



Bottled Ocean 2120: George Nuku, the Ocean, plastic and the role of artists in discussing climate change

Karen Jacobs

To cite this article: Karen Jacobs (2022): *Bottled Ocean 2120: George Nuku, the Ocean, plastic and the role of artists in discussing climate change*, World Art, DOI: [10.1080/21500894.2022.2070659](https://doi.org/10.1080/21500894.2022.2070659)

To link to this article: <https://doi.org/10.1080/21500894.2022.2070659>



© 2022 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group



Published online: 17 May 2022.



Submit your article to this journal [↗](#)



Article views: 128



View related articles [↗](#)



View Crossmark data [↗](#)

Bottled Ocean 2120: George Nuku, the Ocean, plastic and the role of artists in discussing climate change

Karen Jacobs *

Sainsbury Research Unit, University of East Anglia, Norwich, UK

This article discusses George Nuku's artwork *Bottled Ocean 2120* by focusing on the two core components of its title, the ocean and plastic, in order to explore the role of the Oceanic artist in the global climate change debate. Drawing on the understanding that artists can help to change perspectives in the debate on climate change and justice, the focus in this article is on Oceanic artists who move the discussion beyond the idea of Oceania being the region that contributes the least but is challenged the most by climate disaster, which includes plastic pollution. With his *Bottled Ocean* series, George Nuku laments the state of plastic-filled ocean in a region that expresses a connection to it. He urges the viewer to stop the single use of plastic, an action that he hopes to inspire by considering and demonstrating the divinity of the material.

Keywords: Art; climate change; Moana Oceania; plastic; Māori; ocean

The dramatically lit plastic art installation fills the two-storey high exhibition room of 'A sea of Islands: Masterpieces from Oceania' at the Museum Volkenkunde in Leiden, part of the National Museum of World Cultures, The Netherlands. The centrepiece, *Tangaroa Totem Mutation*, consists of four Perspex layers that form platforms covered with coral and red and green flora, all made of empty plastic bottles. Mutated hammerhead sharks made of water fountain bottles menacingly float amidst schools of plastic bottle-turned fish, stingrays and giant jellyfish. The coloured light gives them an

*Corresponding author. Email: k.jacobs@uea.ac.uk

This article has been corrected with minor changes. These changes do not impact the academic content of the article.

© 2022 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

enchanting aura of presence while swimming. A coral reef is made up of hundreds of plastic bottles. The transparent textures combined with multiple layers of blue and white lights suggest water. The amalgamation of transparency, reflections and shadows makes looking at the installation a submerging experience – one not only looks at, but enters, an ocean packed with plastic. There is a playfulness to this dystopia, yet it conveys a stark warning for a fragile future. Living in an ocean inundated with discarded plastic, these sea creatures are no longer potentially plastic-eating organisms, they have mutated and are entirely made of plastic. This artwork provides an image of the evolution of marine life in a polluted oceanic environment. Indeed, the large art installation *Bottled Ocean 2120* by George Nuku presents a grim yet aesthetic vision of the world in the year 2120 (Figures 1 and 2).

Bottled Ocean is an interesting title for this artwork. In terms of materiality, the ocean and the plastic bottle could not be more different, yet in reality, they are more merged than ever. The oceans are filled with plastic ranging from tiny plastic particles to the Pacific garbage patches made up of several million tons of plastic waste. People living in Oceania feel a deep connection with the Pacific Ocean; a connection that is expressed in this artwork and the exhibition in which it features. ‘We sweat and cry salt water, so we know that the ocean is really in our blood,’ a well-known quote by the late Oceanic scholar Teresia Teaiwa, is printed on the exhibition wall before entering the room where George Nuku’s work is displayed.¹ The well-known idea that Oceania has contributed the least but suffered the most from climate change (Jolly 2019, 172), albeit accurate, has not necessarily benefitted the representation of climate disaster in the region. Oceania is threatened by rising sea levels, global warming and extreme weather phenomena, plastic pollution, coastal erosion and species extinction. However, the regular focus on isolated, sinking, drowning, small islands in Oceania victimises people in the region and has led to a representation of climate change that can be considered, in DeLoughrey’s (2018) words, as a form of ‘salvage environmentalism.’ Her concept resonates with the nineteenth-century notion of ‘salvage ethnography’ where the focus was on salvaging Oceanic culture after the European invasion (Clifford 1989). Salvaging was done by collecting, in the form of objects, photographs and texts which mostly ended up in ethnographic museums – the place where Nuku’s artwork under discussion was shown. Both views, salvage ethnography and salvage environmentalism, start from a perspective that fixes the Oceanic region and culture in time and place. Ethnographic museums are now making efforts to decolonise the museum by including multifarious perspectives, and contemporary artists are playing a role in this decolonisation process (Barrett and Milner 2014; Durand 2010; Cockburn 2019; Geismar 2015).

Artists can also play a role in broadening the climate change debate. While science shows the clear impact of climate change, the topic has resulted in



Figure 1. *Bottled Ocean 2120* by George Nuku, part of the exhibition 'A sea of Islands: Masterpieces from Oceania' (20/02/20-05/04/21) at the Museum Volkenkunde in Leiden, National Museum of World Cultures, The Netherlands. Photo by Aad Hoogendoorn. Courtesy of the National Museum Volkenkunde Leiden.



Figure 2. *Bottled Ocean 2120* by George Nuku, part of the exhibition 'A sea of Islands: Masterpieces from Oceania' (20/02/20-05/04/21) at the Museum Volkenkunde in Leiden, National Museum of World Cultures, The Netherlands. Photo by Aad Hoogendoorn. Courtesy of the National Museum Volkenkunde Leiden.

polarised public opinion and varying degrees of crediting climate disaster, illustrating ‘the emotional and communicative gap that separates scientific discovery from public knowledge’ (Cameron and Neilson 2015, 2). Climate scientists discuss the extent of the climate problem, but visual art can play a role in raising public awareness by considering climate change as a social rather than merely physical phenomenon (Hulme 2009, xxv; cf. Hahn and Berkers 2021); they can address the fact that climate change ‘presents profound representational dilemmas’ (Demos, Scott, and Banerjee 2021, 3). Rather than merely illustrate the scientific facts, artists show the impact physically, culturally and affectively (Roosen, Klöckner, and Swim 2018, 94; Duxbury 2010, 294–296). Artists often do not just call attention to the problems, but demonstrate resilience, resolution, alternative solutions and, ultimately, hope (Newell, Robin, and Wehner 2017, 48); they can show us ‘a new planetary future’ (Ballard 2021, 5). In other words, visual art ‘meet [s] the imaginative deficit of scientific data’ (Miles 2010, 13), and it is this creativity, or an alternative way of imagining the world, that helps the public to understand the impact of climate change and act on it.

Oceanic identity is significant in this process, particularly because Oceanic cosmologies demonstrate how people and places – landscape and seascape – are inseparable (Kabutaulaka et al. 2017, 2). As Noelani Goodyear-Ka‘ōpua (2018, 82–83) argues: ‘The peoples of Oceania grow up being at home with the sea. Our fluency with fluidity can be useful in helping to reimagine settler colonial ways of structuring human relationships to land.’ Jolly argues for an openness to Indigenous epistemologies in framing climate change as ‘Oceanic peoples have not routinely made such distinctions between natural and human histories and most are still not making them in the context of contemporary environmental transformations attributed to climate change’ (Jolly 2019, 174). A focus on salvage environmentalism alone ignores the many actions taken by Oceanic people to reach climate justice; people who refuse ‘to accept the identity of victim’ (Steiner 2015, 149). Aware of the picture of vulnerability that some representations of climate disaster provide, members of 350 Pacific, the Pacific Climate Warriors, have stated, ‘We are not drowning. We are fighting’ (<https://world.350.org/pacificwarriors/>, see also Farbotko and Kitara 2021). This was repeated in Brianna Fruean’s address at COP26 in Glasgow in 2021, the 26th UN Climate Change Conference of the Parties, when she said, ‘this is our warrior cry to the world’ (<https://www.youtube.com/watch?v=3HZ5xS5J9Go>). Not just activists, but artists and practitioners play a role in the climate change debate. Through dance, song, story-telling, sculpture, painting, craft and forms of multi-media, artistic and creative production are a crucial means of raising awareness of the effects of climate change. In this fight for climate justice, Oceanic Indigeneity is important to demonstrate that it is less about victimisation and more about survival, or ‘survivance,’ a term that combines the words ‘survival’ and ‘resistance’ and

‘goes beyond mere survival to acknowledge the dynamic and creative nature of Indigenous rhetoric’ (Vizenor 2008, 20).

