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1 Introduction: Pacific Climate Cultures

As an instrument for reducing emissions and slowing global warming, science has failed. As a source of definitive prescriptions about how communities should deal with a changing climate, science alone is inadequate...a purely technocratic approach is likely only to exacerbate the climate crisis because it ignores the dynamic psychological, cultural, social, economic and political systems that affect climate impacts.

(Finucane, 2009: 2)

1.1 Living Climate Change in Oceania

Cultural concepts and ecologies are vitally inseparable, mutually constitutive and made living through each other. Pacific philosophies understand oceans, lands and skies as agentive, malleable living forms participating in, constitutive of and responsive to cosmological and kinship-based relations capable of encompassing the perspectives of fish and the relational qualities of people. In this vein, the Prelude diagnoses climate change as the consequential, unbalanced, manifestation of human “arrogance and greed.” In this vein too, the Afterword depicts the “inter locks” of vital energetics to convey the reciprocal mutuality of living climate change. What we coin here as “living climate change” in Oceania then, entails rather more than simply living *with* climate change - as though it were merely a matter of making an accommodation with a troubling, separate and adjacent realm or some distinct natural domain only legible to science and a technocratic approach. Climate change amplifies and makes manifest human natures, conceptual ideas, relational practices and their consequences, and this volume explores the registers, forms and actions through which Pacific peoples are living climate change as diverse cultural concepts and ecologies newly combine. Changing climates and changeable cultures in the Pacific make manifest and make known the constitutive relations and reciprocal exchanges amongst various life-forms in a shared and living realm of responsibility which has no end of forceful motivating currents. The relations and effects drawn forth through “climate change” have in this sense always been a part of life itself in the Pacific, and are increasingly influential and dominant currents amongst many others. As much as distinctive forms of reciprocity inform and support these inter-locking relations, distinctive forms of reciprocity are also shaping the climate mediated encounters through which Pacific peoples are living climate change - adapting through their own means, and adapting climate change to their own ends. We might as much point to “climate” or “culture” as concepts expressing aspects of mutually constitutive relations, yet must remember that such Eurocentric terms are poor substitutes for

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particular Oceanic conceptualisations, and merely proxies for specific indigenous references and philosophies. Different forms, sources and registers of knowledge are being brought into new relations through climate change, and combined and made living in particular ways. As described below, discourses of “climate change” in a scientific register are being dynamically adapted, combined and appropriated into narratives and genres which are also home-grown. Pacific climate cultures as depicted here, then, draw attention to diverse cultural forms which are registering, expressing and responding to the emergent properties, effects and possibilities of “climate change.” Grasping these interconnected and reciprocal relations at the outset opens up the possibility for apprehending new ethnographic objects, of asking new questions, of offering new descriptions and new analyses, and of formulating language for new forms of pro-active response—and this also affords the basis for a different paradigm and a distinctive Pacific contribution. *Pacific Climate Cultures* aims to bring Oceanic philosophies to the frontline of social scientific theorization. It explores the home-grown ways that “climate change” becomes absorbed into the combined effects of globalization and into a living nexus of relations amongst human and non-humans, spirits and elements.

Pacific peoples have their own explanations for the causalities and wider effects of “climate change,” and their own interpretations of the broader cultural changes entailed in the diverse encounters and manifestations of climate cultures across the contemporary Pacific. We need not imagine that climate change is entering from beyond Pacific worldviews as if they were somehow separate domains impinging upon or having to adapt to each other. Reciprocity is an important principle and social mode: it involves a sophisticated aptitude for discovering new possibilities in resources of all kinds, and an equally adept skill in accepting external interests and turning them into home-grown initiatives. As a cultural principle, combining mutual enactments enables distinctive forms of social and knowledge exchange. It creates a ready-made space in which different sources of knowledge can be combined, and a ready-made mode through which multiplicity can be accommodated. Of course, this reciprocal mode of combining and exchanging interests operates in diverse ways across local and global scales, and so disrupts any simple picture of internal and external. Pacific peoples have a long and distinguished history of meeting the peoples of other regions of the world on their own social and cultural terms, and of engaging with outsiders through their own economic and political interests (Thomas, 2010; Matsuda, 2012) and can be relied upon to creatively respond to climate change through the cultural resources of their own life principles.

