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Wishful sinking: Disappearing islands, climate refugees and cosmopolitan experimentation

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Abstract: *Disappearing islands and climate refugees have become signifiers of the scale and urgency of uneven impacts of climate change. This paper offers a critical account of how sea level rise debates reverberate around Western mythologies of island laboratories. I argue that representations of low-lying Oceania islands as experimental spaces burden these sites with providing proof of a global climate change crisis. The emergence of Tuvalu as a climate change 'canary' has inscribed its islands as a location where developed world anxieties about global climate change are articulated. As Tuvalu islands and Tuvaluan bodies become sites to concretize climate science's statistical abstractions, they can enforce an eco-colonial gaze on Tuvalu and its inhabitants. Expressions of 'wishful sinking' create a problematic moral geography in some prominent environmentalist narratives: only after they disappear are the islands useful as an absolute truth of the urgency of climate change, and thus a prompt to save the rest of the planet.*

Keywords: *climate canary*, *climate refugee*, *disappearing islands*, *island laboratory*, *Tuvalu*

Introduction

Disappearing islands and climate refugees are signifiers that circulate with frequency in public discourse, yet the role that these representations play in the cultural politics of climate change has not been extensively examined. In particular, low-lying islands are being described as 'litmus tests' for global climate change by cosmopolitan environmental activists and in the media, a discourse which thus far has operated largely under the radar of critical analysis. The purpose of this paper is to explore how the legacy of the island laboratory enables the exercise and justification of cosmopolitan activism towards climate change that speaks in part through space. What follows is an exploration of the disappearing island in terms of cosmopolitan imaginative geographies of climate change. Drawing on narratives centred on the Pacific nation state of Tuvalu, I argue that islands imagined as laboratories appropriate the space of an already marginalised population; these are imaginings by cosmopolitans who demand, for various and at times conflicting reasons, that disappearing islands provide tangible manifestations of the statistical abstractions that dominate climate science. First, I provide an outline of the discursive field centred on Tuvalu and climate change, much of which is structured by attempts to answer the question 'are the seas really rising there?' Then, I use Hau'ofa's critique of the litany of smallness that characterises Western development discourse of the Pacific region to contextualise Tuvalu's climate change imaginative geographies, and detail these as island spaces outside and yet constitutive of, continental/mainland modernity. I then examine how the idea of the island laboratory has been enrolled in attempts to produce the truth about rising sea levels in Tuvalu, which has become a space in which cosmopolitans attempt to locate and contain their climate change hopes and anxieties. This examination is followed by questioning a significant turn towards a problematic moral geography in some prominent strands of environmentalist discourse. Expressions of 'wishful sinking' attempt to posit Tuvalu's islands as expendable: only after they disappear will the islands become an

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absolute truth of the urgency of climate change, and thus act as a prompt towards saving the rest of the planet.

The spectacle of the disappearing islands

The islands of Tuvalu, largely absent from Eurocentric imaginings of the Pacific region, have become meaningful spaces in cosmopolitan discourses only as they disappear. Low-lying regions of the world were identified by scientists as being at risk from rising sea levels associated with climate change in the late 1980s (Lewis, 1989; Connell and Roy, 1990). Since then, media publics have watched from a distance, partly in horror and partly with perverse impatience, for the first islands to disappear. In current climate change debate, the 10 000 inhabitants of the nine coral atolls and reef islands in the central Pacific Ocean that make up the archipelago of Tuvalu have become signifiers of the scale and urgency of the uneven impacts of climate change around the planet. Dramatic representations of rising sea levels in Tuvalu circulate; the cosmopolitan media is on hand to bear witness to flooding and destitution when seasonal king tides cause flooding on its islands. Many foreign journalists, researchers, environmentalists and documentary-makers who arrive during those king tides capture footage of flooding on the islands (see Figs 1,2). Locals are photographed and interviewed. Islanders apparently witness their land dissolving into the ocean and seem to attempt to find refuge on safe, dry, yet alien, expanses elsewhere. Dispatches of disappearing islands, often apparently on the verge of evacuation, are sent to all corners of the cosmopolitan world (e.g. Kurosawa, 2001; Baliunas and Soon, 2002; Ede, 2003; Allen, 2004; Lynas, 2004b; Gore, 2006; Patel, 2006; Leahy, 2007; Farbotko, 2008). A climate change tourism narrative, framing Tuvalu's disappearing islands as places to visit before they disappear, pays little attention to the ethical implications of such tourism (Farbotko, forthcoming). Meanwhile, activists and lobbyists around the world seek political and legal recognition of climate refugees (Ralston *et al.*, 2004; The New Economics Foundation, 2004; Friends of the Earth, 2008). Others represent Tuvaluans as climate change heroes (Farbotko, forthcoming).

