaotic, story-less future is what is captured and dealt with by the settler imaginary's fantasy of the atomic totem, which at least imagines a future equally uninhabitable for all; indeed, since it represents complete annihilation, the awful irony is that this is a symbol that is more successfully able to accommodate contradictions and neutralise distortions than the various other attempts at national symbolic unification.

In this regard, the atomic totem could be thought of as a vision, then, of a kind of morbid reconciliation. The utopian discourse of reconciliation has emerged in the politics of settler states around the world, offering a vocabulary and iconography of redress, consolidation, and transformation for settler-colonial nations grappling with violent pasts as well as with the ongoing suffering and entrenched disadvantage resulting from the dispossession of Indigenous populations (Edmonds 2016). In Australia, public discourses of 'reconciliation' between First Nations and settler Australia emerged most fully in the early 1990s when the Labor government, under prime minister Bob Hawke, promulgated a reconciliation movement in place of more substantive action towards Indigenous land rights or a treaty; while both of these courses of action were flagged in the early days of the Hawke government, they were ultimately abandoned after pressure from resources lobbyists and other interest groups (Edmonds 2016). The notion of reconciliation, then, for all of its emotional and affective power, was also an attempt to envision a future for both Indigenous and settler Australia that did not involve any great compromise for the settler nation and its economic structures (although the movement went on to mark some "significant achievements" in terms of raising broader awareness about and fostering recognition of Indigenous issues) (Edmonds 2016, 97).

6 W. E. H. Stanner was perhaps giving voice to this morbid aspect of the settler colonial imagination in 1968 when he ominously remarked: "The twentieth century and the Stone Age cannot live together" (1969, 22).

The reconciliation movement tended to be described in language that connoted healing and the spanning of rupture. Prior to Hawke's election in 1983, for example, his campaign was founded on this platform of 'national reconciliation, national recovery, and national reconstruction' articulated under the slogan 'Bringing Australia Together;' the most prominent public performances of this reconciliation movement were a series of bridge walks (Pratt 2005). However, as well as being critiqued as a performative display of nationalist fantasies of unity and a means of relieving settler feelings of shame rather than a genuinely transformative process that could bring about substantive legal change or reparations that materially benefit Aboriginal people (Edmonds 2016, 93), the movement has been critiqued for the weakness of this imagery. From the perspective of one commentator, a leader in an Aboriginal and Torres Strait Islander Christian congress, its failure was partly due to a paucity of historically specific symbolism: "I don't think we have powerful symbols that link us together in a deeply mythic way" (Rev. Grant Finlay as cited in Edmonds 2016, 102). Bizarrely, though, as this article suggests, the psychic work on developing such symbolism may in fact have begun decades earlier: the same settler longing for unanimity is apparent in prototypical form in the figure of the atomic totem, which, as a precedent to the reconciliation movement at a time of broader public silence about Indigenous issues, *figured the same desire for conciliation morbidly in terms of an imagined or potential mutual extinction*. Not fully or coherently articulated in the form of a statement, but present in a disavowed symbolic formulation which both acknowledges and denies settler Australia's affiliation with Aboriginal Australia, the reconciliation discourse appears proleptically, latent in the settler Australian imaginary's bleak resolution to the otherwise irreconcilable and shame-inducing contradictions of its violent history which it was unwilling to resolve politically; at the same time, anxieties and difficult feelings about the use of weapons of mass destruction are displaced onto Aboriginality. The morbidly sublime moment of the end of history was the arena, it seems, in which the mid-century settler imaginary could face the unattended figures of the First Peoples, and in which the nation could finally be 'brought together;' meanwhile, having contained these bad feelings and contradictions, the work of nuclear imperialism could continue and the reality of the endurance of Aboriginal people could remain unacknowledged, obscured by silence.

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Bibliography:

Andersson, Warwick, Deborah Jenson and Richard C. Keller. 2011. *Unconscious Dominions: Psychoanalysis, Colonial Trauma, and Global Sovereignties*. Durham: Duke University Press.

Attwood, Bain and Andrew Markus. 1999. *The Struggle for Aboriginal Rights: A Documentary History*. Sydney: Allen and Unwin.

Attwood, Bain. 2007. *The 1967 Referendum: Race, Power and the Australian Constitution*. Canberra: Aboriginal Studies Press.

