

Forthcoming as a special issue of *Unlikely: Journal for Creative Arts*, 2017:

Montebello, Emu, Maralinga: Australia's Nuclear Culture

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About the editors

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N.A.J. Taylor is among those inaugurating a new, nuclear, humanities. Recent works include the edited volumes, "Re-imagining Hiroshima" (*Critical Military Studies*, 2015) and "Internal Relations" (*Journal of Narrative Politics*, 2017). Forthcoming works under contract include the books, *Antipodean Nuclear Feminisms* (Palgrave Macmillan, c.2018), and *Experiencing Hiroshima* (Routledge, c.2017).

Ellise Barkley's career combines academic and industry research with project management, teaching, consultancy, and leadership across arts, sustainability, humanities, and community development fields. Ellise has twenty years of professional experience, and high-level expertise in research and evaluation, critical analysis, partnership development, management of large-scale projects, education, and the production of multi-platform research and creative assets. Ellise is Program Manager for Sydney-based arts company Alphaville, for the international community arts program 'Nuclear Futures', and recently completed a Doctor of Creative Industries. Her research interest is the study of the impacts of arts and culture, particularly from interdisciplinary and cross-cultural perspectives. Email: ellise.barkley@nuclearfutures.org

a. Abstract

It is little known that among the survivors of the nuclear attacks on Japan were a small number of Australians. It is also barely understood that Australia yielded its land and compromised the future of its people to allow British nuclear colonialism—in the form of nuclear weapons testing at Maralinga, Emu Field, and the Monte Bello Islands. As the Cold War ended, greater sections of Australian society have since been implicated in our nuclear future—which is manifest in the legacies of uranium mining, nuclear testing and nuclear wastes, and signified in new public debates about the nuclear energy option, the role of extended nuclear deterrence in Australia's defence, the expansion of uranium exports, and proposals about the handling of national and foreign radioactive wastes.

Since the time of the British nuclear tests, in the 1950s and 60s, Australian artists have responded to Australia's nuclear politics and history through the mediums of film, song, digital arts, paintings, sculptures, theatre, photography, poetry, literature, and many others. The special issue, *Australian Nuclear Art*, argues that Australian artists offer unique insights about its peoples and land, underwritten by Australia's many indigenous cultures. The special issue brings together the contributions of artists—and their artworks—alongside critical reflections on the role of the creative arts in dealing with Australia's nuclear history, and bringing about alternative nuclear futures and social change.

Acknowledgement

The Nuclear Futures partnership initiative from which this project arises has been principally funded by the Australian Government through the Australia Council for the Arts between 2014 and 2016. Yalata has raised additional direct funding, including Australia Council funding for the Yalata Festival, an Australia Council grant for the men's sculpture group and the Nagasaki project, and a Country Arts SA grant for the Maralinga Music project. The Department of Foreign Affairs through its Tokyo Embassy supported the Nagasaki Sculpture project. Grants have also been secured from Mayors for Peace Australia and the Graham F. Smith Peace Foundation, and there has been significant in-kind support from Yalata Community and several universities in Australia and overseas.

b. Statement of aims

The impulse for this special issue comes from the new insights and understandings that have arisen out of a three-year Australia Council for the Arts project, called Nuclear Futures (2013-2016). The Nuclear Futures partnership initiative is an international collaboration of artists working with atomic survivor communities that seek to bear witness to the legacies of the atomic age through the creative arts in Australia, Britain, Japan, Kazakhstan, and the Marshall Islands. Participants explore how multiple, dynamic and diverse arts practices drive creative reflection on the atomic age and its consequences for the deep future (www.nuclearfutures.org). Underpinning the work are a range of community arts and cultural development approaches, where professional artists partner with communities of interest.

The proposed special issue aims to bring together the diverse skills and experiences of the participants in order to ask:

what insights and understandings about people and land—and their interrelationship—can be gained from Australian nuclear art?

Multiple, dynamic and diverse arts practices have driven the project so far, alongside scholarship related to:

- i. Memory and narrative;
- ii. Arts-Science interactions;
- iii. The history of military and civil nuclear programs;
- iv. Imperialism, the Cold War, and other key historical dimensions;
- v. Wastes and contaminated sites;
- vi. Health and radiation impacts;
- vii. The role of the arts (and specifically of community arts);
- viii. Art, protest, and disruption;
- ix. Gift theory and reciprocity;
- x. Justice and the arts;
- xi. Resilience and survival;
- xii. Eco-criticism; and
- xiii. Future Studies.

c. Structure

Introduction *N.A.J. Taylor*

This brief essay introduces the edited collection, first by proposing and defending the idea that Australian atomic art is best understood as being inspired by and offering insights about people and land, before drawing together the many diverse contributions selected for this volume. In so doing this introductory chapter serves to contextualise Australian atomic art in the global context, in relation to one or more artworks, or clusters, of art forms.

Grounding atomic art: the *Nuclear Futures* partnership initiative *Paul Brown and Ellise Barkley*

The *Nuclear Futures* partnership initiative seeded new creative partnerships through which communities and artists use theatre, film, paintings and sculpture, photography, digital arts, writing and other art forms to make creative works that reflect the horror and inevitability of living with nuclear radiation and contaminated land, but also the resilience of ecosystems and communities as they face the nuclear future. Two residency programs feature: first, a collaborative partnership in the South Australian rural community of Balaklava, a place subjected to wind-blown contamination from British nuclear tests, and also home to a long time nuclear veteran campaigner; and second, a community arts project at Yalata and Oak Valley, exploring the forced relocation and intergenerational response of Pitjantjatjara Anangu in the aftermath of Britain's atomic testing at Maralinga in South Australia. The resulting art works respond to the slow public reveal and long-term legacies arising from the British run atomic experiments, and sit at the creative junction between historical fact, eye-witness testimony and artistic interpretation. They explore memory and narrative to create new understanding of arts-culture-science-environment interactions, and provide a case study in the role of community arts in protest and disruption of "official" histories.