The renaissance and contemporary importance of Pacific voyaging, and its role as a compelling home-grown response to climate change, illustrates the point. In saying that “Pacific indigenous navigation is a powerful metaphor for Pacific leadership,” His Highness Tui Atua Tupua Tamasese has in mind guidance “to find yourself in your cultural histories and indigenous references before tackling the references of others,” “for our own [national] development moving into the future,” and for the

challenges of 21st-century global politics (Tamasese, 2010: 1, 3). The Pacific Council of Churches' formulation of the "Island of Hope" (2001) envisions navigating a way towards sustainability based on life-centred Pacific ways. Since the 1970s through to the current Mālama Honua Worldwide Voyage (2013-17), the Polynesian Voyaging Society's double-hulled voyaging canoe, Hōkūle'a, has inspired the redesign of a new sail plan for humanity.² The Third UN SIDS Conference in 2014 transformed the meeting hall into, and portrayed the outcome document,³ as a double-hulled *va'a* or voyaging canoe (Crook, 2016); and Kathy Jetnil-Kijiner's address at the 2014 UN Climate Summit invoked Marshallese canoes in calling for a "radical change of course."⁴ Besides motivating the enhanced geopolitical presence of the Pacific on the global stage, climate change has had an important regionalising effect across the Pacific, providing a new basis for emphasising common cause across a range of scales, and a point of contention and division with some traditional geopolitical and development partners, most notably Australia, through the "new Pacific diplomacy" (Fry and Tarte, 2015).

Pacific peoples are on the frontline of climate change: recognised as among the first affected by the changing nature of sea-level rises and global weather systems (Farbotko, 2010; Lazrus, 2012), and yet curiously absent from the front line of early climate change debates. Whilst the dichotomy of the universal character of IPCC guidelines (Barnett 2001) and the specificity of Pacific contexts (Pernetta, 1992) was recognized right from the outset, the Pacific region is gaining increasing scholarly attention (e.g. Mortreux and Barnett, 2009; Jacka, 2009; Lazrus, 2009; McNamara and Gibson, 2009; Barnett and Campbell, 2010; Rudiak-Gould, 2011, 2013a). Prophecies about the inevitability of displacement due to climate change create spaces in which ideas such as migration lose all proportion and reality (Kempf, 2009), and become driven by policy development rather than by material circumstances (Mortreux and Barnett, 2009). They do not necessarily reflect experiences (Lieber, 1977), local plans and wishes (McNamara and Gibson, 2009), "multistress" contexts of environmental, social, and political changes and pressures (Becken, 2005) or local perceptions of potential political and economic advancement (Connell, 2003).

Pacific peoples' receptions of and responses to the physical effects and prophetic narratives of anthropogenic climate change (such as the "end of the Pacific," Nunn,

2 Nainoa Thompson, "Redesigning a Sail Plan for Humanity," http://www.huffingtonpost.com/nainoa-thompson/redesigning-a-sail-plan-f_b_10374096.html

3 "This week we have all helped to build a great SIDS *va'a* or voyaging canoe, the SAMOA Pathway. We have also equipped it with the many paddles necessary to move it forward, through the many partnerships we have celebrated and launched here in the Pacific. We are departing on a journey and charting a course together towards the many multilateral negotiations awaiting us." (Tuilaepa Lufesoliai Sailele Malielegaoi 2014).

4 <https://www.un.org/climatechange/summit/2014/09/watch-marshallese-poet-kathy-jetnil-kijiner-speaking-climate-summit/index.html>

2013) are beginning to shape international priorities, policies and practices (e.g. Kelman, 2010). Scientific prophecies are absorbed and heard within the frame of religious and cosmological interconnections, and prompt internal reflections and critiques of localised community affairs (Rubow and Bird, 2016). Rather than simply a question of physical and tangible changes to natural systems that require technological and material remedies, climate change in the Pacific is altogether more complex, and yet altogether more straightforward from a social science perspective. Climate and weather are barometers, so to speak, that manifest and express the qualities and changes in social relations—peoples’ dealings with one another and with other beings in their lifeworlds (cf. Strauss and Orlove, 2003; Lefale, 2010).