George Nuku’s *Bottled Ocean* series

Based on interviews with the artist, this essay analyses George Nuku’s artwork *Bottled Ocean 2120* and looks at the two core components of its title, the ocean and plastic, in order to explore the role of the Oceanic artist in the climate change debate.² While the main emphasis is on George Nuku’s artwork and his perspective on plastic, I approach Nuku’s artwork from the context of ‘Oceania’ as a theorised notion (Hau’ofa 1994, 1998, 2008), later elaborated to Moana Oceania (Lagi-Maama 2021, see below), and argue for an openness to local perspectives in a global debate. This paper, therefore, follows the suggestion of Māori scholar Alice Te Punga Somerville to look to the ocean simply as an ocean ‘without a singular starting point or origin; endlessly circulating. Not beyond genealogy, because nothing is, but possessed of a genealogy that is impossibly and beautifully wide’ (Te Punga Somerville 2017a, 28).

George Tamihana Nuku is of German/Scottish and Māori (Ngati Kahungunu/Ngati Tūwharetoa) descent. He currently lives between Rouen in France and his home marae at Omaha in Hawke’s Bay, Aotearoa New Zealand. Nuku adapts the art forms that his ancestors have been making by using contemporary materials.³ Plastic is one of Nuku’s favourite materials for his art and he states that he speaks the language of plastic fluently: ‘Our ancestors carved out of wood, because they lived in a world of wood. We don’t live in a world of wood, we live in a world of plastic, even parts of our body are made of plastic now. Plastic is the currency we use in exchange rituals. So, I think it is more divine than wood’ (Jacobs and Nuku 2009, 117; cf. Nuku 2011). Although presented in the singular in this article, because that is how George Nuku refers to the material, it is important to acknowledge the existence of multiple types of plastic, made of a wide range of diverse combinations of polymers and chemicals. The two types of plastic mostly used by George Nuku are Perspex or acrylic sheet made of Polymethyl Methacrylate (PMMA) and plastic bottles (mostly made of Polyethylene Terephthalate (PET), a thermoplastic polymer, or Polycarbonate for refillable plastic bottles). Rochman (2019, 703) has argued that not differentiating the different types of (micro)plastics results in ‘simplified studies and protocols that may be inadequate to inform us of the sources and fate of microplastics, as well as their biological and ecological implications.’ However, the point that George Nuku wants to make is that the single use of plastic should stop, an action he hopes to inspire by considering and demonstrating the divinity of plastic(s).

Throughout his career Nuku has not only progressed to using more plastic in his creations, he also gradually followed a broader Oceanic approach.

George Nuku's work has featured in exhibitions in diverse venues, such as contemporary art museums and festivals, and has included a wide range of collaborations with ethnographic and natural history museums that hold Māori and wider Oceanic collections. His participation in the 2006 *Pasifika Styles* exhibition at the Museum of Archaeology and Anthropology, University of Cambridge, initiated his journey of providing a contemporary counterpart to, and often critique on, historic collections (Raymond and Salmond 2008). In the same year, Nuku was one of the artists in residence during the exhibition *Pacific Encounters: Art & Divinity in Polynesia, 1760-1860*, where he created contemporary responses to the historic collections in the exhibition.⁴ Not only did he create plastic responses of Māori objects on display, he also produced an artwork inspired by the Austral Islands figure known as A'a (Jacobs 2009). The latter illustrates his interest in the wider Oceanic region, which is driven by the belief that 'we are all family' (Nuku, e-mail 2022). In 2008 Nuku's collaboration with carver David Gross in the Captain Cook Birthplace Museum, Middlesbrough, UK, resulted in the creation of *Ko Tutira Kei Ahunehenehe*, also known as the Marton Moai, a sculpture in the style of a Rapa Nui/Easter Island moai (carved figure) (<https://www.captcook-ne.co.uk/ccbm/MARTONMOAI.htm>). He displayed work with other Oceanic artists that challenged the ethnographic gaze in the October Gallery, London, in 2009 (<https://octobergallery.co.uk/exhibitions/2009eth>). During the following decade, he continued working with ethnographic and natural history museums, mostly in Europe, and he also began addressing pressing issues that affected the Oceanic environment.

His Oceanic perspective and interest in plastic truly came together in 2014 when Nuku was commissioned by the Museum of Contemporary Art in Taipei, Taiwan, to contribute to an exhibition on Austronesian voyaging, which resulted in the first *Bottled Ocean* installation. The exhibition aimed to emphasise the connection between people in Taiwan and Oceania today (Nuku interview, 2020). Between approximately 3000 BC and AD 1000, Austronesian navigators migrated from their homeland in the region of southern China and Taiwan ultimately to places as far apart as Hawai'i, Aotearoa New Zealand and Rapa Nui (Easter Island).⁵ They crossed ocean gaps up to 800 km wide without charts and compasses—navigating by the stars, the winds, the birds and the swells and currents of the ocean. These ancestral voyages are remembered as a source of connection between the descendants of Austronesian voyagers dispersed in the Oceanic region. This was echoed by Nuku's words, when he stated: 'When we introduce ourselves, we name the waka [Māori word for canoe] on which our relatives travelled from Hawaiki [ancestral homeland before dispersal in Oceania] to Aotearoa [New Zealand] so they know our whakapapa [genealogy] and they know who we are' (Nuku, interview 2006). These ancestral voyages and the unequalled navigational skills involved continue to inspire people in Oceania today. Since the 1970s

there has been a renaissance of Oceanic voyaging, particularly through the Polynesian Voyaging Society's double-hulled voyaging canoe Hōkūle'a and the Mālama Honua Worldwide Voyage (2013–2017, <http://www.hokulea.com/worldwide-voyage/>). These voyages and the focus on the canoe to traverse the ocean emphasise a unity in Oceania that transcends colonial borders.

In the first iteration of the *Bottled Ocean* series in Taiwan, *Bottled Ocean 2114*, the core component of the work therefore was a waka hourua pounamu (waka hourua: a double-hulled canoe, the type that was used to settle in Aotearoa New Zealand during ancestral voyages; pounamu: nephrite, here used to refer to plastic as valuable material) with a whare (carved house) structure. Named Takitimu, various ancestral figures that prevail in Māori cosmological stories were depicted on the waka pounamu, including Tangaroa, deity of the ocean (Vision de Wiremu 2017). The waka in *Bottled Ocean 2114* was adapted to the year 2114; suitable for long-distance voyaging while protecting its users from 'the harmful effects of the toxin filled ocean and the depleted ozone layer' (Nuku 2014). The work laments the polluted state of the ocean that once served as the pathway for ancestral Austronesian voyages. Since *Bottled Ocean 2114* the artwork has had a number of yearly iterations, all projected 100 years into the future, at various museums and festivals globally ranging from Belgium to France, Taiwan, Aotearoa New Zealand, Indonesia, New Caledonia and The Netherlands.⁶ In French-speaking countries George Nuku adapted the title *Bottled Ocean* to *Bouteilles à la mer/Message in a Bottle*, but the implication was the same (Nuku, interview 2020). Each iteration has differed from the previous one, adapted to its location and involving local communities who volunteered with washing bottles and creating the artwork. Each iteration also demonstrated a development and refinement in the production of marine creatures and corals from a gradually increasing number of plastic bottles (see also Nyssen 2020) (Figure 3).