Australian Commonwealth Department of Supply, Research and Development Branch. 25 November 1953a. "On the Development of Maralinga." National Archives of Australia: A6456, Control symbol: R145/011, Item no. 416248.

Australian Commonwealth Department of Supply, Research and Development Branch. 14 December 1953b. Letter from A. G. Halden to Security Officer, Grade II. National Archives of Australia: A6456, Control symbol: R145/011, Item no. 416248.

Beadell, Len. 1986. *Blast the Bush*. Adelaide: Rigby.

Carter, Paul. 1987. *The Road to Botany Bay: An Essay in Spatial History.* London: Faber and Faber.

Cross, Roger, and Avon Hudson. 2005. *Beyond Belief: The British Bomb Tests: Australia's Veterans Speak Out*. Adelaide: Wakefield Press.

Edmonds, Penelope. 2016. *Settler Colonialism and (Re)conciliation: Frontier Violence, Affective Performances, and Imaginative Refoundings.* Houndmills: Palgrave Macmillan.

Freud, Sigmund. 2001 [1913]. *Totem and Taboo*. Oxford: Routledge.

Gara, Tom. 2020. “Beadell, Leonard (Len) (1923–1995).” *Australian Dictionary of Biography*. National Centre of Biography, Australian National University. https://adb.anu.edu.au/biography/beadell-leonard-len-29681/text36717. Accessed March 26, 2023.

Gerster, Robin. 2020. *Hiroshima and Here: Reflections on Australian Atomic Culture*. Maryland: Lexington Books.

Gibson, Ross. 2002. *Seven Versions of an Australian Badland*. Queensland: University of Queensland Press.

Hodge, Bob and Vijay Mishra. 1991. *Dark Side of the Dream: Australian Literature and the Postcolonial Mind*. North Sydney: Allen and Unwin.

Hurley, Jessica. 2017. “Impossible Futures: Fictions of Risk in the *Longue Durée*.” *American Literature* 89 (4): 761–90.

Hurley, Jessica. 2018. “The Nuclear Uncanny in Oceania.” *Commonwealth Essays and Studies* 41 (1): 95–105.

James, Rod. 1994. “Death in Excess: Nuclear Imagery.” *Artlink* 14 (4): 38–40. https://www.artlink.com.au/articles/635/death-in-excess-nuclear-imagery/.

Kuldova, Tereza. 2019. “Fetishism and the problem of disavowal.” *Qualitative Market Research* 22 (5): 766–780.

Kwaymullina, Ambelin and Blaze Kwaymullina. 2010. “Learning to read the signs: law in an Indigenous reality.” *Journal of Australian Studies* 34 (2): 195–208.

Langton, Marcia. 1993. *“Well I heard it on the radio, and I saw it on the television.”* North Sydney: Australian Film Commission.

Lennon, Jessie, with Michele Madigan. 2000. *I'm the One that Know this Country!: The Story of Jessie Lennon and Coober Pedy.* Canberra: Aboriginal Studies Press.

Lennon, Lallie, with Michele Madigan and Paul J. Langley. 2010. *The Black Mist and its Aftermath: oral histories*. Public Domain Edition. Aldinga Beach, S. Aust: P. J. Langley. PDF on DVD+R.

Lester, Yami. 2000. *Yami: The Autobiography of Yami Lester*. Northern Territory: Institute for Aboriginal Development.

Maguire, Mark. 2013. “From *The Nuclear Borderlands* to the counter-terrorist state: an interview with Joseph P. Masco.” *Social Anthropology* 21 (3) 389–402.

Masco, Joseph. 2006. *The Nuclear Borderlands: The Manhattan Project in Post-Cold War New Mexico*. New Jersey: Princeton University Press.

Mattingley, Christobel. 2016. *Maralinga's Long Shadow—Yvonne's Story*. New South Wales: Allen and Unwin.

Mead, Philip. 2018. “Unresolved Sovereignty and the Anthropocene Novel: Alexis Wright's *The Swan Book*.” *Journal of Australian Studies* 42, (4): 524–538.

Michaels, Eric. 1994. *Bad Aboriginal Art: Tradition, Media and Technological Horizons*. New South Wales: Allen and Unwin.

Morton, P. 1989. *Fire Across the Desert: Woomera and the Anglo-Australian Joint Project, 1946–1980*. Canberra: Australian Government Publishing Service.