Hence the limitations of assuming that the motivating cultural concepts are the same as those informing international climate discourses, and the limitations of assuming that the scientific account of global warming is shared as an explanation of the causalities at work (Salick and Byg, 2007; Jacka 2009). In the Pacific at least, it is equally important to look at where the effects of climate change wash up—as a cultural idea, an environmental discourse, a global prophecy, a political ideology—in the social thinking of Pacific peoples and the particular places and communities in which they live.

Place-based ethnographies of “traditional ecological knowledge” (TEK) (cf. Crate, 2011) do well to avoid viewing TEK as an indigenous equivalence to science (Leach and Davis, 2012). Pacific knowledge-practices are composite, relational, combinatory and highly inter-personal, and characterised by the importance of places and persons and hierarchical relations. For example, Borofsky’s study in the Cook Islands (1990) shows how pedagogy involves a willingness to learn for hierarchical advancement rubbing against an unwillingness to appear hierarchically subservient; Harrison’s (1990) and Lindstrom’s (1990) studies in PNG and Vanuatu respectively, show how knowledge requires the verification of another person; Crook’s work in PNG shows how knowledge is regarded as a bodily capacity that relies on combining rationales and relational sources for efficacy (2004, 2007a). Technocratic and bureaucratic cultures of knowledge and practice often rub up against and combine with local modalities of knowing—as new relational sources and rationales—and, thereby, disrupt any easy reading or questioning as to whether they might be commensurate or incommensurate. Yet, creating pathways for including alternative modes of knowing into official assessment and reporting processes are far from unproblematic (e.g. Magistro & Roncoli, 2001; Nakashima et al, 2012).

Advancing the theoretical understanding and practical interaction of different systems of knowledge-practice are critical features of social science contributions in response to climate change, and provide key pivots for the emerging “cultural turn” (e.g. Adger et al, 2011; Hulme, 2009; Rudiak-Gould, 2011; Urry, 2011). Engagement with scientific paradigms and the terminologies of international policy agendas may be a premise for anthropological engagement (Crate and Nuttall 2009, 2016), but we need not assume that these international terms and causal connections also

provide the premise for Pacific perceptions of climate changes. Nor should we assume in a distinctively Eurocentric vein that climate cultures are merely diverse social constructions of the same natural facts (cf. Pettenger, 2007). Anthropologists wishing to avoid the limitations of such a “social constructionist” position, are learning that when it comes to climate change it is insufficient to assume and ascribe the scientific account of the causes of global warming—and to only then look to culture *after the fact* as a resource for adaptation or else a basis for vulnerability. Instead, their predisposition is to look beyond this Eurocentric folk-model and academic convention and to anticipate that Pacific peoples will have shifting and multiple explanations, deriving from and addressing specific aspects, and analysable in terms of cultural concerns that reflect the interconnections between dimensions of the world which all nonetheless fall within a distinctly humanised and cosmomorphic vision of life.

The Pacific continues to exercise an important and disproportionate influence on the intellectual development of social science disciplines, including social anthropology. Social anthropology has a long tradition of studying indigenous perceptions of ecological relations in the vernacular terms of traditional cosmologies, but its specific engagement with the issue of climate change can be traced back to a conference organized by (erstwhile Pacific anthropologist) Margaret Mead in 1975, ‘The Atmosphere: Endangered and Endangering’, which brought together scientists and social scientists across a range of disciplines, and set precedents as much for subsequent research as for policy engagement (Kellog and Mead, 1977; Baer and Singer, 2014: 23-24). Mead was involved in the first Earth Day in 1970, and in the years leading up to the conference had clearly recognized the emergent idea of “our shared atmosphere” (1972) as a powerful *cultural idea* that all people shared equally, which served to dissolve national differences and which echoed President Kennedy’s vision of the atmosphere as a unifying political entity in which “we all breathe the same air” (1963).

A Pacific contribution to debates seeking to theorise climate change, then, could well be fashioned from juxtaposing metaphysical connections made by peoples across the region and drawing notions of mutability to set against commitments to immutability, and vice versa: that is, to critically point out cultural distinctiveness and to productively deploy conceptual divergences. Indeed, following the Prelude to this volume and drawing upon Samoan indigenous reference we might well look to a worldview or life principle that “privileges not just the perspective of other men, but of other living beings” and respects their “equivalence and affinity,” as a source of insight which unsettle prevailing assumptions in the understanding of climate change.