The canoe has become a powerful metaphor in the fight for climate justice in Oceania. In her 2014 address to the UN Climate Summit, Marshall Islands artist and activist Kathy Jetnil-Kijiner invoked a Marshallese legend of a canoe race, not only to remind the audience to respect the ancestors in addressing challenges, but to remind them that the race to address climate change is a race to save humanity (Jetnil-Kijiner 2014). A month later, in October 2014, 30 Pacific Climate Change Warriors from 12 Pacific countries sailed a flotilla of canoes into the world's largest coal port in Newcastle, Australia, to draw attention to the disastrous effects of the mine on their environment (Jolly 2019, 182). In 2017 during COP23 in Bonn, Germany, when Fiji chaired the event, the Honourable Frank Bainimarama, Fijian Prime Minister and COP23 President, stated that, with respect to climate change, 'We are all



Figure 3. Part of *Bottled Ocean 2120* by George Nuku at the Museum Volkenkunde in Leiden. Photo by Aad Hoogendoorn. Courtesy of the National Museum Volkenkunde Leiden.

in the same canoe, which is why we have [a] Drua – Fijian ocean-going canoe – in the foyer. To remind us of our duty to fill its sail with a collective determination to achieve our mission’ (Bainimarama 2017). The canoe is used as a symbol of a collective fight against the current threats that the Pacific Ocean poses and faces.

Moana Ocean(ic) discourses

While discussing a 2016 iteration, *Bottled Ocean 2116*, in La Rochelle, France, Nuku stated: ‘The ocean is a vast marae’ (Vision de Wiremu 2017). Core to Māori cultural and social life, the marae simply refers both to the space outside the wharenui meeting house and the combination of buildings on that space, but overall the term refers to a tapu (restricted, sacred) place that is linked with people and whakapapa (genealogy). With this statement, Nuku shows the Māori connection to the ocean, which is known amongst Māori people as Te Moananui-a-Kiwa, the Great Ocean of Kiwa, connected to the ancestral navigator Kiwa and guarded by the deity Tangaroa. By articulating their ancestral history as migratory seafarers, Māori people demonstrate that they draw their identity not only from land but also from the ocean (Te Punga Somerville 2017a, 25).

While the Pacific Ocean has been a space of colonialism, displacement and nuclear testing, it has also been a space for unification, reconnection and decolonisation. The Pacific Ocean has long been, as Tongan writer, educator and philosopher Epeli Hau‘ofa put it, the ‘most powerful metaphor’ (2008, 58) in Oceania. Hau‘ofa’s vision for Oceania, set out in his essays ‘Our sea of islands’ (1994) and ‘The ocean in us’ (2000), was put forward as a reaction to colonialism and the subsequent tendency to divide the region into clearly delineated and separate areas. Rather than an array of small, isolated entities, Hau‘ofa proposed to consider Oceania as an assemblage of islands connected by the ocean; an ocean that acts as a linking pathway rather than a separating boundary. He emphasised the common relationship with and connection to the ocean for the Oceanic people living in the region, a place defined by the seascape as much as the landscape: ‘All of us in Oceania today, whether indigenous or otherwise, can truly assert that the sea is our single common heritage’ (Hau‘ofa 1998, 405).

This discourse had been voiced in similar terms by Samoan writer, educator and artist Albert Wendt (1982) and continues to resonate and inspire scholars, curators, artists and practitioners in the region and beyond.⁷ Various ethnographic museums organised regional displays based on this vision as it was considered to be a way to show long-standing mobility as well as unity in a culturally diverse region. It was an ideal way to reject the hitherto fixed representations of the region that focused too much on

salvage ethnography. The idea of considering an Oceanic identity in a regional form defined by the connection with the Pacific Ocean has also been used in the Strategic Plan 2017–2026 of the Secretariat of the Pacific Regional Environment Programme (SPREP): ‘The ocean defines us as Pacific people. It underpins our livelihoods and way of life. Although most SPREP Members have small populations and economies, they are Large Ocean Island States responsible for managing more than ten per cent of the planet’s oceans’ (SPREP 2017, 7).

Taking Hau‘ofa’s argument a step further, some scholars, such as Tēvita Ka‘ili, Ty Kawika Tengan and ‘Okusi Mahina, argue for using Moana (ocean in some Pacific languages) epistemologies (Ka‘ili 2017; Rovoi 2019a). This empowering discourse is in stark contrast to Robert Flaherty’s 1926 silent film *Moana*, which provides a stereotypical representation of the region. Now the term Moana not only acts as a unifying denominator but as a plea to value Indigenous voices.⁸ The term Moana is advocated above Oceania which is considered outdated and European-bestowed (Rovoi 2019a).⁹ The discussion is about local versus regional representation. Te Punga Somerville (2012, xxiii) points out that Albert Wendt’s and Epeli Hau‘ofa’s regional visions of an Oceania allow ‘little room to problematise the relationships between Indigenous and immigrant Pacific peoples in particular spaces.’ She is referring to the distinction in Aotearoa New Zealand between Māori as the Indigenous people and Pacific (Pasifika) people who have made the country their home.¹⁰ Pacific Islanders had to stand up for their visibility in their history in Aotearoa New Zealand.¹¹ In fact, the title *Bottled Ocean* was first used in an innovative exhibition curated by Jim Viviaere in 1994 that aimed to draw attention to the ambiguous position of Pacific artists within Aotearoa New Zealand (Thomas 1996; Whimp 2009). As important as this terminology debate is, the threat of climate change is a global one requiring a broad strategy, hence why a regional terminology is followed in this paper. Therefore, the term Moana Oceania, as proposed by Chitham, Uafā Māhina-Tuai, and Skinner (2019, 16) is suitable. The term builds on Hau‘ofa’s view, while aiming to be ‘meaningful to island nations that do not have the word Moana in their languages,’ yet privileging Indigenous perspectives. This view is followed because of its defiance of the colonial partition of Oceania, its appeal for a flexible, oceanic approach and its reminder to consider the connection with the environment when considering climate disaster.

Moana Oceanic artistic expressions of climate change

Expressing a connection with the Ocean does not equal domination. The Pacific Ocean in Oceania is acknowledged as an uncontrolled entity. As Albert Wendt wrote about the Pacific Ocean: ‘I will not pretend that I

know her in all her manifestations. No one – not even our gods – ever did; no one does; no one ever will, because whenever we think we have captured her she has already assumed new guises’ (Wendt 1982, 202–203). However, the sheer scale and speed of change and threats due to climate change make this relationship ever more challenging.