Cluster 1: Immersive nuclear knowledges

This cluster features two immersive installation works co-produced by the Nuclear Futures creative team and atomic survivor communities, including nuclear veterans and local indigenous communities. The works, *10 Minutes to Midnight*, and *Ngurini (Searching)*, are designed to screen together as one program, on an 8-metre diameter cylindrical surface, with six projectors and seven speakers.

Title	Abstract	Author/s
<i>10 Minutes to Midnight</i> Immersive installation [sample of artwork]	<i>10 Minutes to Midnight</i> is the culmination of a collaborative partnership with representatives from Australian nuclear veteran communities. The creative team worked as artists in residence over 18 months in the south Australian rural community of Balaklava, a place subjected to wind blown contamination from British nuclear tests, and home to long time nuclear veteran campaigner Avon Hudson (See Avon's story in ' <i>Portrait of a Whistleblower</i> ').	Alphaville
<i>Ngurini (Searching)</i>	<i>Ngurini (Searching)</i> explores the forced relocation and	Alphaville and

<p>Immersive installation [sample of artwork]</p>	<p>intergenerational response of Pitjantjatjara Anangu in the aftermath of Britain’s atomic testing at Maralinga in South Australia. It embodies community stories of landscape and migration, and is inspired by the resilience and hopes of current generations. This work is a culmination of a community-based arts project with Pitjantjatjara Anangu from Yalata and Oak Valley, who were relocated from traditional lands and the Ooldea Mission, from 1952 when Britain commenced its nuclear testing program in Australia. Alphaville’s visiting artists spent two years at Yalata in collaboration with local artists.</p>	<p>the Yalata community</p>
<p>“Staging the bomb” Article</p>	<p>This article explores the integrated production design for the 360° projection installation 10 Minutes to Midnight, that makes explicit the idea that we go about our everyday lives “in the nuclear age” by appealing to each audience member’s sensory and social consciousness. We created a sensory space where meticulously programmed synchronised sound, light and evocative imagery are used to engage, challenge and connect with the audience. The circular projection structure emerged as an experimental, creative solution for the 2015 Adelaide Fringe Festival production. We hoped to achieve an installation that offered a visceral, yet personal experience of our shared nuclear history. Here we reflect on our experience designing and touring this installation in both remote and metropolitan venues, and argue that the use of innovative audio-visual technologies has enhanced community arts practice and transformed our capacity to communicate the nuclear age.</p>	<p><i>Nic Mollison, Ellise Barkley and Luke Harrald</i></p>

Cluster 2: Personal nuclear narratives

This cluster includes the personal narratives of the indigenous artist Warren (Ebay) Paul), British nuclear test whistleblower, Avon Hudson, digital artist Linda Dement, and a group of 16 indigenous painters from the Yalata Womens Centre. The art samples provide dozens of still photographic images documenting Avon Hudson's life and work, as well as a short film and documentation from a recent exhibition of Ebay's art practice relating to nuclear testing. There are also images of Yalata womens' paintings and access to Linda Dement's augmented reality installation at Maralinga.

Title	Abstract	Author/s
<p><i>Ebay makes the Bomb</i></p> <p>Photographic images, drawings, and short film (10 mins) [sample of artwork]</p>	<p>Warren (Ebay) Paul is a Yalata artist who produces intricate ink drawings, samples of which are provided. In 2015 he turned his hand to pottery, working with Pam Diment, potter and then Director of Tjutjuna, the Ceduna Aboriginal Arts and Culture Centre. Warren's bomb sculptures express the horror and futility of the atomic age.</p> <p>"I wanted to show the bombs blowing up the country, blowing up culture. I wanted to call it, "Day one, the beginning of whatever we are in now". It changed everything. Thinking you can blow up an atomic bomb on someone's country – it kind of gets in the way. The atomic bomb – it's only got one use, and that is to kill people, and cause death and destruction. It's a pointless thing."</p> <p>Ebay's four bomb sculptures could be a comment on the first series of four nuclear tests conducted by the British at Maralinga, sixty years ago. The first of these took place on 27 September 1956. The fifth piece, "Fukushima: elements of a slow bomb" is dedicated to Mayor Kotaku Wamura who saved his town Fudai by building a sea wall that stood firm against the Japanese Tsunami of 11 March 2011. The piece expresses the idea that nuclear power stations and other nuclear facilities constitute slow bombs, with their yield of radiation comparable over time with atomic bombs. (The second series of bombs at Maralinga were exploded in 1957. This 'Antler' series saw three bombs exploded. With the three tests at Monte Bello Islands in 1952 and 1956, plus two at Emu Field in 1953, this makes a total of twelve atomic bombs exploded on Australian soil in the 1950s.)</p>	<p>Warren Paul</p>
<p><i>Portrait of a Whistleblower</i></p> <p>Photographic essay [sample of artwork]</p>	<p><i>Portrait of a Whistleblower</i> is curated from the treasure trove of nuclear veteran Avon Hudson's own extensive collection of documents, news clippings, photographs, objects and artefacts that make up his life's work. The exhibition chronicles Avon's life, from early years growing up in regional South Australia, to service in the Royal</p>	<p>Jessie Boylan, Ellise Barkley, Avon Hudson and Paul Brown</p>