As much as the contributors to this volume put forward examples and analyses from a range of venues across the region to convey how Pacific peoples “make what they would” (Bolton et al, 2013: ix) of climate change, they share a concern to speak beyond a suite of Pacific exemplars illustrating common cause, to contribute what amounts to a Pacific vantage point on anthropological and wider social science

assumptions and theorisations of climate change. Beyond a collection of small-scale case-studies from across a large-scale region, the materials and analyses here speak to how scale and relations of adaptation, combination and appropriation appear to, and are approached by, particular cultural logics, and moreover, speak to prevailing orthodox understandings of climate change, and thereby challenge these hegemonic understandings from a Pacific perspective.

Alongside the temptation to read these Pacific examples as multipliers of the ways that many cultures make what they would of the same facts of nature, or as a collective exhibition of a region's responses to a shared experience, or as evidencing the confirmation of a theoretical perspective, comes an invitation tempting readers to engage the contributions that follow as an opportunity to re-work and re-frame any underpinning cultural and ideological commitments of their own. As much as the descriptive enrichment and analytical enhancement that might be derived from the Pacific ethnographies that follow, the volume also offers insight into why the problems of climate change are difficult to make transparent. Here we touch upon distinctively Eurocentric interlocks, interconnections and conceptual separations by which the disjuncture of representations from that which is represented provides a corollary of the disjuncture between nature and culture or different social constructions of a shared real world. Whilst the relational iteration of cultural interlocks may be universal, the character of the interlocks and what is being connected are, of course, not. Pacific climate cultures provide a vantage-point on folk-models and cultural assumptions of our own.

It is instructive that His Highness Tui Atua Tupua Tamasese's forthright diagnosis of the problem of climate change in terms of "arrogance and greed" in the Prelude to this volume should be a necessary preliminary and instrumental means to finding a way to be "bold enough to allow us to say the unsayable." Conventions need to be knocked off balance to reveal both old habits and new possibilities, and in this way too His Highness' provocation is a fitting Prelude to the ambitions of this volume. Pointing to the problem of arrogance and greed might be hard to say because of the "soul-searching questions it forces us to confront about ourselves," and because of the resistance to acknowledging presumptions of "unfettered dominion over our environment and all living things" and an "unhealthy preoccupation" with "material gain for individual benefit at the unreasonable expense of others." Offending delicate social protocols makes these things hard to say, no doubt, and acknowledging their traces in one's own actions and in one's view of oneself is uncomfortable. Beyond etiquette and honesty, the impasse appears to be a problem of representation: that is, of collapsing the disconnect between the ideal world as represented through cultural models and the real world as reproduced through social actions. Representational strategies embody and reiterate certain assumptions: representation necessarily involves a separation or detachment, and suggests a corollary in the very separation of human ideas and systems from environments taken as causal factors in anthropogenic climate change. So, the wider question and larger point to be taken here is that, from

this Samoan perspective, why should the obvious disconnect between the reality of the world and the social actions that manifest it, be so “difficult to make transparent”?

Questions of “change” summon notions of prior and normative states. Similarly, that social, economic, political and cultural changes accompany climate, meteorological, ecological and environmental changes summons a prevailing order of things, for example, in how one register is implicated in and represented by the other. In addressing this question, we might look to adapt or combine some older cultural and intellectual resources of our own. The view that order is the proper and normative state, and that the order of nature provides a model for society, such that changes in one are represented by changes in the other, reveals particular cultural origins and corresponding problems or “totemic illusion” with analysts discovering “social control” (Strathern, 1985: 116) and “society” in parts of the Pacific (1988). Indeed, Pacific socialities provide vivid counter examples of the “familiar and predictable lifeworlds humans create for themselves” (Hulme, 2015: 293). In respect of Pacific materials, Wagner counter-intuitively suggests we resist the temptation entailed in “constantly trying to [bring] things into an ordered and consistent relation”: we should instead grasp the motivation as “constantly trying to change, readjust [and] ‘knock the conventional off balance’ ([1975] 1981: 66), or ‘the more disputes are settled, the more they erupt’ as Strathern puts it (1985: 127). “Change” holds a different position and quite alternative effects in such different views: starting points carry definite corollaries for analytical stances, theories and motivations. For when Strathern suggests that in one view “parts of social life are seen to offer commentaries on other parts, much as the social scientist’s job is to offer commentary” (1985: 112), this is a question of representation that pertains as much to a tradition of social science as to the social traditions these disciplines emerged from, and we should grasp the parallels between our social and methodological positions. The question of why it is so hard to see the disconnection between the world as it is ideally imagined and the world as it is lived is fundamentally a problem of representation: as such it goes to the heart of social scientific description which relies on a separation or disconnect with its object into order to make it describable in the first place. The Pacific is a provocative place from which to confront these questions.