A range of artists from the region have shown how climate change has caused the Pacific Ocean to become a dark and threatening metaphor as well as an empowering one. In the digital artwork, *Siva in Motion* (2012), Yuki Kihara references the devastating impact of the tsunami that affected Samoa, American Samoa and northern Tonga in September 2009, by performing the Tauluga, a Samoan dance, in a Victorian-style mourning dress. Her choreographic movements mirror the force of the waves and the duration of the video reflects the duration of the tsunami.¹² Her choice of dress expresses grief and loss, but the reference to Victorian dress might equally reference climate change as a colonial act. Kihara wears this dress again in the work *Where do we come from? What are we? Where are we going?* (2013), a series of photographs taken at places impacted by environmental destruction.¹³ Standing near a roofless schoolroom, a ruined plantation, or the remnants of a Roman Catholic church, Kihara does not portray the Pacific region as a paradise, as is often done in popular representations, but as a space threatened by global warming and extreme weather events that result from climate change.¹⁴ The sites have been cleaned up and their eerie emptiness illustrates the ongoing and long-lasting effects of these incidents. Angela Tiatia’s videos *Salt* (2015), *Holding On* (2015) and *Tuvalu* (2016) were shot in Tuvalu, a Pacific atoll nation urgently experiencing the flooding effects of climate change and global warming. The works resulted from a need to counteract representations of a drowning paradise by showing her own body immersed in the ocean, almost vanishing yet surviving (Hamilton Faris 2021, 9; cf. Ballard 2021, 1–2). In her analysis of Angela Tiatia’s video, *Salt* (2015), Vercoe (2017, 136) explains that ‘salt’ not only refers to the ocean, but to tears of loss of Indigenous knowledge and practices tied up with an environment that people will be forced to leave unless action is taken. Similarly using her body is Rosanna Raymond who in *Pulotu Pollution* (2013) laments plastic pollution in her poetry (<http://www.blackmailpress.com/RR34.html>). Latai Taumoepeau dances and then struggles in a transparent cuboid as it slowly fills with water in her performance piece *Repatriate* (2018). Choreographer Navi Fong of contemporary dance company VOU Dance Fiji created a response to the tragedy of Tropical Cyclone Winston, the strongest storm to ever make landfall in the Pacific which hit Fiji in February 2016, killing 44 people and causing tens of thousands to flee their homes. ‘Are We Stronger than Winston?’ does not only show the raw emotion involved in dealing with such a disaster, but a strong sense of determination and resilience.¹⁵

Similarly, Nuku does not merely portray a region that is victim to climate disaster, but emphasises resilience and a connection to the environment that complicates the threat of climate change. Nuku addresses the state of pollution of the ocean as well as rising sea levels. That makes sense as discarded plastic not only pollutes the ocean, each stage in the production of plastic creates greenhouse gas emissions: from the extraction of fossil fuel and its transport to the manufacture of plastic and the management of plastic waste. As the Center for International Environmental Law observes, 'If plastic production and use grow as currently planned, by 2030, these emissions could reach 1.34 gigatons per year—equivalent to the emissions released by more than 295 new 500-megawatt coal-fired power plants' (Ciel 2019, 1). Plastic incineration is a significant source of air pollution and when plastics in the ocean break down, they release greenhouse gases that slowly affect the ability of marine micro-organisms to absorb carbon dioxide and release oxygen (Kvale et al. 2021).

Bottled Ocean 2120 is a vision of the world in 2120 when the ice caps have melted and the world has flooded; it is a waterworld. In fact, the artwork was inspired by the 1995 Post-apocalyptic film *Waterworld* directed by Kevin Reynolds and based on Rader's original 1986 screenplay. Taking place in the year 2500, the film shows how the world has flooded as a result of the sea levels rising more than 25,000 feet. Humans live on atolls made of floating bits of junk and are searching for a mythological 'Dryland,' which is believed to exist somewhere in the vast ocean. The main character, the Mariner, mutated to his living situation by developing gills and webbed feet, which enable him to live above and below the water surface. He uses his waka (canoe), Nuku explained, to travel to trade dirt (a rare commodity). Nuku relates to the Mariner character because he is an anti-hero, who warns people that they need to adapt. He has contempt for them as due to 'their non-ability to change they are plagued with fear and doubt and suspicion and paranoia and so they immediately identify him as a threat because he's different to them' (Nuku, interview 2020). Nuku considers the film to be a reflection of today's world.

While earlier versions of *Bottled Ocean* had a central whare-waka hourua (canoe house) that allowed for travel, the centre piece for the Leiden iteration was *Tangaroa Totem*, a plastic mutation of the deity of the sea, Tangaroa, surrounded by plastic sea creatures. The option to travel and look for a new world is not given, and the mutated deity seemingly expresses an acceptance of an unavoidable future (Figure 4). While being the cause of this transformation, there appears to be no place for humans in this artwork. Yet the work aims to express hope by its use of material; hope that can only become reality if we treat this material differently. Nuku forces us to reconsider our view on plastic.



Figure 4. *Tangaroa Totem Mutation*, part of *Bottled Ocean 2120* at the Museum Volkenkunde in Leiden. Photo by Taco van der Eb. Courtesy of the National Museum Volkenkunde Leiden.

Plastic as Taonga

I'm not here to talk about how bad the plastic is or how bad the pollution is or the state of the planet ... Other people are talking about those things and we already know those things. I'm just here to say that this [picks up a plastic bottle] is really sacred. (Nuku interview, 2020)

In 2016 the global consumption of plastic bottles was estimated at 500 billion and it was expected to increase to 600 billion by 2021 (Dauvergne 2018, 12). Less than 50% are collected for recycling and only 7% are transformed into new bottles (Nielsen et al. 2020, 7). Recycling itself is costly and often dangerous, causing negative health and environmental effects (as shown in the plastics recycling village Wen'an in China) (Davis 2015, 205). This means that a high percentage of plastic bottles becomes waste. While it does not just derive from plastic bottles but a range of plastics, plastic pollution is found everywhere.

Microplastics are found in the land, in the oceans, in our drinking water, food, in the air and in our bodies. Plastic has long been hailed for its innovative characteristics, its lightweight, low cost and durability as a quintessential product of post-WWII industrial growth. Its characteristics benefit us in personal ways, from providing prostheses to smartphones and ways of making food last longer. It is our inability to limit production and waste and the environmental cost of recycling plastic that is the

problem. While Nielsen et al. (2020, 1) point out that ‘plastic pollution is one of the greatest environmental challenges of our time,’ it is the plastic in the oceans that is of most concern in this paper. A 2017 United Nations report that if single-use plastic items such as bags and bottles are not stopped, by 2050 our oceans will contain more plastic than fish (UN 2017). Even at the deepest level of the ocean, a recently identified species turned out to contain microplastics and was therefore named *Eurythenes plasticus* (Weston et al. 2020).

For this very reason Guam poet Craig Santos Perez paraphrased Hau‘ofa’s seminal expression ‘our sea of islands’ as ‘our sea of plastic’ as the title of his 2013 poem. While Ha‘oufa’s text was a warning against the restrictions of colonial borders, Perez’s poem is a cautioning against the dangers of climate change and colonial pollution. Perez compares the problem that albatross birds feed their young pieces of plastic mistaken for food, which ultimately kills them, to the introduced canned food, mistakenly given a high status, that Pacific Islanders feed their children, which makes them obese and unhealthy. Both are considered to be a result of colonialism: ‘The plasticity of colonialism can be felt in how its toxic presence crashes against the shore of these fragments and floats on (and below) the surface of the poem. The plastic ocean is in us. It molds our bodies and stories’ (Perez 2013). Perez’s words echo Liboiron’s argument that plastic pollution is another form of colonialism (2021).¹⁶

In this poem, Perez equally adapted Teresia Teaiwa’s quote ‘We sweat and cry salt water, so we know that the ocean is really in our blood’ and wrote ‘We drink from plastic water bottles, so we know/that the ocean is really in our blood’ (Perez 2013). When sea levels rise and Pacific Islands flood, fresh water sources are contaminated with salt water. In more and more Pacific Islands, people are obliged to become reliant on bottled water, which leads to excessive waste that is not easy to deal with and often ends up in the ocean, together with plastic pollution produced globally. ‘Oceania is vast, Oceania is plastic soup’ (Perez 2013) (Figures 5 and 6).