Flooding, storm surges, coastal erosion and salt-water infiltration into pits of the root crop *pulaka* in Tuvalu are maintained by some eyewitnesses among inhabitants, visiting journalists and documentary-makers to undoubtedly be indications of sea level rise (Ede, 2003); others

Figure 1. Journalist filming high tide flooding, Funafuti (Tuvaluan capital) January 2006 (photograph taken by author)

Figure 2. Journalists filming high tide flooding, Funafuti (Tuvaluan capital) February 2006 (photograph taken by author)

are equally vehement that sea level rise is not happening (Eschenbach, 2004). There are those who are convinced that sea level rise induced by climate change is a distant concern (Connell, 2003), while others are convinced it is an imminent catastrophe (Lynas, 2004b). Still others believe evacuation events have occurred (Gore, 2006). While now diminishing, a group of sceptical voices has been prominent in challenging issues relating to Tuvalu's predicted climate change impacts. These challenges have ranged from questioning the motivations of Tuvalu's leaders who draw attention to the issue in the international political arena (Eschenbach, 2004), to questioning the validity of climate science (Baliunas and Soon, 2002).

The volume of discourse produced is extremely large. By January 2010, Google returned around 5 320 000 hits for a search in English on Tuvalu and climate change. According to Chambers and Chambers (2007) no less than five documentaries on Tuvalu and climate change have been filmed, none of them by Tuvaluans. In 2008, the Immigration Museum in Melbourne, Australia, opened a temporary exhibition entitled 'Waters of Tuvalu: A Nation at Risk'. It was the first ever museum exhibition in Australia devoted exclusively to the small archipelago and its people.

The attention turned to Tuvalu's disappearing islands is embedded in debate over whether and how to reduce fossil fuel use at the global scale. Increasingly urgent warnings emanate from the scientific community about the need to reduce emissions of carbon dioxide and other greenhouse gases that contribute to climate change (e.g. Randerson, 2009). Yet there has been a failure on the part of the most powerful emitters to address the climate change issue. There have been only small efforts to switch to renewable energy, and inaction is often justified on the basis of uncertainty and excessive cost. Tuvaluan government and community representatives have been vocal advocates for reducing greenhouse gas emissions in the international political arena. Arguing that their populations face a serious inequity, members of parliament, diplomats and community leaders repeatedly highlight that Tuvaluans face significant climate change impacts and yet make little contribution to reducing the fossil fuel use that causes them (Paeniu, 1991; Paeniu, 1997; Toafa, 2004; Sopoaga, 2005; TANGO, 2005).

The Tuvalu delegation at the Copenhagen Conference of Parties (COP) in 2009 mobilised the symbolic force of their islands' vulnerability to sea level rise to ensure their commitment to a controversial maximum 1.5° Celsius global

average temperature increase was heard. Halting proceedings at the COP on procedural grounds, their substantive position received considerable media coverage and was supported by many civil society representatives in Copenhagen, who quickly organised into visible and vocal demonstrations of support for Tuvalu (Farbotko and McGregor, forthcoming).

There is an ongoing lively debate on climate change (and many other issues) by Tuvaluans and others on various online forums, particularly Tuvalu Online at Yahoo groups. Many ordinary Tuvaluans, however, especially many of those on the outer islands without Internet access until 2009, have little voice in international climate debate at all. Publicity for flooding on the islands is largely welcomed by Tuvalu's inhabitants. Unsubstantiated doubts raised by climate sceptics are generally unwelcome among inhabitants, as are superficial and often paternalistic accounts of Tuvalu's social and local environmental problems. While much detailed planning devoted to climate change is underway in Tuvalu, adaptation policy-making and implementation rarely makes international headlines. In August 2005, in response to perceptions there that Tuvalu was being painted in non-favourable ways to the rest of the world, a motion was passed in the Tuvalu national parliament that journalists coming into the country to investigate climate change should be screened (Tuvalu Parliament, 2005). This attempt to officially censor what had already become a widely distributed discourse on the islands was largely unsuccessful.

A litany of smallness

Tuvalu once drew little international interest in comparison to the attention it has received over the last decade in climate change discourse. Indeed, it could be characterised most accurately during and immediately after its colonial period under the British by a distinct neglect. Aside from some interest fanned by its independence in 1978, when it became one of the world's smallest nation states, the Tuvaluan population has experienced no major internal unrest, nuclear testing or natural disaster to attract intervention by neighbouring nation states or anything more than negligible media attention. In cosmopolitan imaginations, Tuvalu differs from its more politically and culturally visible neighbours such as Tonga, Fiji and Solomon Islands. Furthermore, the nine islands of Tuvalu – Funafuti, Nanumea, Nanumaga, Niutao, Niulakita, Nui, Nukufetau, Nukulaelae and Vaitupu – have little in the way of tradeable natural resources. Lacking economies of scale to support a tourist industry, there have been few tourists, and no resorts, boutiques, backpacker hostels or package tours. In short, Tuvalu once had little to attract the mutually supportive forces of (neo)colonial economic exploitation and popular imaginings of Pacific paradise.