	<p>Australian Air Force as a Leading Aircraftman, through the experience of British atomic bomb tests, to his “whistle blower” act of revealing Maralinga’s deadly legacy. Featured are contemporary photographs and video works by photo-media artist Jessie Boylan, who has worked and travelled alongside Avon over the past ten years on numerous anti-nuclear and educational journeys. The creative works are exhibited alongside oral history excerpts and archival materials.</p>	
<p>“Invisible memorial: 21,830 Bones”</p> <p>Article and augmented reality work [sample of artwork]</p>	<p>Between 1957 and 1978, in hospitals around Australia, scientists secretly collected bones from the dead bodies of 21,830 babies and children. The bones were reduced to ash and sent to the UK for testing for the presence of Strontium 90 to help determine the spread of contamination from the atomic blasts at Maralinga. As a memorial to these wronged dead and a caution as to the unscrupulousness of the powerful, this work stands in its critical location, invisible to the naked eye and reliant on the vagaries of remote communications. The memorial is a ghost-like trace, calling up bones from the ether; a haunting in-situ by 21,830 dead. This article discusses the making and installation of 21,830 Bones, taking up ideas around the invisible and present, memory and resistance, and the importance of place.</p>	<p>Linda Dement</p>
<p><i>Life Lifted into the Sky</i></p> <p>Paintings [sample of artwork]</p>	<p>In May 2016 at the Yalata Womens Centre, 16 women, across three generations, sat together and produced thematically linked small paintings, creating the collection “Life lifted into the sky”. In these pictures, each painter elaborates on the migration story of the 1950s – that period in the region’s history when the British tested nuclear weapons, declaring Maralinga to be a permanent firing range, and preventing Anangu from occupying or visiting their lands. Meanwhile the forced closure of the Ooldea Mission in 1952, had begun a process of migration south to the newly formed township of Yalata. The paintings show the impact of the Maralinga bombs on people and country, and the role whitefellas played in the forced removals from Ooldea. But they also depict the temporary camps, the bush church, the roads, the railway line, the vehicles and the footprints that were all vital elements of one of Australia’s least known migration stories.</p> <p>One means of communicating this project has been via a successful crowdfunding campaign, that served to promote the work through social media.</p>	<p><i>Painters:</i> Alinta Smart, Ann Marie Woods, Edwina Ingomar, Natasha Woods, Verna Gibson, Polly Charra, Teresa Peters, Margaret May, Mima Smart, Karen Ingomar, Melvina Smart, Eileen Champion, Rita Bryant, Glenda Ken, Mary Ann Finlay, Melissa Windlass</p> <p><i>Workshop facilitator:</i> Pam</p>

		Diment
<p>“In/Visible”</p> <p>Article with photographic images</p>	<p>The nuclear age is not easily resolved as subject matter for contemporary art. Surrounded by secrecy, located in remote environments, vulnerable to weather, flawed protocols, political priorities, mismanagement and corruption, nuclear sites are also often beautiful and always, on investigation, compromised. Drawing on our separate visits to Sellafield in the UK and Maralinga in South Australia, we suggest that when visual artists go to these places and make work something else can happen beyond the documentary—this 'something else', the aesthetic construct, has the potential to transform the powerful events of real life and thus transform the viewer’s experience of them.</p>	<p>Meryl Fairbanks and Jessie Boylan</p>

Cluster 3: Listening to the bomb

This cluster documents arts projects in which the *sound* of the bomb is critical metaphorically and/or in the way an audience experiences the artwork. It includes the collaboration between Yalata Choir and Band with singer/songwriter Johnny Lovett, radio plays by British collaborator Gordon Murray, and a radio documentary by Adrian Glamorgan and Elizabeth PO'.

Title	Abstract	Author/s
<p><i>Maralinga</i></p> <p>Music</p> <p>[sample of artwork]</p>	<p>'Maralinga' has been produced by Aboriginal singer/songwriter Johnny Lovett with the musicians and singers from Yalata, a remote Anangu community 1,000 km west of Adelaide. The collaboration has also included Umeewarra Radio Station that provided the recording studio in Port Augusta, and arts production company Alphaville, which has been working on projects with Yalata community. Yalata Band has been making contemporary music around the remote communities for several years. In Anangu country, there's no shortage of energy, commitment to the songs, and a sense of humour. But Maralinga is also a place where British tested nuclear weapons in the 1950s and 60s. This song is part of that sad history. It recalls the scene of devastation caused by the atomic bombs, and the subsequent impacts on Anangu communities. Johnny Lovett wrote the song 40 years ago, in response to news about the legacies of the tests, and now he has gifted it to the Anangu communities.</p>	<p>Johnny Lovett and the Yalata Band</p>
<p>“Outliving nuclear weapons”</p> <p>Article</p>	<p>Storytelling through radio documentary can be valued for its capacity to uncover, witness, connect, curate and empower nuclear narratives. As “engaged journalists” from Australian community radio, the authors follow Australia’s uranium trail from British nuclear tests and Indigenous dispossession, through to Fukushima, Hiroshima and Nagasaki, and international efforts to disarm. To enrich the process, the makers also facilitate experimental workshops, bringing together nuclear testimonies, documentary makers and community. Soundscapes, stories, visuals, and “open question circles” enable participants to deepen connection with each other, their own nuclear stories, and their own potential to activate. This process invariably energises the program makers’ own creative practice.</p>	<p>Adrian Glamorgan and Elizabeth PO’</p>
<p>“Where do you put the bomb?”</p> <p>Article and two radio</p>	<p>Theatre director Gordon Murray and former journalist Paul Carter have been working on <i>Fallout</i>, a series of audio poems based on interviews with descendants of nuclear veterans. In developing a piece of verbatim theatre that</p>	<p>Gordon Murray and Paul Carter</p>