Although the actual use or lifespan of plastics is often short, plastics will photodegrade but not biodegrade. This means that plastic pieces exposed to the sun will gradually be broken down into smaller pieces, often releasing toxic chemicals, but their molecules remain intact – a process that leads Davis to write that plastics ‘are a kind of living dead among us’ (Davis 2015, 352). George Nuku passionately stated that ‘whoever dreamed up this idea to have single use plastic needs to be shot.’ The problem, he declared, is that we do not have a continuing relationship with the plastic bottle; ‘in fact the moment the last drop of water leaves the bottle we have an anti-relationship with it.’ Nuku believes that the general public is repelled by the empty plastic bottle because it pollutes the earth. By urging people not to consider the empty plastic



Figure 5. George Nuku, during the installation of *Bottled Ocean 2120* at the Museum Volkenkunde in Leiden. Photo by Fanny Wonu Veys. Courtesy of the National Museum Volkenkunde Leiden.

bottle as waste, but as a sacred thing of value and beauty, Nuku wants to ensure that people no longer look away from the plastic bottle but are enchanted by it instead. What makes the plastic bottle sacred from Nuku's perspective is that it enables the presence of two essential components, light and water. A plastic bottle reflects light and it contains water, *waiora* (Māori concept for water of life) (Nuku, interview 2020). What Nuku wants to make clear to his viewers is that plastic is not the problem, it is the human inability to consider its *whakapapa*, its genealogy (Lythberg 2019, 75).

In other words, Nuku turns a consumable plastic bottle into a *taonga*. *Taonga* is a Māori term referring to 'a treasure, something precious; hence an object of good or value' (Henare 2007, 47). *Taonga* can be both tangible and intangible and both animate and inanimate. The term can refer to a Māori historic *hei tiki* (pounamu/nephrite adornment) as well as the Māori language or the knowledge to recite *whakapapa* (genealogy). Underlying *taonga* are whole ancestral lineages connecting them with their *whenua* (ancestral lands) and resources (Henare 2017, 47, 58; Tapsell 2000, 13). *Taonga* connect generations; they allow descendants



Figure 6. Detail of *Bottled Ocean 2120* at the Museum Volkenkunde in Leiden. Photo by Paul te Stroete. Courtesy of the National Museum Volkenkunde Leiden.

to meet their ancestors and are ‘vital threads from the past, acting as guides (here) to interpreting the past’ (Tapsell 2000, 13).

Plastic is indebted to a fossil fuel that required a process to form over thousands of years. The fact that plastic is derived from crude oil, especially petroleum, makes it a material with a long whakapapa/genealogy. Depending on its chemical structure, plastics can last hundreds of thousands of years. Plastics can enmesh themselves with rocks to form plastiglomerates, literally forming part of the environment (Schaag 2020).¹⁷ Scientists discovered that microscopic species of bacteria are capable of feeding on plastics (Zettler, Mincer, and Amaral-Zettler 2013). This also makes a material, the product of overconsumption and the cause of the death of many creatures, a life-sustaining source of energy for other species. It is these opposites that attract Nuku to the material. Nuku considers plastic to be both the oldest and the newest material around. It is made from a core material of the earth yet pollutes it at the same time because people do not value it. In Nuku’s words: ‘plastic is proof of divinity, genealogically speaking and everything starts from that ... plastic has a whakapapa like every element in our universe and we trace this genealogical lineage back to oil under the surface. The plastic bottle that we handle in our daily lives is probably the oldest thing we will ever hold in our hands, it’s millions of years old, it’s

our senior in the family tree and it's our elder, our ancestor and we should treat it as such' (Nuku, interview 2020). Ultimately, as Lythberg (2019, 18) writes 'Nuku's message ... reminds the viewing audience that if you want to make a renaissance – a new world – you have to stay connected to your ancestors.'

Nuku applies a Māori perspective but his nonconforming ideas are understandably not always accepted. He reminisces about his experience at COP21, the 2015 climate summit that resulted in the Paris Agreement (<https://www.cop21paris.org/>): 'I was kinda thrust into this role of like guardian of the planet. And instead, I was standing up talking about how amazing plastic is and how sacred...members of the audience started yelling at me and walking out.' When he was asked afterwards why he was 'upsetting the environmentalists so much?', he stated that 'they haven't evolved and they're like the people on the atoll in Water-world. And they feel threatened by another way of looking at things' (Nuku, interview 2020).

Conclusion: relational plasticity

While plastic is the antithesis of plasticity – it is a material that does not change and is valued for staying true to its form (Davis 2015) – George Nuku enforces fluidity and flexibility upon the viewers of his plastic artwork by following an Oceanic perspective. He offers a submerging experience that aims to impact the audience and create a watershed. How? By creating and building relationships in multiple ways.

For *Bottled Ocean 2120*, 230 volunteers, guided by Karolien Nedée at the Leiden Museum, collected and washed 7,000 plastic bottles. Nuku creates and implicates a community who feel involved and that they make a difference (Nuku, interview 2020). Not only do the volunteers establish long-term relationships with Nuku that continue beyond the project, they 'then become themselves spokespeople for the messages and authorities of the meanings behind each element and the installation as a whole' (Nuku 2020).

Nuku's artwork emphasises how the ocean is a relational entity. Plastic that is discarded in one part of the world washes up on shore elsewhere. As Emalani Case (2019, 76) writes in her discussion of Kamilo beach, a beach on Hawai'i Island known for its accumulation of plastic waste due to swirling ocean currents, 'In conventional understandings, waste is what is "thrown away" but Kamilo reminds us that there is no "away"' (Case 2019, 76). Nuku makes the invisible impact of people's actions visible and emphasises an ocean of connection. Similarly, the other Moana Oceanic artists discussed in this paper visualise climate disaster, yet go beyond salvage environmentalism by demonstrating their resilient relationship with the ocean, which is being challenged at a global level.

With *Bottled Ocean 2120* Nuku displayed and created new relationships in an ethnographic museum – a place built on often problematic, colonial relationships which deserve critical scrutiny. Nuku considers the ethnographic museum a place where colonisers and colonised confront each other: ‘this is a place where we meet, and sometimes clash. I don’t think that ethnographic museums should be the place where we all kind of rub each other’s back. ... No, this is the place where we confront each other. Artfully, but still confront each other’ (Nuku, interview 2020). The space in between is the space for dialogue. The ebbs and flows in relationships leave room for personal interpretation and experience and the potential to encourage behavioural and cognitive change. The role of the contemporary (Moana Oceanic) artist in the debate of climate change can have an impact, as seen in *Bottled Ocean 2120*. The main message in Nuku’s work is to stop treating plastic as waste but as a material with a genealogy that needs to be treasured, not thrown away. He asks the viewer to change their perspective on the material by considering its beauty and wealth. Nuku builds on the notion of relationships by using the metaphor of the ocean and plastic as taonga. The ancestral links inherent in his artwork are a reminder for the viewers to respect these relationships and to care for our future.

...and in the same breath as being the most old, it’s also the most new material we’ve got around us... I maintain that there’s a space between these two where we can discover some truths ... We are talking about voyaging, discovery of ways of looking at things and discovering truths. And perhaps between being the oldest and the newest the plastic has something to tell us. Perhaps the plastic will save us. (Nuku, interview 2020)

Notes

1. Teresia Teaiwa’s expression was quoted in in Hau’ofa (2008, 41). For an overview of the exhibition by the curators, see Lilje and Veys (2021). This paper will use the terms ‘Oceania’ and ‘Oceanic’ artists, but uses it in the sense of ‘Moana Oceania,’ as proposed by Lagi-Maama (2021) and discussed below. The term Pacific is used to refer to the Pacific Ocean, to people of Pacific Islands that migrated to Aotearoa New Zealand or when using quotes by other scholars. Please note that I have chosen not to italicise Māori (and other non-English terms) words – a process that differentiates these words rather than treats them as equal to English.
2. This research is based on informed consent and has been approved by the UEA ethics committee (SREC 20-015).
3. Nuku continues to work with natural materials such as shell and stone too. Other Māori artists use contemporary materials. To name a few, Rangi Kipa works with corian amongst other material; multi-media artist Tracey Tawhiao often uses newspaper; and the Mata Aho collective, whose work *Kiko Moana* (2017) evokes the ocean, use slashed, stitched and layered

blue tarpaulin (Smith et al. 2007; Tawhiao 2018; Sutherland 2020). For further information on Contemporary Māori art, see Borell (2022). Examples of other contemporary artists working with discarded plastic are Pam Longobardi (<https://driftersproject.net/>) and Pinar Yoldas (de Araújo 2019).