With a land area of 26 square kilometres and a relatively small population, Tuvalu was not a significant site of trade for the British and was, as historian Barry Macdonald described it, a 'Cinderella of the British empire' (Macdonald, 1982). The British claimed Tuvalu (then called the Ellice Islands) and Kiribati (the Gilbert Islands) to the north in order to fend off German colonial ambitions in the region. The islands became a British Protectorate in 1896. The islands' lack of wealth as gauged by Europeans meant that neither settlement nor trade were developed as intensively there as in other colonised parts of the Pacific. Taking into account worldwide trends towards decolonisation, Ellice Islanders foresaw their future as a disempowered and subjugated minority if a decolonisation process for the Gilbert and Ellice Islands Colony led to a new nation state that maintained their union with the Gilbertese (Macdonald, 1975). Independence was sought by Ellice Islanders with the distinct purpose of protecting what they described as a unique cultural identity from the rising power of Gilbertese majority interests. The Ellice Islanders voted in favour of independence, despite widely circulated misgivings from British authorities that the new Tuvalu would have an extremely difficult economic future as an independent nation state (Connell, 1980).

Unlike many islands and archipelagos in the Pacific with a strong presence in imaginings of island exoticism, Tuvalu has been almost untouched by the tourism and culture industries. Its islands have had no Margaret Mead-ish or Gaughin-esque Westerner to produce significant representations of it in cultural or academic arenas. Neither does Tuvalu have something like a mysterious landscape popu-

lated by stone Moai as on Rapa Nui. Furthermore, Tuvalu's lack of easily exploitable natural resources destined for external markets attracts little in the way of foreign investment. Its fishing rights are licensed to Taiwanese vessels but with no large internal market, the boats bypass the islands and sell their catch elsewhere. Tuvalu does not regularly attract media attention (climate change aside), largely a function of its internal political and social stability. Moreover, although internationally mobile, the small absolute number of Tuvaluan people travelling around the world is insufficient for them to make a significant impression on host communities. There are no large migrant communities of Tuvaluans anywhere, except in New Zealand, where their numbers are officially around 2600 (Statistics New Zealand, 2007).

After independence, and before the explosion of climate change discourse, attention turned to Tuvalu framed it as little more than a sovereign curiosity, interesting mostly because of its remarkable smallness. Tuvalu was, and remains, a kind of irritant as an aid recipient according to some leaders and commentators in its more wealthy neighbouring states. Characterisations of Tuvalu in development discourses tend to present the islands as intrinsically poor in natural resources, offering few opportunities for development and economic self-sufficiency, and thus the people are widely believed to be destined to rely on external aid (e.g. Tisdell and Fairbairn, 1983; Fisk and Mellor, 1986). Smallness, isolation, fragmentation and barrenness of the islands are an entrenched litany in development discourses, seeming to define the very character of Tuvalu. Constructed as a site in which modernity can never be realised because it provides only enough for a subsistence existence, this view of the Tuvalu islands parallels closely representations of Pacific geography that Epeli Hau'ofa (1993) questions and seeks to change: of Oceanic populations as inherently, and even fatally, small and economically weak. Writing of 'Our sea of islands,' Hau'ofa's powerful problematising of dominant configurations of the geography of the Pacific brings into focus belittling notions of islands that underlie many contemporary social science understandings of the region. Hau'ofa (1993: 4) urges that critical attention be paid to discourses that characterise Pacific islands as 'much too small, too poorly endowed with natural resources, and too isolated from the centres of economic growth for their inhabitants ever to be able to rise above their present condition of dependence on . . . wealthy nations' (Hau'ofa, 1993: 4). Hau'ofa urges rethinking of small islands as spaces fundamentally outside modernity and questioning of notions that dependence on aid connections outside is somehow preordained.

Although superficially aimed at raising living standards and promoting self-determination, these types of understandings are disempowering. If one only pays attention to the lives of the ordinary people of the Pacific, Hau'ofa argues, other meanings of island spaces can be revealed. He points out that the lives of Pacific people, characterised by movement and migration, are informed by notions of the largeness of Oceania (his preferred term for the Pacific) as a connected 'sea of islands' rather than by the smallness of discrete land masses. Oceania's islands as small, remote and poor are thus an imaginative geography: a means of hierarchical identity construction in relation to spaces that are apparently distant and different from continental or mainland homes (Said, 1978: see also Fry, 1997). Imaginative geographies are performative and constantly reconfiguring. The categories, codes, conventions and landscapes with which a geographic idea is associated over time become a repertoire which shapes the imaginings of those who draw on it (Gregory, 2003). Because imaginative geographies actively constitute objects such as the Orient, the tropics or the islands, they 'sharpen the spurs of action' in relation to that object (Gregory, 2004: 20). Hau'ofa's essay is a prompt to analyse and recover marginalised island meanings and experiences from dominant imaginative geographies, a task taken up here by critically examining how discourses of disappearing islands have emerged from the litany of smallness in cosmopolitan imaginings of Tuvalu. As I will discuss, Hau'ofa's concerns take on a new relevance when thinking through climate change discourse.