<p>plays (25 mins each) [link TBC]</p>	<p>responds to the testimony of descendants of British veterans who worked on the nuclear bomb tests in Australia, we were forced into considering the limits and merits of “theatre” as a campaign tool and “verbatim” as a means to access authenticity. We found that the midpoint of the process between initial interviews and final performance also provides useful tools for advocacy and campaigning. We therefore developed a form that mixed drama and narrative poetry, with journalism and documentary. In our attempt to place the memory of the bomb into the public consciousness we had to first work out where to place the sound of the bomb in the stories we were telling of Reiki Healers, Franciscan Friars, Sickly Children and Conscripted Soldiers.</p>	
<p>“Indefinite elaborations: learning to listen to the bomb” Article</p>	<p>Inter-generational harms such as the nuclear legacies are rarely, if ever, dealt with effectively by governments. This evasiveness captures the mismatch of contemporary politics: governments bind themselves to short term economic and political cycles while such challenges cross decades and even centuries. In this way evidence-based policy is avoided and a moral gap emerges between scientific findings and a government’s willingness to hear the news about unknown harms, let alone address them. This article explores both the actual and potential role of the arts in society in such a moral vacuum. We reflect on the intimate relationship between art and society, and how art—in its many forms—fills spaces neglected by the political class with sound, image and story. In so doing, the arts do not only offer beauty, joy, understanding, and healing but as the stories that are captured in this volume highlight, also present those affected with the opportunity to build both agency and solidarity as we listen intently to the bomb and face our nuclear future.</p>	<p>James Arvanitakis and Ingrid Matthews</p>
<p>10,000 suns; followed by silence Article with sound clips</p>	<p>Sound is a curious phenomenon when it comes to The Bomb. There is only one known declassified sound recording of a nuclear test; all other film footage is overdubbed with recordings of TNT to give the explosion an impressive sound that the viewer might expect. This chapter explores Australian nuclear art in the sound medium, spanning from protest songs to experimental electronic music. The soundtrack of <i>10 Minutes to Midnight</i> and Ngurini is unpacked, explaining the author’s compositional approach to the use of field recordings, soundscape and music. Through constantly shifting the audience’s sense of perspective, the soundtrack not only supports the visuals, but creates narrative and enables audience engagement with the wide variety of contemporary and historical materials used in the works.</p>	<p>Luke Harrald</p>

Cluster 4: Playing with the bomb

How has Australia's atomic history played into the work of two of Australia's most prolific and awarded authors? Acclaimed children's author and historian Christobel Mattingley and 'National Treasure' playwright John Romeril joined the Nuclear Futures Partnership Initiative to produce a new illustrated biography and a play respectively. This cluster features readings taken from those works, as well as commentary on the related processes of community engagement.

Title	Abstract	Author/s
<p><i>Maralinga's Long Shadow: the Yvonne Edwards Story.</i></p> <p>Audio recording (10 minutes) [sample of artwork]</p>	<p>A short reading from the recent book, <i>Maralinga's Long Shadow: the Yvonne Edwards Story</i>, by award-winning author Christobel Mattingley, and published by Allen & Unwin. The book was released in March and is centred on the life of Yalata artist Yvonne Edwards, her family and community history, with paintings by Yvonne Edwards and photography by Jessie Boylan. The book's launch at Tandanya National Aboriginal Cultural Institute brought some 45 community members from remote South Australia to Adelaide, to be joined by another 250 people for a unique memorial event that confirmed the deep community engagement process used by Mattingley – a relationship forged over a decade. The book has been commended in the 2016 Educational Publishing Awards.</p>	<p>Yalata, Oak Valley Communities with Christobel Mattingley, Jessie Boylan</p>
<p><i>Dancing with the Atom (Theatre play script)</i></p> <p>Audio recording and photographic essay (10 minutes) [link TBC]</p>	<p>Across a two year period, a unique collaboration developed between playwright John Romeril and nuclear veteran Avon Hudson – John in search of an elusive dramatic form capable of conveying Avon's love of knowledge and his hatred of the atomic bomb and all things colonial. Meanwhile Avon has sought refuge in the collaboration with one of Australia's greatest playwrights – refuge from the torment brought on by his engagement in nuclear veterans' affairs, campaigning for recognition of the history of Maralinga and for restitution for generations of atomic survivors. In the resulting playscript, 'HE' encounters the daughter of a nuclear veteran in an Adelaide park, at a humble park bench bearing a small plaque in memory of nuclear veterans. 'SHE' reveals the horrors of genetic transformation across generations, as together they 'romance' the atom like Fred Astair and Ginger Rogers. Presented here is an extract of the play in rehearsal with reflections by the playwright.</p>	<p>John Romeril, Avon Hudson, Jessie Boylan, Paul Brown</p>

Cluster 5: Constructing community from the bomb

This cluster first gives focus to an international sculpture project that originated from community workshops at Yalata in remote South Australia, but which grew to become a major act of cultural exchange between atomic survivor communities in Australia and Japan. The works featured are the central sculpture "Tree of Life Gift of Peace" accessed through photographic images, audio pieces and essays, as well as a 10-minute documentary film about the project. The exchange brought together Alphaville with sculptor Yukiyo Kawano, a third generation Hiroshima survivor, and her soft sculptures of the atomic bomb are juxtaposed with 'Tree of Life'. Also included in this cluster is an essay on a series of youth leadership workshops conducted with third generation participants from atomic survivor communities that promoted cultural development and exchange across several countries; this forged a partnership between Alphaville's *Nuclear Futures* program and the Global Hibakusha Project.