4. *Pasifika Styles* (2006–2008) at the Museum of Archaeology and Anthropology, University of Cambridge, was one of the first major exhibitions on contemporary Oceanic art in the UK. The exhibition featured contemporary artworks amongst the ethnographic collections. *Pacific Encounters: Art & Divinity in Polynesia, 1760–1860* (2006) was shown at the Sainsbury Centre for Visual Arts, University of East Anglia, Norwich, UK. Nuku then based himself mainly in Europe resulting in permanent installations at the British Museum (2008), National Museum of Scotland (2011; cf. Barrett 2016), Museum aan de Stroom, Antwerp, Belgium (2011), and Muséum d'Histoire Naturelle de Rouen, France – amongst others.
5. The Austronesian settlement of Oceania is one of three major waves of migration, after the settlement of Australia by Indigenous Australians and the island of New Guinea and neighbouring islands by Papuan language speakers.
6. *Bottled Ocean 2114*: Pulima Arts Award, Museum of Contemporary Art, Taipei, Taiwan (15/11/14–04/01/15). *Bottled Ocean 2115*: Muséum d'histoire naturelle de Rouen, France (25/24/25–31/01/16); ESfO (European Society for Oceanists) conference, Brussels, Belgium (July 2015); and Maison de l'UNESCO, Paris, France (December 2015). *Bottled Ocean 2116*: Pataka Art + Museum, Wellington, Aotearoa New Zealand (21/02/16–15/05/16); Centre Culturel Tjibaou, Nouméa, New Caledonia (July 2016); Muséum d'histoire naturelle de La Rochelle, France (29/10/16–22/01/17). *Bottled Ocean 2117*: Kaohsiung City Museum of Fine Arts, Kaohsiung, Taiwan (07/10/17–20/02/18); Université de Nouvelle-Calédonie, Nouméa, New Caledonia (July 2017). *Bottled Ocean 2118*: Panorama XXL, Rouen, France (March 2018); Taitung East Coast Land Art Festival, Duli Visitor Center, Taitung County, Taiwan (29/06/18–30/11/18); Hastings City Art Gallery, Aotearoa New Zealand (04/08/18–11/11/18); MGT Hawke's Bay, Gisborne, Aotearoa New Zealand (24/08/18–03/03/19). *Bottled Ocean 2119*: Muséum d'histoire naturelle de Bourges, France (05/04/19–24/11/19); Green School, Bali, Indonesia (May 2019); Festival de Musique des Francofolies, La Rochelle, France (July 2019); Tairawhiti Festival, Gisborne, Aotearoa New Zealand (October 2019); Musée maritime de La Rochelle, France (09/11/19–31/10/21); SMEDAR, Rouen, France (November 2019). *Bottled Ocean 2120*: Museum Volkenkunde, Leiden, The Netherlands (20/02/20–05/04/21).
7. To name but two of many: Hau'ofa's vision inspired the refurbished Pacific Hall at the Bishop Museum, Honolulu, Hawai'i (opened in 2013), and the refurbished Oceania display in the Royal Albert Memorial Museum and Art Gallery, Exeter, United Kingdom (opened in 2014).
8. Retired Anglican Archbishop Winston Halapua has done much theological writing on the theme of Moana and introduced the notion of 'theomoana' to emphasise a theology that puts the ocean at the centre (Hau'ofa 2008).

9. The discussion goes beyond this paper, but it is significant to point out that some feel that the term Moana does not universally apply across the region, particularly to people in Papua New Guinea who do not express the encompassing connection with the ocean (Rovoi 2019b; however, see McDonald 2021). While this could equally be argued for Hau'ofa's term Oceania, it could be considered a more neutral terminology because Moana is only used in Polynesian languages, not in Micronesia and Melanesia.
10. Moana Pasifika, for instance, is a recently formed Auckland-based rugby union team made up of players who identify with Pacific Island nations.
11. On 1 August 2021 Prime Minister Jacinda Ardern issued a formal apology for the 'dawn raids' of the 1970s and the historic racist policing of Pacific people in Aotearoa New Zealand. As mentioned, the term Oceania is used in this paper to bring the connection to the ocean to the fore, while acknowledging that the terms Pacific and Pasifika are important as well (cf. Teaiwa 2014).
12. For more information see: <http://unframed.lacma.org/2014/03/26/shigeyuki-kiharas-siva-in-motion>.
13. For more information see: <https://www.milfordgalleries.co.nz/dunedin/exhibitions/328-Yuki-Kihara-Where-do-we-come-from-What-are-we-Where-are-we-going>.
14. While a tsunami might not be considered as a climate disaster in strict terms, the higher number of extreme weather phenomena is generally attributed to climate change in the region: <https://theconversation.com/5-ways-climate-change-increases-the-threat-of-tsunamis-from-collapsing-ice-shelves-to-sea-level-rise-175247>.
15. The choreography was a response to the hashtag #strongerthanwinston that emerged post-cyclone and raised the question as to whether people in Fiji felt they were. Amongst other venues, it was performed at the 2016 Edinburgh Festival: <https://edinburghfestival.list.co.uk/article/83140-are-we-stronger-than-winston/>.
16. Similarly Te Punga Somerville (2017b, 321) uses the Pacific garbage patch as a metaphor for the 'invisible/suffocating relationship' between the United States and Oceania. 'Like any archipelago,' she continues, 'the great Pacific garbage patch is made up of constituent parts whose medium both of connection and disconnection is the ocean' (Te Punga Somerville 2017b, 323).
17. Kelly Javzac makes art from plastiglomerates (<https://kellyjavzac.com/Plastiglomerates>).

Acknowledgments

The author is grateful to George Nuku for sharing his vision and Erna Lilje at the Leiden Museum Volkenkunde for recording and being part of the 2020 interview. Thank you to Fanny Wonu Veys for providing photographs and to the photographers themselves for their work. Thank you to the three anonymous reviewers for their comments.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes on contributor

Karen Jacobs is Associate Professor at the Sainsbury Research Unit for the Arts of Africa, Oceania and the Americas, University of East Anglia, UK. Her work focuses on the Arts of West Papua, Polynesia and Fiji, and material heritage of British missions in the Pacific. International exhibition projects include *Pacific Encounters: Art and Divinity in Polynesia 1760–1860* (Sainsbury Centre for Visual Arts, 2006; Musée du quai Branly, 2008), *Art and the Body* (Fiji Museum, 2014), and *Fiji: Art and Life in the Pacific* (Sainsbury Centre for Visual Arts, 2016; LACMA, 2019). *Book projects include Collecting Kamoro* (Jacobs 2012), *Trophies, Relics and Curios? Missionary Heritage from Africa and the Pacific* (Jacobs, Knowles and Wingfield 2015) and *This is not a Grass Skirt: on fibre skirts (liku) and female tattooing (veiqia) in nineteenth century Fiji* (Jacobs 2019).