Tuvalu's imaginative geographies

Among the earliest representations of Tuvalu in climate change discourses were those produced by scholars who had a standing interest in

Tuvalu. One of these scholars, a geographer named John Connell, contributed to ideas about Tuvalu as disappearing islands in academia and popular media in Australia (Connell, 1980; Connell, 1986; Connell, 2003; see also Quiddington, 1988). The following are extracts from two of Connell's accounts of Tuvalu before it was identified as being at risk from sea level rise associated with climate change:

> Tuvalu . . . presents in almost classic terms the problem of small nations. It has a small population, the majority of whom remain essentially within the subsistence food production sector. Its size and extremely limited natural resources severely constrain the range of policy options available to the country (Connell, 1980: 31).

> All the evidence suggests that the serious development problems experienced in . . . Tuvalu cannot adequately be met by internal policies, or regional cooperation, and that higher levels of aid will only marginally contribute to economic growth (as opposed to improved welfare) (Connell, 1986: 70).

Connell's characterisation of Tuvalu presented the islands as poor in natural resources and consequently as offering few opportunities for development. For him, the very small islands were spaces of intrinsic scarcity, where a state of modernity can never be realised because they provide only for subsistence. In thinking of islands as spaces fundamentally outside modernity, Connell is able to argue that dependence on aid connections outside is preordained. This view parallels closely representations that Hau'ofa (1993) questions and seeks to change.

When sea level rise was identified as a risk for Tuvalu, conceptions of the islands as fundamentally impoverished and dependent became the basis of their meaning as spaces of climate change in Connell's accounts. In a newspaper report entitled *Scientists warn of islands' peril*, which appeared in 1988, Connell is cited as an expert source. His representation of Tuvalu is cited by the journalist, in terms of smallness and weakness:

> Up to about 500 000 people living on small coral islands in the two oceans could be displaced if the predictions of a one-metre rise in sea level over the next 50 years prove correct. Dr Connell said that half of those people may need to seek refuge in Australia as there were few other immigration outlets. . . . 'Even without the greenhouse effect their problems are severe', said Dr Connell. 'These people are already potential economic refugees and perhaps Australia will soon be forced to make concessionary migrations for these islanders. There is absolutely no prospect of stopping the destruction of these small atoll States' (Quiddington, 1988: 7).

In such a narrative, Tuvalu is constituted in opposition to perceptions of Australia as a place of economic and environmental safety; Tuvaluans, represented as refugees, are assumed to be likely to try and find shelter there; and the islands continue to be represented as separate from spaces of modernity. Read in conjunction with his early representations of the islands, Connell finds the rising sea levels an exacerbation of existing dire conditions. Because he perceives the islands as already almost uninhabitable due to economic problems, rising sea levels merely hasten a preordained exit towards spaces of modernity, such as Australia.

Islands imagined as spaces outside continental and mainland modernity resemble Said's (1978) identification of Western or Occidental knowledge about the Orient or the East as ideologically constitutive of an unequal relationship between the Occident and the Orient. Unequal relationships are imagined in dramatisations and divisions of distance and difference that project inferior islands in opposition to superior continents or mainlands. Since identity formation is a relational endeavour, those who identify as mainlanders or continental can locate their identity in the disappearing island's reflection, through the projection of their own fears and desires. Greenhough (2004) suggests that islands, by definition, can be mirrors held up to reveal fears and desires of continental or mainland dwellers. Islands, like the Orient, become particular spaces depending on how they are held in a relational gaze. Continents or mainlands are the standard by which islands are judged. They are ordinary and everyday space, whereas islands are both fascinating spaces of difference and peripheral to the everyday. In Western discourses, islands have been represented as strange, parochial and inferior spaces in relation to continents (McCall, 1994; Deloughrey, 2001; Garuba, 2001). The disap-

pearing island phenomenon has produced different imaginative geographies. In the image of the climate refugee, fleeing the disappearing islands, islanders are positioned as something to fear and/or control, even if empathetically, in climate change discourse. For example, Tuvalu has become a 'global showcase' of renewable energy through efforts of French environmentalists to eliminate fossil-fuel use on all its islands, which tend to summon a romanticised space where islanders live in harmony with 'nature' at the same time as biofuel initiatives are developed and implemented (Farbotko, forthcoming). A distinctly neoliberal cost-benefit analysis of the disappearing islands led an Australian bureaucrat to state that an evacuation of small island states might be more efficient than forcing industrialised countries to cut greenhouse gas emissions (Australian Bureau of Agricultural and Resource Economics Executive Director Dr Fisher, cited in Edwards, 1999: 318).