Title	Abstract	Author/s
<p><i>Tree of Life: Gift of Peace</i></p> <p>Sculpture [sample of artwork]</p>	<p>The sculpture embodies a message of peace, and was inspired by the peace-related activities taking place in Nagasaki through the 70-year commemoration of the atomic bombings. It represents the passing of a call for hope and peace across generations and across borders, sent as an internationally relevant message of peace from Australia to Japan. It also provides an Indigenous Australian presence in Japan, and promotes recognition of Australian atomic survivor communities while expressing the forward-looking initiatives they have pursued. It looks to a peaceful future, while paying respect to Japanese atomic survivor communities and supporting international advocacy for peace. The tree used for 'Tree of Life: Gift of Peace', is a 'Western Myall' and represents the survival of a sustaining natural environment after the atomic tests at Maralinga.</p>	<p>John Turpie, Steven Harrison, Thomas Reeves and Russell Bryant</p>
<p><i>Peace Gift to Nagasaki</i></p> <p>Film (10 minutes) [sample of artwork]</p>	<p>As outlined above, in 2016, the Aboriginal community of Yalata in South Australia gifted a sculpture to the Nagasaki Peace Park. Mayors for Peace, Fremantle City and Alphaville arts production company were the Australian partners, with the Nagasaki Atomic Survivor Council and Nagasaki City Council. The film shows the production of the sculpture and the process of community participation from which it emerged; as well as the visit to Nagasaki by a delegation of artists and community leaders, for the unveiling the sculpture.</p>	<p>Alphaville</p>

<p><i>Fat Man (Folded)</i></p> <p>Photographic essay [sample of artwork]</p>	<p>Starting in 2014, visual artist Yukiyo Kawano has been collaborating with Alphaville to create a cultural exchange between Australian and Japanese artists. A third generation hibakusha (atomic bomb survivor) from Hiroshima, Kawano re-evaluates her own condition as part of a diaspora. Her process of disassembling the known (decipherable) history locates her work somewhere in between language and the memories of place. Since 2011, she has been creating life-size renditions of the atomic bombs dropped on the Japanese cities of Hiroshima and Nagasaki. <i>Fat Man Folded</i> is a soft sculpture of the atomic bomb dropped on Nagasaki on 9 August 1945 (three days after Hiroshima). These were the first atomic bombs used on human populations, causing immense devastation and death. Kawano builds the sculptures by using strands of her hair to stitch together old kimonos worn by Hiroshima women. In doing so the artist weaves together the past and the present, the quotidian and the monumental, with her DNA. Seeking to personalise and empathise, the work brings the virtually incomprehensible horror and magnitude of nuclear war and global politics back to human proportions.</p>	<p>Yukiyo Kawano</p>
<p>“The Yalata-Nagasaki sculptures in post-Fukushima crisis conditions”</p> <p>Article</p>	<p>Having explored the potential for testimony and witnessing through artistic practice in my book <i>Cultural Responses to Occupation in Japan: The Performing Body</i> during and after the Cold War, I am particularly interested in the multiple meanings and associations accumulated in an artistic object over a period and in different contexts. Just as the atomic bombs dropped on Nagasaki and Hiroshima have engaged varied interpretive perspectives over seventy years, so too have the memorials dedicated to them. This article examines the implications of a sculpture donated by the Yalata community and Australian Mayors for Peace to the Nagasaki Peace Park to coincide with the 70-year anniversary of the dropping of the atomic bombs on Hiroshima and Nagasaki, and the installation of a replica on Maralinga Lands. As part of this project, delegations of Aboriginal elders and artists visiting Japan have shared stories with hibakusha in Japan. The two sculptures represent more than a symbolic bonding between nation-states; they also act as warning of nuclearization and signify a commitment towards a non-nuclear future.</p>	<p><i>Adam Broinowski</i></p>
<p>“Yalata’s global hibakusha”</p>	<p>The Global Hibakusha Project interviews victims of the nuclear age around the world. The project organizes workshops in sites of nuclear disaster bringing together</p>	<p>Mick Broderick and Robert Jacobs</p>

Article	the grandchildren of atomic survivors to train them in conducting and preserving oral history and culture within their home communities. The project aims to create international solidarity between youth who can maintain these links between communities via digital and internet technologies, building a global network of third generation hibakusha. Workshops have been held in the Marshall Islands (2014) and Japan (2015), involving global hibakusha participants from the Marshall Islands, Kazakhstan, Japan and Australia.	
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Knowing the deep future through the arts *Paul Brown*

The half-life of the two commonly encountered forms of plutonium is 6,500 years for plutonium 240, and 24,000 years for plutonium 239 (World Nuclear Organisation, 2013). The dangerous presence of radioactive materials is one thing that will not change on a 10,000-year trajectory. Society’s on-going experiments with nuclear materials – originating in the mid Twentieth Century as a result of uranium mining and transport, nuclear weapons testing, radioactive waste handling, and the releases from ‘civil’ nuclear installations – have already impacted on people and ecosystems, but they have also irretrievably colonized a deep future. By emphasizing the inevitable nuclear future, *Nuclear Futures* tries to extend present day public awareness of atomic survivor stories. This is essentially about keeping legacies and impacts in view, while celebrating community resilience in the face of the horrors of the nuclear age. One aim has been to extend public understanding of Cold War nuclear experimentation and its legacies – exploring the way the experience of the bomb has translated into community campaigns and initiatives for peace, nuclear disarmament and community development. This includes a search for artworks – plays, films, photographs, installations, museum exhibits, websites – that can endure across very long timescales, following ‘futures pathways’ within and beyond the arts. These pathways would be partially pre-determined now, and send ‘messages’ into the deep nuclear future.

Making the story go far: Reflection, Evaluation, Analysis, and Documentation *Ellise Barkley*

This article examines the overriding objective that drove the Nuclear Futures art-making and partnerships: What creative artworks and artefacts can endure across the deep-time of the nuclear future, and by what processes—if at all—is this achieved? To attempt an answer to this question, and to understand and appraise the work using participatory and partner-oriented approaches, host organisation Alphaville devised the READ model based on the systematic integration of reflection, evaluation, analysis and documentation. The model was then developed and trialled as part of research conducted at the Queensland University of Technology. Utilising creative documentation, rigorous evaluation, reflective practice, community archiving, and academic enquiry, the READ findings offer insight into the wider implications of the program, and the role of the creative arts in exposing Australia’s atomic test history and shaping our nuclear futures. To make the story go far, the READ application generated a legacy of multi-media outputs and accounts of the broader range of artworks and commentary generated, with emphasis on public dissemination and accessibility to optimise how these products endure through time as an invitation for future generations of communities, artists and researchers to respond.