There are different ways of understanding social relations, and alternatives to assuming that it is relations between differentiated domains that call for explanation. Roy Wagner’s depiction of Scientific and Papuan conceptualisations of the innate, spells out the consequences of stances that take either “relating the perceptibly differentiated” or “differentiating the perceptibly related” as their epistemological starting points (1977). For example, the honorific words the Samoan chief addresses to the fish confirm their relatedness in an equality of status, a mutuality of respect—albeit further differentiated in a culinary hierarchy. Of course, these stances and starting points derive from cultural commitments to the metaphysical ways that ideas participate in each other, and we stand to learn from Pacific people’s own cultural and social representational strategies—not least whether they are representational

in quite the same way. As Hulme observes, these are matters of agency: “as new and not-so-new political interests find multiple uses for climate change, our material, social, and imaginative worlds become subject to its powers” (2015: 297). Agency is also evident in analytical stances and starting points for description, and also evident in the corresponding location of realms of human responsibility and of innate realms taken for granted.

As much as any utility derived from counter examples to the conceptual differentiation of nature and culture or human and non-human, the ethnographic materials in this volume can be read as affording counter examples to a representational strategy able to “describe one’s social world as apart from the actions which constitute it,” by which “Life is understood in terms of a split between representations (descriptions) of it, and as it really is” (Strathern, 1985: 128). But as we have seen, there are real problems with assuming that this particular social representational strategy is universal: “however useful the concept of society may be to analysis, we are not going to justify its use by appealing to indigenous counterparts” (Strathern, 1988: 3). The all too familiar representational strategy we know as “society” provides endorsement for relations between individual members and collective groups, and provides a corresponding means of differentiating dual registers: just as it is possible to describe a social world as apart from constitutive actions, so it is possible to speak at the individual or society level without the need to speak at both levels at the same time, for in their differentiation they also invoke, and provide a rationale for, each other. In terms of climate change, the articulation between dual registers endorses the possibility of speaking to the problems of climate change in one register and of speaking to personal participation in those problems in another register. And the tongue twister of articulating differentiated separation—when to speak of one evokes and relies upon the other—makes transparency difficult and a diagnosis almost unsayable. Perhaps this also informs what His Highness Tui Atua Tupua Tamasese observes as “the ability to rationalise and believe that what is wrong is right.”

Climate change in the Pacific is indistinguishable from the constitutive ideas, actions and responses, and thus adaptation and appropriation are not bridging a representational gap between differentiated registers: instead the focus falls on reception by knowledges which are relational and combinatory, and on apprehensions and actions which are mutually constitutive. If the parts do not index or represent or offer commentary on other parts, then what happens to the corresponding position for analytical representation and commentary? If order is not the motivation and if change is not disruptive to convention but rather a means of revealing it, then cultural appropriations crafting analogies through climate change begin to appear as techniques of knowledge by which to apprehend the capacities, affordances, possibilities and constraints of the world anew. Climate change affords a venue for multiple ways of knowing in a changeable world, and a method of discovering insights into re-worked possibilities. In other words, it begins to appear as a revelatory

technique, a means of finding ways of saying what was previously unsayable about the world and the conventions of its constitution. This volume questions whether and how climate change in the Pacific is being “used to stand in for a wider set of human concerns about their changing cultural, political, moral, and physical worlds” (Hulme, 2015: 293). In doing so, the volume offers both ethnographic and analytical insight, and both regional and theoretical provocation, in which aspects of the region’s epistemologies share an equality of status with the region’s experiences as contributions that enrich understandings of climate change. In this way, the volume aims to put the Pacific closer to the frontline of social science theorisations of climate change, and the combinatory character of knowledge itself here creates space for a new narrative, reiterating the volume’s contributions in new narrative terms.