ORCID

Karen Jacobs  <http://orcid.org/0000-0002-1794-3078>

References

- Bainimarama, Josaia V. 2017. “We Must Not Fail Our People’: President’s Opening Speech at COP23.” <https://cop23.com.fj/fijian-prime-minister-cop23-president-remarks-assuming-presidency-cop23/>
- Ballard, Susan. 2021. *Art and Nature in the Anthropocene*. London: Routledge.
- Barrett, Jennifer, and Jacqueline Millner. 2014. *Australian artists in the contemporary museum*. Farnham: Ashgate.
- Barrett, Natascha. 2016. “Honoring and Interpreting the Past: Project Review of the Collaboration between Māori Artist George Nuku and National Museums of Scotland, Edinburgh.” *Museum Worlds* 4 (1): 212–214.
- Borell, Nigel. 2022. *Toi Tu Toi Ora: Contemporary Maori Art*. Auckland: Penguin.
- Cameron, Fiona R., and Brett Neilson. 2015. “Introduction: Climate Change, Museum Futures.” In *Climate Change and Museum Futures*, edited by Fiona R. Cameron and Brett Neilson, 13–20. London: Routledge.
- Case, Emalani. 2019. “Caught (and Brought) in the Currents: Narratives of Convergence, Destruction, and Creation at Kamilo Beach.” *Journal of Transnational American Studies* 10 (1): 73–92.
- Chitham, Karl, Kolokesa Uafā Māhina-Tuai, and Damien Skinner. 2019. *Crafting Aotearoa: A Cultural History of Making in New Zealand and the Wider Moana Oceania*. Wellington: Te Papa Press.
- Ciel. 2019. “Plastic & Climate: the Hidden Cost of a Plastic Planet.” www.ciel.org/plasticandclimate
- Clifford, James. 1989. “The Others: Beyond the ‘Salvage’ Paradigm.” *Third Text* 3 (6): 73–78.
- Cockburn, Sylvia. 2019. “Rethinking Relationships: Contemporary Pacific Artists and Museums in the 21st Century.” PhD thesis, Norwich: University of East Anglia.
- Dauvergne, P. 2018. “The Power of Environmental Norms: Marine Plastic Pollution and the Politics of Microbeads.” *Environmental Politics* 27 (4): 579–597.

- Davis, H. 2015. "Life and Death in the Anthropocene: A Short History of Plastic." In *Art in the Anthropocene: Encounters Among Aesthetics, Politics, Environments and Epistemologies*, edited by H. Davis and E. Turpin, 347–358. London: Open Humanities Press.
- de Araújo, Vanbasten. 2019. "'Life Without Humankind'—Queer Death/Life, Plastic Pollution, and Extinction in An Ecosystem of Excess." *Kvinder, Køn & Forskning* 3–4: 49–61.
- DeLoughrey, Elizabeth. 2018. "The Sea is Rising: Visualising Climate Change in the Pacific Islands." *Pacific Dynamics: Journal of Interdisciplinary Research* 2 (2): 185–197.
- Demos, T. J., Emily E. Scott, and Subhankar Banerjee. 2021. "Introduction." In *The Routledge Companion to Contemporary Art, Visual Culture, and Climate Change*, edited by T. J. Demos, Emily E. Scott, and Subhankar Banerjee, 1–10. London: Routledge.
- Durand, Carine A. 2010. *Anthropology in a Glass Case: Indigeneity, Collaboration, and Artistic Practice in Museums*. Saarbrücken: VDM Verlag.
- Duxbury, Lesley. 2010. "A Change in the Climate: New Interpretations and Perceptions of Climate Change Through Artistic Interventions and Representations." *Weather, Climate and Society* 2: 294–299.
- Farbotko, Carol, and Taufikie Kitara. 2021. "The Political Ecology and Visual Culture of the Pacific Climate Warriors." In *The Routledge Companion to Contemporary Art, Visual Culture, and Climate Change*, edited by T. J. Demos, Emily E. Scott, and Subhankar Banerjee, 399–408. London: Routledge.
- Geismar, Haidy. 2015. "The Art of Anthropology: Questioning Contemporary Art in Ethnographic Display." In *Museum Theory*, edited by Andrea Witcomb and Kylie Message, 183–210. Hoboken: Wiley.
- Goodyear-Ka'ōpua, Noelani. 2018. "Indigenous Oceanic Futures." In *Indigenous and Decolonial Studies in Education*, edited by Linda Tuhiwai Smith, Eve Tuck, and Wayne Yang, 82–102. London: Routledge.
- Hahn, Ulrike, and Pauwke Berkers. 2021. "Visualizing Climate Change: An Exploratory Study of the Effectiveness of Artistic Information Visualizations." *World Art* 11 (1): 95–119.
- Hamilton Faris, Jaimey. 2021. "Gestures of Survivance: Angela Tiatia's Lick and Feminist Environmental Performance Art in Oceania Permalink." *Pacific Arts: The Journal of the Pacific Arts Association* 20 (1).
- Hau'ofa, Epeli. 1994. "Our Sea of Islands." *The Contemporary Pacific* 6 (1): 147–161.
- Hau'ofa, Epeli. 1998. "The Ocean in Us." *The Contemporary Pacific* 10 (2): 392–410.
- Hau'ofa, Epeli. 2008. *We Are The Ocean: Selected Works*. Honolulu: University of Hawai'i.
- Henare [Salmond], Amiria. 2007. "Taonga Maori: Encompassing Rights and Property in New Zealand." In *Thinking Through Things: Theorising Artefacts Ethnographically*, edited by Amiria Henare [Salmond], Martin Holbraad, and Sari Wastell, 46–67. London: Routledge.
- Hulme, Mike. 2009. *Why We Disagree about Climate Change: Understanding Controversy, Inaction and Opportunity*. Cambridge: Cambridge University Press.

- Jacobs, Karen. 2009. "Artists-in-Residence: Polynesian Engagement with the Past." *Journal of Museum Ethnography* 21: 112–126.
- Jacobs, Karen, and George Nuku. 2009. "An Artist's Perspective 3: George Nuku in Conversation with Karen Jacobs." *Journal of Museum Ethnography* 21: 145–151.
- Jetnil-Kijiner, Kathy. 2014. "Statement and Poem by Kathy Jetnil-Kijiner, Climate Summit 2014. Opening Ceremony." https://www.youtube.com/watch?v=mc_IgE7TBSY
- Jolly, Margaret. 2019. "Engendering the Anthropocene in Oceania: Fatalism, Resilience, Resistance." *Cultural Studies Review* 25 (2): 172–195a.
- Kabutaulaka, Tarcisius, Jacki Leota-Ete, Losch Kealalōkahi, Fleur Enchante Palmer, Damon Salesa, Hiagi Wesley, Terence Wesley-Smith, and Sarah Wongking. 2017. *Health and Environment in the Pacific. Volume 3 of Teaching Oceania Series*, edited by Monica C. LaBriola. Honolulu: Center for Pacific Islands Studies, University of Hawai'i–Mānoa.
- Ka'iili, Tevita O. 2017. *Marking Indigeneity: The Tongan Art of Sociospatial Relations*. Tucson, AZ: The University of Arizona Press.
- Kvale, K., Prowe, A. E. F., Chien C.-T., Landolfi A. and A. Oschlies. 2021. "Zooplankton Grazing of Microplastic Can Accelerate Global Loss of Ocean Oxygen." *Nature Communications* 12 (1): 1–8.
- Lagi-Maama Academy & Consultancy: Toluma'anave Barbara Makuati-Afitu and Kolokesa Uafa Māhina-Tuai. 2021. "'Talking Critically Yet Harmoniously' It's in Our Bloodlines As Moana Oceania Peoples." *Museum Worlds: Advances in Research* 9: 110–115.
- Liboiron, Max. 2021. *Pollution is Colonialism*. Durham: Duke University Press.
- Lilje, Erna, and Fanny Wonu Veys. 2021. "A Sea of Islands: Masterpieces from Oceania." *Journal of Museum Ethnography* 34: 69–89.
- Lythberg, Billie. 2019. "Message in a Bottle." *Art News New Zealand* 39 (3): 74–77.
- McDonald, Lisa. 2021. "Artfully Sustaining the Sea." January 27, 2021. *One Ocean Hub blog* (Artfully Sustaining the Sea|One Ocean Hub).
- Miles, Malcolm. 2010. "Representing Nature: Art and Climate Change." *Cultural Geographies* 17 (1): 19–35.
- Newell, Jennifer, Libby Robin, and Kirsten Wehner. 2017. "Introduction: Curating Connections in a Climate-Changed World." In *Curating the Future: Museums, Communities and Climate Change*, edited by Jennifer Newell, Libby Robin, and Kirsten Wehner, 30–50. London: Routledge.
- Nielsen, T. D., J. Hasselbalch, K. Holmberg, and J. Strippel. 2020. "Politics and the Plastic Crisis: A Review Throughout the Plastic Life Cycle." *Wiley Interdiscip. Rev. Energy Environ* 9: e360. doi:10.1002/wene.360.
- Nuku, George. 2011. "Perspicacité: The Art of George Nuku." *World Art* 1 (1): 67–73.
- Nuku, George. 2014. 'Bottled Ocean2114', *Pulima Arts Award. Art Installation and Concept by George Nuku*, November 2014. Taipei: Museum of Contemporary Art. (file:///C:/Users/g188/OneDrive%20-%20University%20of%20East%20Anglia/Art%20and%20climate%20change/_Bottled%20Ocean%202114_.pdf).