A manifesto for an Archive of Nuclear Harm N.A.J. Taylor

This concluding article puts forward the case for a permanent collection of nuclear culture and art to

be situated as part of an Australian nuclear heritage area, as well as freely accessible online to anyone with an internet connection. Such an Archive of Nuclear Harm would collect and exhibit material on life and death in the nuclear age. Items in the collection would explore the full range of harms—both human and ecological— that are inflicted by nuclear weapons, accidents and waste. The Archive's mission would be to create an accessible resource deep into the nuclear future. Since nuclear harms are conceived in timescales of up to one million years, this will be a memory institution like no other.

d. Status of the work

The artworks are all completed have been wholly or partly funded by the Nuclear Futures partnership initiative, and are available for reproduction (except for the immersive installations which are to be screened in abbreviated form due to the nature of the works). Each essay is between 2,000 and 5,000 words in length, with 2,000-word editorial introduction.

In total, we expect the volume to come in around 60,000 words.

Many authors—in fact nearly all authors and artists—have produced draft papers for a seminar titled *Creative Arts and Nuclear Futures* held at The Queensland University of Technology, in Brisbane, Australia, August 6-7, 2015. In most cases, these papers are being further developed to respond to both the following ordering concepts of the proposed special issue:

1. the thematic structure adopted by the editors concerning land, people and their futures; and
2. the contributor's unique perspective from one-or-other specific art mediums (e.g. painting, photography, and so on).

e. Definition of the market

We envision that the special issue will appeal to three types of audiences:

The first includes those passionate about Australian art in general; we imagine very few would have engaged with Australian atomic art in any substantive detail. The discussion of contemporary works by practicing artists throughout the proposed special issue further suggests an appeal to arts practitioners themselves, who are likely to value the collation of art works alongside both scholarly analysis and practitioner reflection.

The second type of audience is a small, yet growing and committed global audience whose work specifically explores atomic art and/or aesthetic (world) politics. To exemplify the field, in *Aesthetics and World Politics* (Routledge, 2009), Roland Bleiker argues that aesthetic politics acknowledges that any representation of “reality” is necessarily altered by the way in which it is presented. According to Bleiker, it is how the gap between reality and representation is treated that gives aesthetic sources the potential to enhance our understanding of world politics. Thus the greatest contribution might come not as we might expect from politically committed art, but from less conscious representations. Relying heavily on literature and poetry, Bleiker reasons that an aesthetic reading may provide insights regarding how events in world politics are “internalised in our minds, our habits and our collective political consciousness” (Bleiker 2009, 8). In this way, art introduces creativity and imagination, and thus 'challenges the modern tendency to reduce the political to the rational' (11). We see the contributors to this volume as very much contributing to our understanding of the nuclear age in much the same way.

The third intended audience consists of academics, policymakers and other specialists in Australia and overseas whose research and decision making roles require engagement with the nuclear age in some way. For instance, we can foresee scholars in archaeology and critical heritage studies engaging with the special issue when thinking about nuclear harms—and waste in particular—as cultural heritage. How might one assemble works or commission them in order to speak to the far-future (e.g. 100,000 to 1,000,000 years)? Alternatively, decision makers looking to advance projects and initiatives for social change may look to many of the contributions to the volume to inform their own work. Ellise Barley and Paul Brown’s standalone article specifically fill this objective, although there are others.

In all instances, because there is both very little—if any—assumed prior knowledge and each of the contributors is writing in an engaging and accessible style, we can foresee the special issue appealing to the reading public, as well as undergraduate and graduate students and scholars across each of the above audience categories. Similarly, the proposed volume would appeal to a global audience and not merely an Australian one since there are very few related works to note, and because Australians in general have adopted a very identifiable stance towards the nuclear age that reflects the relative isolation of its land and peoples in the Southern Hemisphere (and given any future possible nuclear winter is likely to occur, at least in the first instance and more harmfully, in the North).

f. Competitor texts

There are no competitor texts on Australian atomic art. Where the proposed volume is situated in relation to the cognate literature is as a complement to works that have explored atomic art in another geographical region (e.g. *British Art in the Nuclear Age*, Ashgate, 2014) or in some way globally (e.g. *Filling the Hole in the Nuclear Future: Art and Popular Culture Respond to the Bomb*, Lexington Books, 2010 and *Atomic Postcards: Radioactive Messages from the Cold War*, Intellect Books, 2011) in particular, or art and social change in general (e.g. *Art and Social Change: Dust, a case study*, Hubcap Productions, 2015).

Australian Art on the Nuclear Age therefore fills an important gap in the literature.

g. About the contributors

James Arvanitakis is Dean of the Graduate Research School at Western Sydney University, a lecturer in the humanities and a visiting professor at the University of Witwatersrand, Johannesburg. He researches in the transdisciplinary areas of globalisation, citizenship and the cultural commons - incorporating issues around hope, trust, safety and intellect. Having held various positions within human rights-based organisations, his research seeks to maintain a particular focus on issues of social justice. He has also worked with playwrights and artists to document stories of injustice.

Ellise Barkley is Program Manager for the Nuclear Futures program and conducts research at the Queensland University of Technology on Community Arts evaluation, a field in which she has published and presented at conferences. She has extensive management experience in community development, creative arts, education and sustainability—working across business, local government, education and community settings. In 2014-15 she took the role of production manager for key arts projects including the donation of a sculpture from Yalata Aboriginal community to Nagasaki Peace Park, and the installation of immersive digital art works in galleries in South Australia and Queensland.