1.2 Discourses of Climate Change in the Pacific

A spectre is haunting Oceania: the spectre of climate change. It is indeed spectral, not quite real, because like “modernity,” “democracy,” “decolonization,” “development,” and many other mega concepts of our age, it describes both a present reality and an imagined future that is still in the process of materializing. “Climate change,” like the other concepts mentioned above, is by its very nature not an endpoint but a process: moving from a past of familiar (and often assumed to be stable and benign) climates, to a present of perturbed and “weirding” climates, towards a future of possible climatic catastrophe. Much has been written about climate change in the Pacific: impacts, forecasts, responses. Less has been written about “climate change” in the Pacific: a discourse and steering concept which itself has the power to cause change. The inverted commas around “climate change” imply a postmodern detachment or irony, and could easily be lampooned for treating as unreal what is actually a very real, very serious, anything-but-ironic threat. But for the social scientist or humanities scholar there is nothing unreal about climate-change-as-discourse: it is really out there, doing real work, channelling real resources, inspiring real action, as this volume intends to show.

What is done in the name of this phrase? In the Pacific, probably as much, or more, than is being done in response to actual physical manifestations of climate change (Hermann and Kempf, this volume). Islanders are responding to the idea as much as to the thing, the future as much as the past or present—the very definition of Beck’s “risk society” (Beck, 1992). The Pacific is a special place to investigate the reception and appropriation of “climate change” concepts, because here the discourse takes some of its most arresting and intense forms. The Pacific Islands in general, and low-lying coral atolls in particular, have found themselves portrayed—by foreigners, and now sometimes by their own inhabitants!—as places of inherent and overwhelming vulnerability, facing mighty challenges at best, evacuation and disappearance at worst (see Connell, Hermann and Kempf, and Struck-Garbe in this

volume; also see Mortreux and Barnett, 2009). This is environmental alarm-sounding at its most sensational register, sometimes verging on “climate porn” (Lowe, 2006). These hyperbolic predictions can rob agency from islanders (Farbotko, 2010; Barnett and Campbell, 2010), but they can equally open the door to the invention of new sorts of agency, as all of the case studies in this volume illustrate. Connell’s case study raises the intriguing possibility that islanders can strategically appropriate doomsday discourses for their own ends.

The result is an interesting tension: on the one hand, we have extreme predictions and pronouncements, on the other hand, in most Pacific communities, a more moderate physical reality. Some Pacific Islanders have indeed been overwhelmed and displaced by (what has been called) the impacts of climate change—the classic, though simplified, examples are the Carteret Islands (see Connell’s and Struck-Garbe’s contributions to this volume for widely different takes on this emblematic example), and Takuu atoll—and many other communities are experiencing increasing socio-ecological distress partly due to changing and destabilizing climates. But by and large, for now, life goes on in the Pacific Islands, and climate change exerts its influence as much as anticipatory idea and conceptual resource as it does through saltwater intrusion, eroding graveyards, cyclonic winds, and bleached reefs.

A fascinating dynamic result. When Pacific Islanders hear about “climate change” and “global warming” (which even those of limited education now do on the radio, in classrooms, at workshops, and elsewhere), for many it is not simply a restatement of what they can plainly see unfolding in front of them, but rather an intriguing set of forecasts and claims, sometimes appearing to be a sort of “prophecy,” as in Hermann and Kempf’s chapter. The scientific discourses of climate change do not merely confirm what Pacific Islanders already know, but in many ways, diverge from their experiences of the world. The scientific and media presentations of the issue may be narrowly “environmental,” while islander understandings are typically interwoven with moral and cultural concerns, making no stark distinction between natural and cultural change (Rudiak-Gould, 2012a). The messages may emphasize particular environmental changes that islanders deemphasize, and vice-versa: foreign media accounts privilege sea level rise as the overarching existential threat, while some locals may be more concerned at the moment with the mundane but important impacts of droughts and coral bleaching. The messages may have a different temporal focus: media accounts tend to be preoccupied with possible scenarios for the century’s end, while islanders may be more interested in what responses can be taken on the ground now (Veitayaki and Holland, this volume). They may differ in the exuberance, or wideness, of attribution— islanders may attribute many things to climate change that scientists would hesitate to, or even reject entirely (Rubow, Newell, and Nolet, this volume; also see Rudiak-Gould, 2012a); conversely, islanders may be intensely concerned about certain climatic changes, such as shifting seasonality, that media outlets rarely emphasize. The message received may evince intense anxiety about the future, while locals are more sanguine (Mortreux and Barnett, 2009). In other cases,

exactly the opposite difference is found (Connell, 2003). Climate change impacts and predictions leave some islanders frightened, others excited, others entirely unfazed, creating opportunities as well as dangers, as Rubow's case study in the Cook Islands shows.