- Nuku, George. 2020. *George Nuku: Art and Life*. [electronic dossier provided by the author].
- Nyssen, Garance. 2020. "Bottled Ocean: George Nuku et la pollution plastique." Dissertation. Paris: Ecole du Louvre.
- Perez, Craig Santos. 2013. "Our Sea of Plastic." *Kenyon Review* 2013. <https://www.kenyonreview.org/2013/02/our-sea-of-plastic/>
- Raymond, Rosanna, and Amiria Salmond, eds. 2008. *Pasifika Styles: Artists Inside the Museum*. Cambridge: University of Cambridge Museum of Archaeology and Anthropology in association with Otago University Press.
- Rochman, Chelsea M. 2019. "Rethinking Microplastics as a Diverse Contaminant Suite." *Environmental Toxicology and Chemistry* 38 (4): 703–711.
- Roosen, Liselotte J., Christian A. Klöckner, and Janet K. Swim. 2018. "Visual Art as a Way to Communicate Climate Change: A Psychological Perspective on Climate Change–Related Art." *World Art* 8 (1): 85–110.
- Rovoi, Christine. 2019a. "What's in a Name? Pacific Scholars Back Moana Over Oceania." *RNZ News*. June 27, 2019. <https://www.rnz.co.nz/international/pacific-news/393052/what-s-in-a-name-pacific-scholars-back-moana-over-oceania>
- Rovoi, Christine. 2019b. "Renaming Oceania: PNG Artist not Sold on Moana." *RNZ News*. July 4, 2019. <https://www.rnz.co.nz/international/pacific-news/393581/renaming-oceania-png-artist-not-sold-on-moana>.
- Schaag, Katie. 2020. "Plastiglomerates, Microplastics, Nanoplastics: Toward a Dark Ecology of Plastic Performativity." *Performance Research* 25 (2): 14–21.
- Smith, Huhana, Oriwa Solomon, Awhina Tamarapa, Megan Tamati-Quennell, and Norman Heke. 2007. *Taiāwhio II: Contemporary Māori Artists: 18 New Conversations*. Wellington: Te Papa Press.
- SPREP. 2017. *SPREP (Secretariat of the Pacific Regional Environment Programme) Strategic Plan 2017–2026*. Apia Samoa: Secretariat of the Pacific Regional Environment Programme. https://www.sprep.org/attachments/Publications/Corporate_Documents/strategic-plan-2017-2026.pdf
- Steiner, Candice E. 2015. "A Sea of Warriors: Performing an Identity of Resilience and Empowerment in the Face of Climate Change in the Pacific." *The Contemporary Pacific* 27 (1): 147–180.
- Sutherland, Claire. 2020. "Stop the Clock! Taking the Nation Out of Linear Time and Bounded Space." *Time & Society* 29 (3): 727–749.
- Tapsell, Paul. 2000. *Pukaki: A Comet Returns*. Auckland: Reed Books.
- Tawhiao, Tracey. 2018. "Te Puna O Āio, the Temple of Potential." Doctoral diss., Auckland University of Technology.
- Teaiwa, Katerina. 2014. "Reframing Oceania: Lessons from Pacific Studies." In *Framing the Global: Entry Points for Research*, edited by Hilary E. Kahn, 67–96. Indianapolis: Indiana University Press.
- Te Punga Somerville, Alice. 2012. *Once were Pacific: Māori Connections to Oceania*. Minneapolis: University of Minnesota Press.
- Te Punga Somerville, Alice. 2017a. "Where Oceans Come From." *Comparative Literature* 69: 25–31.
- Te Punga Somerville, Alice. 2017b. "The Great Pacific Garbage Patch as Metaphor: The (American) Pacific You Can't See." In *Archipelagic American*

- Studies*, edited by Brian R. Roberts and Michelle A. Stephens, 320–338. Durham, NC: Duke University Press.
- Thomas, Nicholas. 1996. “From Exhibit to Exhibitionism: Recent Polynesian Presentations of “Otherness”.” *The Contemporary Pacific* 8 (2): 319–348.
- UN. 2017. “FEATURE: UN’s Mission to Keep Plastics Out of Oceans and Marine Life.” *UN News*. April 27, 2017 <https://news.un.org/en/story/2017/04/556132-feature-uns-mission-keep-plastics-out-oceans-and-marine-life>
- Vercoe, Caroline. 2017. “Contemporary Maori and Pacific artists exploring place.” *Journal of New Zealand & Pacific Studies* 5 (2): 131–43.
- Vision de Wiremu. 2017. *Water and Light: a Portrait of George Nuku*. France (film available on vimeo: <https://vimeo.com/235862761>).
- Vizenor, Gerald. 2008. “Aesthetics of Survivance: Literary Theory and Practice.” In *Survivance: Narratives of Native Presence*, edited by Gerald Vizenor, 1–23. Lincoln: University of Nebraska Press.
- Wendt, Albert. 1982. “Towards a New Oceania.” In *Writers in East-West Encounter*, edited by G. Amirthanayagam, 202–215. London: Palgrave Macmillan. doi:10.1007/978-1-349-04943-1_12.
- Weston, Johanna N. J., Priscilla Carrillo-Barragan, Thomas D. Linley, William D. K. Reid, and Alan J. Jamieson. 2020. “New Species of *Eurythenes* from Hadal Depths of the Mariana Trench, Pacific Ocean (Crustacea: Amphipoda).” *Zootaxa* 4748 (1): 163–181.
- Whimp, Graeme. 2009. “Working in the Space between: Pacific Artists in Aotearoa/New Zealand.” In *In the Space Between: Negotiating Culture, Place, and Identity in the Pacific, Occasional Paper Series 44*, edited by A. M. Tamaira, 9–24. Honolulu: Center for Pacific Islands Studies, University of Hawai’i at Manoa.
- Zettler, Erik R., Tracy J. Mincer, and Linda A. Amaral-Zettler. 2013. “Life in the “Plastisphere”: Microbial Communities on Plastic Marine Debris.” *Environmental Science and Technology* 47: 7137–7146.