Jessie Boylan is a photomedia artist and member of the Atomic Photographers Guild, who has previously photographed nuclear sites in collaboration with nuclear veterans. A finalist in the Spirit of Youth Awards, 2009, Jessie held an Australia Council ArtsStart Grant in 2011. She was commissioned by Mt Alexander Shire Council for a public art project in Castlemaine 2014, and has exhibited internationally. In 2015 her exhibition “Portrait of a Whistleblower” won the 2015 “Images of Justice” award. She has been a finalist for the Josephine Ulrick and Win Schubert Photography Award in 2007, 2009 and 2012, and the Head On Alternative Portrait Awards ACP, 2009 and 2010. Jessie was the editor and co-writer of “Ngurini”, a new media installation made in Yalata for the *Nuclear Futures* program. She has worked extensively across remote communities in SA and NT.

Mick Broderick is Australian coordinator of the Global Hibakusha Project, and Associate Professor of Media Analysis at Murdoch University. He has produced extensive creative work and scholarly writing on nuclear issues with atomic survivor communities, and research for the UN’s International Atomic Energy Agency film library and the Australian National Museum—auditing the nation’s atomic heritage. His exhibition *Atomicalia* was installed at museums in Japan during 2009-10, and he curated *The Atomic Age in Film* for Physicians for Social Responsibility to commemorate the 50th anniversary of the nuclear age.

Adam Broinowski is an Australian Research Council DECRA research fellow at the School of Culture, History and Language in the College of Asia and the Pacific at The Australian National University. His research project is entitled ‘Contaminated Life: Hibakusha in Japan in the Nuclear Age’ DE130101746. His monograph *Cultural Responses to Occupation in Japan: The Performing Body during and after the Cold War* is published with Bloomsbury Academic 2016.

Paul Brown is adjunct professor of Environmental Humanities at University of New South Wales and creative producer for Alphaville, a Sydney-based community arts company. He was co-founder Urban Theatre Projects (Death Defying Theatre) in 1980, and across three decades has combined arts practice with academic environmental studies and community engagement. He developed Australia’s first full-length verbatim play *Aftershocks* which was also adapted into a mainstage play and a film. Paul co-authored/edited *Verbatim: staging memory and community*, and *Art and Wellbeing*, and has published extensively on the relationships between creative arts, science and environment.

Russell Bryant is a resident of Yalata Anangu community in the far west of South Australia. He is a musician in the Yalata Anangu rock band, a Lutheran pastor, and a member of the Maralinga Tjarutja Council. He has played the lead role in establishing a sculpture group at Yalata, in collaboration with the *Nuclear Futures* program. Russell has developed skills in video making, and was an actor in “Ngurini” and digital arts installation made in Yalata under Alphaville’s *Nuclear Futures* program. He visited Nagasaki in April 2015 for negotiations with the city Council about donation of a sculpture.

Teresa Crea is a leading Australian writer, director, facilitator and artist in community. Trained in film and theatre, she co-founded Australia's first professionally recognised bicultural performance company, *Doppio Teatro*, and received national awards for seminal contribution to multiculturalism in the arts. As a creator and director, her recent interests have gravitated towards hybrid and new media art, and her work now spans from grass roots and participatory projects, to contemporary experimental productions and live art events. For the 2015 Adelaide Fringe Festival *10 Minutes to Midnight* installation, Teresa led the Dramaturgy and Concept Development.

Linda Dement is a Sydney based artist who has worked in arts computing since the late 1980s. Originally a photographer, her digital practice spans the programmed, performative, textual and virtual. Her work deals with issues of disturbance, commingling psycho-corporeality and the digital and electronic, giving form to things unbearable and conflicted, with precision and control. Dement’s programmed and still image work has been widely exhibited internationally and locally, including at the Institute of Contemporary Art London, Ars Electronica Austria, multiple International Symposia of Electronic Art and at Impakt Media Arts Festivals in Europe. She is twice winner of the Australian National Digital Art Award and has been awarded a New Media Arts Fellowship by the Australia Council for the Arts. Her work is held in collections such as the Bibliothèque Nationale de France, Australian Video Art Archive, New York Filmmakers Co-op and the Daniel Langlois Foundation.

Merilyn Fairskye is a Sydney-based visual artist whose recent video and photo media work continues her interest in the impact of nuclear energy on humans and the environment. It has taken her to the Polygon in Kazakhstan, Sellafield, Chernobyl and other key nuclear sites. Her work is widely exhibited and is held in most public collections in Australia and the Museum of Modern Art, NY. She has been the recipient of many Australia Council and Australian Film Commission grants and a Rockefeller Foundation Fellowship. She is Honorary Associate Professor at the Sydney College of the Arts, University.

Adrian Glamorgan’s expertise includes writer, facilitator, community radio broadcaster, teacher/educational administrator, non-government organisation manager and public speaker. He works with Elizabeth PO’ to produce a dedicated environmental radio program “Understory” in Perth. With interests in global ecological issues, environmental policy, citizen science and solutions-focused journalism, his community broadcasting includes producing current affairs programs at 2XX and RTR FM 92.1.

Robert (Bo) Jacobs coordinates the Global Hibakusha Project from the Hiroshima Peace Institute. He studies nuclear history and culture in the US and Japan—collating narratives of a future disrupted by nuclear weapons. He works with hibakusha communities in the Marshall Islands, Japan, and Kazakhstan. Editor/contributor of *Filling the Hole in the Nuclear Future: Art and Popular Culture Respond to the Bomb*.

Luke Harrald is a composer, performer and new-media artist known for his ground-breaking work with improvisation and interactive computer music. Originally from the mid-north of SA, Luke is the Head of studies for the Popular Music and Creative Technologies program at the University of

Adelaide, and lectures in Sonic Arts.

Steve Harrison is an Anangu carver and painter from Yalata, who is the leading hand for the Yalata sculpture project. Steve has experience across South Australia, as a youth worker with at-risk children on the streets of Adelaide, as a landscaper in Port Augusta, and he currently works in Yalata on community projects. He has recently embarked on large scale carving using found timber and machinery. He has taken a leading role in the production of carved Piti (large dishes), and is working closely with visiting artist John Turpie on Yalata's sculpture for donation to the Nagasaki Peace Park. He made a cultural exchange visit to Nagasaki in 2015, and conducted interviews with Hibakusha (Japanese atomic survivors).