As many of the case studies in this volume show, islanders are now attributing a great variety of local changes to "climate change," or to its recently translated equivalents in Pacific languages. This is a relatively new phenomenon, which in many Pacific societies began in the last five or ten years (Rubow, this volume). A key question, as we see it, is what exactly happens, what exactly are the consequences, when an environmental change becomes understood in this way. The contributors offer some answers to this question. A variety of different issues—water stress, migration, marine pollution, fisheries—are, for good or ill, gathered together under a single heading, and thus seem to demand an integrated, perhaps even a single, response (Newell, Connell, this volume). It becomes all too easy to assume that all of these issues will follow the same trajectory—steady intensification, worsening—even though the reality is more complex, as we see in Rubow's chapter. The widely varying experiences of different Pacific societies are similarly grouped together—all are now "on the frontlines of climate change," "facing climate change," "vulnerable to climate change," and so forth, even though among Pacific Islanders are enormous differences of wealth, power, positionality, and attitude to climate change (Rubow in this volume; Hughes, 2013). It is a bridging concept that rallies disparate Pacific societies around a central concept that looms over them all (Kelman and West, 2009). The discourse of climate change also builds bridge between the Pacific Islanders and the citizens of high-income, industrial nations, some of whom now conceptually relate to islanders almost entirely through the idiom of "sinking islands" (Connell, this volume). Certain opportunities are unlocked. Funding earmarked for climate change work becomes available for climate change education, adaptation, and mitigation projects (Veitayaki and Holland, Binging, Rubow, Newell, this volume)—indeed for any kind of project that can be plausibly labelled with that extremely marketable phrase, for many officials of Pacific NGOs lament that nowadays every project must be said to relate to climate change lest it not be funded (Newell, this volume), such that communities may express all of their disparate concerns in terms of climate change (Rubow, this volume). Pacific environments become emblems and evidence, Pacific communities become victims and witnesses (Connell, this volume). Western journalists suddenly become intensely interested in the movements of small, marginal, usually ignored populations (Farbotko, 2005, 2010; Farbotko and Lazrus 2012)—it is unlikely that media outlets would have given much attention to the looming relocation of fewer than two thousand Carteret Islanders from their eroding islands, if not for the fact that it could be recognized, or spun, as an "impact of climate change," thus making the migrants "climate change refugees" (Connell, this volume).

Still other changes may take place when islanders come to see local changes as climate change impacts. Guilt, but with it responsibility, is taken away from local

hands, for if something is “an impact of climate change,” locals are neither to blame for it nor are able to solve it (Newell, Veitayaki and Holland, this volume). Complex local processes and histories that contribute to vulnerability are thus ignored (Connell, Nolet, this volume). Many small local problems become a single global mega-problem that may seem solvable only by the world’s most powerful states (Newell, Veitayaki and Holland, this volume). This disempowers at the same time that it, more positively, discourages unnecessary self-flagellation and victim blame (see Struck-Garbe in this volume). By giving an account of the causation of climate change, tracing it to particular industrial artefacts, it suggests ways of participating in mitigation, for those societies that see it as worthwhile (see Veitayaki and Holland, Binging, this volume; also see Rudiak-Gould, 2014a). The science also warns people that changes they see around them are not the apogee of a cycle, but part of an upward trend that will continue for decades or centuries. Things will not return to normal, but will continue to become stranger, and worse (Nolet in this volume). This is a call to arms, but also for some Pacific Islanders an invitation to anxiety and despair (Loughry, 2010); Hermann and Kempf’s chapter in this volume shows that the two reactions can co-occur. Putting local changes under the label of climate change may also scientize, make technical, local processes that before seemed amenable to the vernacular, leading to the disempowering perception that local knowledge has been rendered obsolete (see Veitayaki and Holland, this volume). Just this process appears to be occurring on some of the atolls of the Federated States of Micronesia, where the *idea* of climate change, by itself, is making a once-familiar environment seem unknown and unknowable (Pam and Henry, 2012).