While imaginative geographies such as these are performances of space that are scripted, their outcomes, of course, are not fully determined (Gregory, 2004). Every 'performance of the . . . present carries with it the twin possibilities of either reaffirming and even radicalising the hold of the . . . past on the present or undoing its enclosures' (Butler, 1993; Gregory, 2004: 19). Said's formulation of Orientalism has been correctly criticised for reducing the relationship between Occident and Orient to one of domination by an active, homogeneous West over a passive, innocent and equally homogeneous East. Furthermore, Said's formulation of imaginative geographies fails to acknowledge the myriad resistances against the Occident by the people who populate that space. Power relations comprise pluralities and hybridities of gender, class, religion, ethnicity, scale and other social and geographic ideas. Orientalism, in its original formulation, had a tendency to reproduce the Occident/Orient binary that Said was keen to unsettle (Clifford, 1988; Gregory, 1995; Fry, 1997; Driver, 2004; Tuhiwai Smith, 2005). Nevertheless, the concept of imaginative geographies, the island among its manifestations, continues to be of use to empirical researchers in critiqued and modified forms that strive to reformulate and challenge, not reproduce, binary understandings of space. The remainder of this paper considers climate change imaginative geographies of Tuvalu among some environmentalists concerned with saving the planet. I consider how, on Tuvalu imagined as an island laboratory, climate change impacts are constructed as readily observable and scalable upwards to aid understanding of the urgency of climate change at a global scale. My intention is not to criticise the work of environmentalists *per se* but to open up for increased debate a discourse constructing Tuvaluans as powerless victims and the Tuvalu islands as experimental space through which many environmentalist narratives derive force.

Island laboratories

Greenhough (2006: 226) has observed that 'islands occupy an unusual and privileged place within the history of science as spaces that echo the ideal conditions of the laboratory'. Similarly, island studies scholar Godfrey Baldacchino (2006: 5–6) has argued that a 'significant component' of Western island fascination is constituted by 'the fact that islands suggest themselves as potential laboratories for any conceivable human project, in thought or action.' Islands imagined as 'natural' laboratories embody positivism's powerful allies: certainty and closure. They help to explain and reinforce discreteness. They function as a means of dividing up the world into knowable portions. Discrete, certain knowledge is highly valued and uncertainty is a source of conflict and stunts decision-making, particularly in the case of climate change (Collins and Evans, 2002). Island laboratories seem to underscore a regressive desire for a world of stable boundaries around, and absolute spaces of, knowledge. Within the boundaries of the idealised island laboratory, there is self-sufficiency and isolation from uncontrollable outside forces, the apparent possibility of spatial closure on knowledge projects.

Tuvalu has become a site where uncertainty about global climate change seems to be miniaturised and resolved in and through the quest to know whether or not the sea around its islands is rising. In large part, Tuvalu's status as experimental space is expressed through the metaphor of 'the canary in the coal-mine'. Caged canaries were once released into coal-mines in order to determine the presence of noxious gases. If the canary was retrieved alive,

it was safe for miners to enter. The metaphor has a disturbingly literal quality in climate change debate: coal-fired power contributes significantly to the carbon dioxide in the atmosphere that causes climate change. The utility of canaries to miners – their expendability in pursuit of mining operations – underscores cosmopolitan anxieties about global climate change. The metaphorical force of the canary in the coalmine rests with the idea that the canary – the Tuvalu islands – is not valuable in and of itself but rather is in service to a larger (global) environmental purpose. Even when the metaphorical death of the canary is considered to be lamentable, a rhetorically predictive manoeuvre is achieved whereby Tuvalu appears to be expendable. The disappearing islands thus embody not a located tragedy of importance in itself but a mere sign of the destiny of the planet as a whole. Tuvalu becomes a space where the fate of the planet is brought forward in time and miniaturised in space, reduced to a performance of rising seas and climate refugees played out for those with most control over the current and future uses of fossil fuels.

The concept of the island laboratory has long been implicated in the cultural subjugation of islanders. Much Western scholarship of Pacific Islands in earlier parts of the twentieth century tended to view the region's people as occupying 'remote, undeveloped human colonies scattered across a vast and empty expanse of sea' and used these spaces as 'convenient laboratories' for particular Western – and positivist – forms of knowledge generation (Terrell *et al.,* 1997: 156). The island laboratories of the Pacific were imagined to be inhabited by populations isolated in space and frozen in time, simpler and hence more amenable to holistic understanding than populations elsewhere. Academic interest in Pacific Island populations, furthermore, did not stem from a view of these populations as necessarily of interest in their own right. Instead, they served as seemingly isolated laboratories in which to study models of more 'complex' societies, especially those in the West. Island inhabitants are strongly communal according to Semple's environmental determinism (Semple, 1911). They make ideal field-sites for scholarly work according to Mead (1928), resembling the highly controlled conditions of laboratories, in which to pursue positivist studies of social systems. They are microcosms of the larger world, 'ready-made isolates for study' according to Spate (1963: 253–254):

> That bugbear question of where to draw the boundary is often answered for us by the embracing sea. [In the Pacific] we have whole congeries of little universes, point-economies, ready-made isolates for study; each capable, in appearance at least, of being readily grasped as a whole. This makes the Pacific world all the better as a laboratory . . . without denying the existence of gaps and complexities, or the fascination of unravelling origins, we can recognise that, since the populations are small and the written history short, we are spared a whole host of variables which confuse the ecology of the great landmasses.