Avon Hudson is a veteran of British nuclear testing who served at Maralinga and Woomera in the 1950s and 60s. As a leader within the Australian Nuclear Veterans Association (ANVA), he has been a prominent advocate for recognition and compensation for Australia's nuclear veterans' community. Avon is also a wood turner and a collector and designer of clocks; and co-authored a book on the experiences of nuclear veterans and their families titled *Beyond Belief*.

Ingrid Matthews is a research officer based at the Institute for Culture and Society and lectures at the School of Law, Western Sydney University. She currently runs the WSU Jurisprudence program while completing research on socially-engaged arts and well-being with Milk Crate Theatre company, Sydney. Ingrid is the Australian consultant to *Commons and Commodities*, a four-year project with Linköping University, Sweden. She has published across the disciplines of law, cultural studies, citizenship studies and international relations.

Christobel Mattingley is the award-winning author of over 60 books, including for Allen + Unwin, *Battle Order 204* and *Chelonia Green, Champion of Turtles*. Many of these projects have been as author in community. In 2009 she co-authored *Maralinga, the Anangu story* with members of the Yalata community. This received several awards including Honour Book Children's Book Council of Australia Eve Pownall Award for Non-Fiction 2010. Her recent book *Maralinga's Long Shadow: the Yvonne Edwards Story* chronicles the effects of Australia's atomic testing on a Yalata family – and the artworks created in response by painter Yvonne Edwards.

Nic Mollison graduated from the Western Australian Academy of Performing Arts (WAAPA) in 1995 and has worked as a freelance stage lighting, projection & scenic designer for over 20 years. Nic has designed for theatre, opera and dance on local, national and international productions. He has created lighting and video projections for concerts, festivals, visual art installations and has lectured in Electronic Arts, Visual Theatre for the University of South Australia's Media Arts Program and lighting at the Adelaide College of the Arts.

Gordon Murray is a senior lecturer in drama at the University of Winchester. Previously a theatre director he worked on *Half a Life*, a verbatim project based on testimony from British Servicemen who had served at Maralinga.

Warren (Ebay) Paul is an illustrator from Yalata in the far west of South Australia. His intricate line drawings depict local scenes, the landscape of Yalata viewed from the air, animals and vegetation, dreams examples are exhibited at Tullawon Aboriginal Health Centre in Yalata. In 2014 Warren embarked upon a major program of sculpting, pottery and line drawings, in an exploration of the images and impacts of the atomic bomb. He is working in collaboration with the Ceduna Aboriginal Arts Centre and the Nuclear Futures program to realise this work.

Keith Peters is a key spokesperson for the Yalata community, and Chair of Maralinga Tjrtutja Council.

He has represented the Maralinga communities in handover ceremonies returning control of Maralinga Lands to Anangu. He has long been an advocate for cultural rights and the maintenance of the Yalata Indigenous Protected Area, including the call for community housing and local services, and for local cultural tourism industry. He recently made a key speech on the history and future of the Maralinga bomb test sites (Section 400) in a ceremony to mark the return of unrestricted access rights.

Elizabeth PO' co-produces, with Adrian Glamorgan, a dedicated environmental radio program "Understory" in Perth. Coverage includes environmental policy, citizen science and ecological solutions. An award-winning journalist, her experiences range from reporting in Northern Ireland to freelance writing for environment magazine and radio production on community radio at Fremantle, Noongar and RTR radio station. With Adrian, Elizabeth has devised a 'nuclear disasters' workshop giving insight into the Fukushima disaster.

John Romeril is a leading Australian playwright. His plays include *The Floating World*, *Carboni*, *The Kelly Dance*, *Miss Tanaka* and *Jack Charles versus the Crown* among many others. John has been Playwright-in-Residence for many communities, theatre companies and tertiary institutions. In 2003 he won the inaugural ANPC Award for Australian playwrights who have made a significant contribution to national theatre and culture; in 2012 the Green Room Lifetime Achievement Award. In 2016 he was awarded the prestigious Dorothy Crawford Award by the Australian Writers Guild, for outstanding contribution to the profession.

Mima Smart OAM is a resident of Yalata, chair of the Yalata Community Board, and a leading advocate for her community's development and well-being. She has served on the board of Aboriginal Family Support Services and Alinytjara Wilurara Resource Management Board. In 2012 she was awarded the Order of Australia Medal for her services to indigenous communities in South Australia.

N.A.J. Taylor lives and works on Wurundjeri land, in Australia. From there, he contributes to the nuclear and environmental humanities, and collaborates on alternative pathways to nuclear-free worlds. His work is characterised by what he calls an Antipodean stance, which necessitates rejecting anthropocentrism—and thus much Anglo-American nuclear thinking—as well as the pursuit of local means to global ends. Taylor currently lectures at RMIT University in Melbourne, and has variously held visiting and honorary appointments at Linköping University, Roskilde University, Bard College, La Trobe University, Whitman College, and The New School, where he was an Australia Awards fellow. He sits on several advisory and editorial boards, including the Consequences of Radiation Exposure Museum, Pace University's Centre for the Arts, Society & Ecology, and The Archive of Nuclear Harm, which he directs.

John Turpie is a sculptor, printmaker, painter and graphic designer who has worked on numerous public art commissions, with non-Indigenous and Indigenous communities in South Australian and the Northern Territory. John has presented in numerous exhibitions and his works reside in public and private art collections. He was instrumental in devising the Elliston Sculptures by the Sea. His awards include the Port Pirie Art Prize (2000) and the City of Whyalla Art Prize (1999 & 1995). John's sculptural practice bears the stamp of later 20th century conceptual art, and incorporates a preference for using found objects and materials.