Penot, Bernard. 2005. “Disavowal.” In *International Dictionary of Psychoanalysis*, ed. Alain de Mijolla, 415–417. Detroit: Thomson Gale.

Pratt, Angela. 2005. *Practising reconciliation? The politics of reconciliation in the Australian Parliament, 1991–2000*. Parliamentary Library. https://www.aph.gov.au/binaries/library/pubs/monographs/pratt/practisingreconciliation.pdf.

Rose, Deborah Bird. 2017. “Connectivity Thinking, Animism, and the Pursuit of Liveliness.” *Educational Theory* 67 (4): 491–508.

Roy, Arundhati. 2002. *The Algebra of Infinite Justice*. London: Flamingo.

Royal Commission into British Nuclear Tests in Australia. 1985a. *Conclusions and Recommendations*. Canberra: AGPS.

Royal Commission into British Nuclear Tests in Australia. 1985b. *Report of the Royal Commission into British nuclear tests in Australia*, Vol 1. Canberra: AGPS.

Saint-Amour, Paul K. 2000. "Bombing and the Symptom: Traumatic Earliness and the Nuclear Uncanny." *Diacritics* 30, (4): 59–82.

Stanner, W. E. H. 1969. *After the Dreaming: Black and White Australians—an Anthropologist's View*. The 1968 Boyer Lectures. Sydney: The Australian Broadcasting Commission.

Swartz, Sally. 2023. *Psychoanalysis and Colonialism: A Contemporary Introduction*. New York: Routledge.

Taylor, Russell. May 26, 2017. "Indigenous Constitutional Recognition: the 1967 Referendum and Today." Papers on Parliament no. 68, Senate Occasional Lecture Series at Parliament House, Canberra.
https://www.aph.gov.au/About_Parliament/Senate/Powers_practice_n_procedures/pops/Papers_on_Parliament_68/Indigenous_Constitutional_Recognition_The_1967_Referendum_and_Today#ftn38.

Turner, Graeme. 1993. "Semiotic victories: media constructions of the Maralinga Royal Commission." In *Australian Cultural Studies: A Reader*, edited by John Frow and Meghan Morris, 180–191. New South Wales: Allen and Unwin.

Turner, Margaret Kemarre. 2010. *Iwenhe Tyerrtye—What it Means to be an Aboriginal Person*. Northern Territory: IAD Press.

Tynan, Elizabeth. July 26, 2013. "Dig for secrets: the lesson of Maralinga's Vixen B." *The Conversation*.
https://theconversation.com/dig-for-secrets-the-lesson-of-maralingas-vixen-b-15456.

Tynan, Elizabeth. 2016. *Atomic Thunder: The Maralinga Story*. Sydney: NewSouth Publishing.

Tynan, Elizabeth. 2022. *The Secret of Emu Field: Britain's Forgotten Atomic Tests in Australia*. Sydney: NewSouth Publishing.

Watson, Irene. 2022. "Inter-Nation Relationships and the Natural World as Relation." In *Locating Nature: Making and Unmaking International Law*, edited by Usha Natarajan and Julia Dehm, 354–374. Cambridge: Cambridge University Press.
https://doi.org/10.1017/9781108667289

Wildcat, Matthew. 2015. "Fearing social and cultural death: genocide and elimination in settler colonial Canada—an Indigenous perspective." *Journal of Genocide Research* 17 (4): 391–409.

Williams, Nancy. 2008. "Stanner, *Milirrpum*, and the Woodward Royal Commission." In *An Appreciation of Difference: W. E. H. Stanner and Aboriginal Australia*, edited by Melinda Hinkson and Jeremy Beckett, 380–414. Canberra: Aboriginal Studies Press.

Williams, Paul. 2011. *Race, Ethnicity and Nuclear War: Representations of Nuclear Weapons and Post-Apocalyptic Worlds*. Liverpool: Liverpool University Press.

Worrell, Mark P. and Dan Krier. 2018. "Totems, Fetishes and Enchanted Modernity: Hegelian Marxism Confronts Idolatry." *Logos: A Journal of Modern Society and Culture* 17, (1).
https://dr.lib.iastate.edu/server/api/core/bitstreams/050bbf50-bc92-47e0-bda8-09c9e0778ad8/content