Imaginings of supposedly simple island civilisations, apparently without history (being unwritten) and seemingly spatially uncontaminated by outside forces, denied peoples of the Pacific a vision of their world as 'a notably early sphere of human accomplishments, on land and sea, and the ocean more an avenue for interchange than a barrier to human affairs' (Terrell *et al.,* 1997: 156). Islands imagined as laboratories assisted Western researchers with their positivist agendas and academic career ambitions. On islands imagined as isolated and timeless, such research worked to deny Pacific Islanders a cultural identity as great travellers, inheritors of their ancestors' remarkable achievements in navigating, sailing and settling throughout islands of the expansive Pacific Ocean (Finney, 1979; Hau'ofa, 1993; Clifford, 2001; Jolly, 2001). In her anthropological practice in the early twentieth century, Margaret Mead was keen to attempt to reproduce laboratory conditions to help her anthropological research. Finding no suitable communities isolated in both time and space in those that she saw as complicated civilisations, Mead (1928, 12–13) turned to what she assumed were the simple and uncivilised people on the islands of Samoa. She wrote:

> For the biologist who doubts an old hypothesis or wishes to test out a new one, there is the biological laboratory. There, under conditions over which he can exercise the most rigid control, he can vary the light, the air, the food, which his plants or his animals receive, from

> the moment of birth throughout their lifetime. Keeping all the conditions but one constant, he can make accurate measurement of the effect of the one. This is the ideal method of science, the method of the controlled experiment, through which all hypotheses may be submitted to a strict objective test . . . Unfortunately, such ideal methods are denied to us when our materials are humanity and the whole fabric of a social order . . . What method, then, is open to us who wish to conduct a human experiment but who lack the power either to construct the experimental conditions or to find controlled examples of those conditions here and there throughout our own civilization?

Here, positivist knowledge is tested against certain ideals – whether it is able to be replicated and hence useful for making generalisations. But Mead did not only have a legitimate pursuit of knowledge in mind. She claimed islands as *ideal* spaces of positivist knowledge production about human societies. Mead's yearning for an ideal field-site in which she could control knowledge of 'humanity and the whole fabric of a social order' reduced populations of supposedly simple civilisations to being valid subjects of experimentation in much the same way as animals or plants in a laboratory.

Part of the appeal of island laboratories to social researchers such as Mead is that they are imagined to function as incubators for utopias. Twin myths operate to help construct the island as a knowledge utopia: an idealised closed, isolated island is not only a complete, perfect world, it is a source of complete, perfect knowledge: 'The island, with its hard, clear outline engraved on the hazy surface of the sea, seems to incarnate an isolated and self-sufficient world. It can thus appear as a form of the world that is complete in itself. There is consequently something reassuring about it. It permits an illusion that "reality" may be experienced in its entirety' (Péron, 2004: 331). The island laboratory has thus long been a space on which to inscribe desires for a small, perhaps even utopian, world that is more tangible, more graspable and more understandable than large, complex mainlands, continents or planet Earth. Imaginings of Tuvalu as a dying canary, sacrificed in a coal mine, are a reminder that island laboratories can be closed, comprehensive sites for experimentation. Tuvalu is represented as space in which the salvation of the planet as a whole is embodied in the vulnerable, expendable canary; where the fate of the planet is reduced to a seemingly manageable scale, on islands. Attention focussed on providing a definitive answer to the question 'are the seas really rising?' seems to be driven more fundamentally by concern for the planet than for the islands themselves, or their inhabitants.

Islands are often imagined to be small, complete worlds knowable in their entirety. However, 'all-seeing' perspectives have been demonstrated to be exceedingly problematic when deployed uncritically. According to Haraway (1991), visuality has been a guiding metaphor for Western knowledge practices. Particularly under the banners of positivism, balanced journalism, and even environmentalism, observers of Tuvalu convince themselves and their audiences that they unproblematically 'see' the islands, then conveniently erase themselves from the story, and record its 'truths'. But the process of linking visuality with objective truths is flawed, as Haraway convincingly argues that it is impossible to have vision from everywhere and yet from nowhere – as if the observer is somehow invisible in the story but knows all. Nevertheless, with their entrenched mythology of visual graspability, the Tuvalu islands are used as 'ideal' laboratories in which observations of sea level rise can be made more readily than on the coasts of continents. Islands are thus more amenable than continents to Haraway's 'god tricks' – the passing off of what are in fact highly subjective representative manoeuvres as recordings of objective truth – and as such they are vulnerable to being appropriated as sites in which to invest the interests of the purportedly objective or invisible observer.

In narratives of some international environmental organisations, Tuvalu is recruited to prompt non-islanders to act on climate change issues. WWF (formerly World Wildlife Fund), Friends of the Earth and Greenpeace have harnessed Tuvalu's image to draw attention to the islands and the planet's climate change impacts simultaneously in climate change campaigns. The disappearing island image is prominent, yet it is planetary salvation, and not the protection of Tuvalu in and of itself, that is frequently at the core of such campaigns. Environmental journalism on Tuvalu also uses the islands in service to

a larger purpose. An example environmentalist internet piece, 'Postcards from the Edge: Photos of Tuvalu show global warming in action', links Tuvalu directly to visualising complex and often intangible climate change phenomena: 'Since 1999, photographer Gary Braasch has worked to document global warming around the world. His images bring home a concept that's often hard to visualize. Today, as the Kyoto Protocol goes into effect, Braasch sends a dispatch and photos from Tuvalu, a Pacific Island nation whose fate already hangs in the balance' (Grist Magazine, 2005: np). Some of the captions for Braasch's photographs use dramatic vocabulary to create a sense of urgency around Tuvalu's environmental vulnerability:

> • Wind and waves *batter* the foundation of a church in the capital, Funafuti.
>
> • Local children playing in tidal waters *washing over* Funafuti's main road.
>
> • Tuvalu's shoreline is *rapidly eroding* under extreme high tides.
>
> • Seawater *bubbles up* on the edge of a runway at the Tuvalu airport.
>
> • Kids in Funafuti watch as *water inundates* their neighbourhood (Braasch, 2005: np, emphases added).

While Tuvalu is a contested space of truth claims straddling past, present and future, such claims are tempered by their makers' ideas, hopes and fears of what they will encounter on Tuvalu, centred on issues of vulnerability, crisis and risk. One journalist stated, for example, 'let's be honest: I'd come in search of imminent catastrophe' (Levine, 2002: 90). Thus, island laboratories can easily become implicated in sensationalist crisis narratives. What is important is that while much research, environmentalism and journalism focussed on Tuvalu and Tuvaluans is undoubtedly beneficial, the endorsement and reproduction of islands as natural laboratories needs a critical perspective. In disciplines that centralise understandings of humans and human behaviour (such as medicine, human genetics and anthropology) the island laboratory has been critiqued as a partial and situated, not neutral, space that can contribute to the cultural subjugation of islanders (Terrell *et al.*, 1997; Edmond, 2003; Greenhough, 2006). In this vein, it is concerning but perhaps not surprising that, in some environmentalist narratives of Tuvalu, representational leaps are being made from Tuvalu as a 'marginal laboratory', to Tuvalu as an 'expendable laboratory' in the pursuit of a larger purpose – saving the planet.

This discursive process can be demonstrated in an example. Environmentalist Mark Lynas displays a strong desire for Tuvalu to be *almost* uninhabitable, a rhetorical manoeuvre achieved by ample use of exaggeration in various investigative journalism pieces depicting his sojourn on Tuvalu. For instance, the following statement was made in a media report by Lynas (2004a: np): 'For six months of the year some Tuvaluans now have wet feet at high tide.' This statement was accompanied by a photograph of two men and a child standing in knee-deep water on Funafuti, one of the men attending a barbecue. It is a visual and hence seemingly authoritative piece of evidence of the existence of high tides over several months of the year. Its appearance on a UNESCO website would lend the article credibility to many readers, and yet it is a highly exaggerated version of Tuvalu's high tide events. Such high tides in fact only occur two or three times a year (depending on lunar cycles), and only for a few days at a time. They are not an almost daily occurrence, as the photograph and its caption seem to suggest. In 2006, for example, king tides caused floods on Funafuti in January, February and March that lasted for about four hours, twice on each of nine days. In January, one family on the capital was evacuated from its flooded home for several days, and was given temporary accommodation in the Red Cross Headquarters. The rest of the time, however, there is minimal flooding on the atoll, and daily life is not conducted in knee-deep water.

In the following extract, from the same UNESCO article, Lynas' desire for the islands to be almost uninhabitable is clearly demonstrated. He hints that the Tuvaluan official he interviewed on climate change was only using the term 'migration' as political whitewash for what was really an evacuation plan, an interpretation that suited his environmentalist agenda:

> "We couldn't just sit back and do nothing", Panapase told me, as we sat in a small office in

> the one-story white-painted building which houses most of Tuvalu's national government. "So far we have received approval from New Zealand to allow seventy-five people a year to go there." This is not an "evacuation", he insisted, but more of a "migration plan". Either way, Tuvalu's 11 300 inhabitants are about to start leaving their homes (Lynas, 2004a: np).

Lynas' representations have been mobilised by others to convey a message that Tuvalu has, in fact, already disappeared – clearly incorrectly. This conveyance occurs in Al Gore's documentary *An Inconvenient Truth* (Gore, 2006). Discussing the Arctic ice cap and Antarctica, Gore states that the impacts of climate change seem to be faster in the polar regions than anywhere else: melting perma-frost and ice shelves result from warming temperatures. To explain the significance of the melting ice at the earth's northern and southern poles, he says, almost dismissively 'That's why the citizens of these Pacific nations have all had to evacuate to New Zealand. But I want to focus on West Antarctica . . . ' (Gore, 2006).

This statement is a mere aside to Gore's chief environmentalist concern, namely, saving the entire planet from climate change impacts. In the documentary, Gore's statement was accompanied by some grainy photographs of an apparently unidentified Pacific island in flood, featuring people wading through knee-deep water. Gore does not name the island in the photographs nor does he specify which Pacific island nation's citizens 'have all had to evacuate to New Zealand.' The photographs are indeed of Funafuti, and were taken by Mark Lynas during his visit there – they are copies of some of those published in his book and are credited to Lynas at the end of *An Inconvenient Truth*. Was it 'an inconvenient truth' for Gore that Tuvalu's citizens have not, in fact, all migrated to New Zealand? Moments after the photos are shown in the documentary, Gore claims that the issue of climate change is the same for the population in China as for that of the United States. He laments the problem of old, polluting technologies such as coal-fired power stations. A translator is shown asking for suggestions on what the Chinese can do to help the situation. Gore states, apparently without irony, to an audience that looks like a group of university students: 'Separating the truth from the fiction and the accurate connections from the misunderstandings is part of what you learn here. But when the warnings are accurate, and based on sound science, then we as human beings, whatever country we live in, have to find a way to make sure that the warnings are heard and responded to [applause]' (Gore, 2006).

Gore effectively sidelines the interests of Tuvaluans and other similarly geographically situated islanders in several ways. He uses disappearing islands as a warning, bringing forward the date of the island disaster to a time apparently already past, and asserting that what he says can be relied on as 'truth'. He produces climate change debate as having two key arenas: on the one hand developed nation states, on the other large developing nation states. The combined effect is to marginalise small islands where fossil fuel industries are not powerful economic forces, erasing their very present and future in an influential documentary.

Similarly, in a 2005 monograph paying unapologetic homage to the success of American cartoon phenomenon *The Simpsons*, the author Chris Turner takes a detour from his main topic in a chapter on the Internet, to wish for a sunken Tuvalu. He argues that if the Internet can change the social world, so too can the world's population make fundamental lifestyle changes needed to combat climate change. Turner writes that his environmentalist project is 'hungry for a metaphor equal in scale to the scope of our planet's environmental crisis' (Turner, 2005: 338) and his metaphor of choice is Tuvalu. According to Turner, Tuvalu is an appropriate choice because it is not merely 'sinking'; it is an entire nation on the verge of disappearing. He mobilises the canary in the coalmine image: 'Here is the global village reaching out to absorb one of the last remaining unglobalised nooks and crannies of the planet . . . here, finally, is the canary in the coal mine of the modern world, a dying bird clinging desperately to its perch to tell us that the whole project might be doomed' (Turner, 2005: 338).

Hoping the canary dies, Turner expresses a problematic moral geography, a perverse desire to see Tuvalu disappear in order for the planet to be saved:

> 'Tuvalu might do more to combat climate change if the Pacific, swelled by melted ice and agitated by extreme new weather patterns, rose up tomorrow to sink it for good. Might that be enough to make it clear that environmental catastrophe is a real and huge and growing threat to our survival? Because if it is even in the realm of possibility that an entire nation could disappear into the sea as a result of manmade climate change – if this is even remotely possible – then we're obliged to rethink our way of living' (Turner, 2005: 338).

Wishful sinking

Journalistic, scientific and environmentalist quests for certainty and truth about rising sea levels find spatial expression in Tuvalu. On the one hand, Tuvalu is often viewed as a site of compassion and environmentalist action in response to climate change, embodied in calls for protection of climate refugees. On the other hand, it is a site of 'wishful sinking', in the discourses of Al Gore and some other environmentalists who turn their attention towards Tuvalu. Representations of Tuvalu as a laboratory for global climate change are constitutive of an unequal relationship, projecting Tuvalu in terms of cosmopolitan hopes and anxieties. The disappearing island becomes expendable to the onward sweep of both climate activism and its opponent, capitalist modernity. A new mythology of Tuvalu as the climate canary is produced in the pursuit of other interests: to save Earth or to create newsworthy accounts of the disappearing islands.

If the disappearing island is a laboratory on which cosmopolitans enclose a space to locate and contain climate change hopes and anxieties, so too are islanders appropriated in the proof of a global climate change crisis. The islander is enlisted to inscribe and purify climate change impacts, which become simplified into extinguished sovereignty and death of culture. Superficial calls to 'save Tuvaluan culture' frame Tuvalu's heterogeneous island communities in terms of a single, static, territorially determined entity. This entity is not called upon on its own terms, but as a means of challenging and defending cosmopolitan and consumerist cultures elsewhere. In the cosmopolitan gaze, there is a strong, albeit paradoxical connection in the politics of the global climate change crisis between 'saving the climate refugee' and 'watching the islands drown'. Island people, long marginalised, are denied their own agency in the climate change crisis. They are fictionalised into victim populations fleeing inundation, desperate for dry land, even drowned.

In the context of political and economic lethargy in addressing climate change, Tuvalu's identity is being reshaped. Its islands seem to allow a comforting graspability when grappling with climate and carbon cycles as complex systems. Tuvalu is being produced as an absolute, discrete and enclosed space in which climate change impacts and their solutions seem more tangible, more graspable and more understandable than on large, complex mainlands, continents or planet Earth. Simultaneously, Tuvalu has come to embody not a uniquely located tragedy but the destiny of the entire planet. It is a relational space, at once microcosm and whole, where the fate of the planet is brought forward in time. The legacy of the island laboratory seems to justify Tuvalu as, perversely and disconcertingly, expendable. This is a problematic moral geography constructed as Tuvalu islands and Tuvaluan bodies become sites to concretize climate science's statistical abstractions, enforcing an eco-colonial gaze on Tuvalu and its inhabitants.

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