So, climate change can change minds. But it should equally be noted that this “momentous” narrative can seem banal and obvious to some Pacific Islanders. Some of anthropogenic climate change’s central premises have been standard ontological premises for many Pacific societies for centuries. The entanglement of nature and culture, which Cecilie Rubow points out in her contribution is inherent in the idea of anthropogenic climate change, is no surprise to societies that have never stressed the distinction. The dynamic, uncontrollable nature of the climate system is hardly a surprise to those who have had to creatively adapt to its vagaries for centuries (Robertson, this volume). The idea that humans can influence the weather, that people’s wrongdoing can be registered in the environment, is not news at all to the many Pacific societies with long traditions of weather magicians, chiefs, and deities who bring good and bad weather depending on public deference (Newell, Robertson, this volume). Even the idea of inundation and disappearance is not novel to some Pacific Islanders: Marshall Islanders have long worried about being swallowed by the waves, living in a country where typhoons can remove entire islands from the reef (Rudiak-Gould, 2013a; also see Hermann and Kempf, Newell, this volume). The idea of forced migration is sadly familiar to the Bikinians, Eniwetokese, Rongelapese, Banabans, and many other Pacific Islanders who have already faced wholesale displacement to make way for phosphate mining, nuclear testing, and other

destructive practices (Lieber, 1977). The perceived loss of identity and tradition was looming over many islanders long before Western journalists and activists declared that climate change migration will kill culture—it has long been seen to be under threat from colonialism, immigration, voluntary abandonment, and much more (Newell, this volume; Keesing, 2000). The apocalyptic narratives that often form part of climate change rhetoric are not new to Pacific communities with pre-existing eschatologies of doom (Rubow, Nolet in this volume). The idea that something is rotten in the state of industrial modernity is an affront to committed modernists (Žižek 2010), but hardly a revelation for the many Pacific Islanders who have, through their rediscovery and celebration of traditional culture (or “kastom”), already launched a powerful critique of blind modernization (see Newell, Nolet, this volume). We may sometimes overestimate the impact and the novelty of climate change; it may be most surprising to Westerners whose ideologies and ontologies made it so hard to accept and recognize.

While much of the preceding discussion has implied a kind of binary between locals/non-scientists and foreigners/scientists/journalists, this is a dangerous oversimplification. Locals may themselves be the scientists in question, as well as the journalists and science educators (Rubow, this volume). The understandings that result are “hybridized knowledge” (Soselisa, 2007): coming from two distinct sources, perhaps, but ultimately melding into something that blurs the line between science and local knowledge.

Despite this potential for productive collaboration and hybridity, often the lines remain too starkly drawn, with scientific assessments side-lining local voices (Finucane, 2009), turning the dialogue into a monologue. On the other side, advocates of local knowledge may also value only one side of the dialogue, portraying science as useless, oppressive, or redundant to local knowledge (Robertson, this volume). While this argument is valuable as a corrective for the overweighting of scientific authority in climate policy, it too risks precluding productive dialogue. Climate science may be of help to Pacific Islanders just as Pacific Islanders are sorely needed to contextualize, localize, humanize, moralize, and complicate the grand pronouncements of climate science. A key question is therefore the following: what exact aspects of climate science, communicated in what way, can be helpful to Pacific communities in their efforts to respond to climate change? and what exact aspects of local knowledge could be usefully incorporated into scientific understanding? Pleas for this sort of collaboration (Kelman, Mercer, and West, 2009) are a step in the right direction, but are often stingy on details. We hope that the chapters of this volume begin to offer more specific answers to these questions. At this point, only tentative answers can be offered. What can science offer Pacific Islanders? It can provide long-term predictions of climatic events decades in advance—uncertain predictions, of course, but still useful for planning, and something local knowledge can rarely provide, since it rarely claims to forecast events decades in the future (Hermann and Kempf, this volume). Climate science can offer an account of causation that absolves locals of

much of the culpability (see Veitayaki and Holland, Connell, this volume), inspiring some Pacific representatives to act as the conscience of the UNFCCC negotiations (Barnett & Campbell, 2010: 101). Climate science, by grouping local problems under the travelable, saleable *cause célèbre* of “climate change,” can be of practical value by providing a steering concept with which local climate activists can attract attention and funding (Newell, Veitayaki and Holland, this volume). Climate science can call attention to certain environmental changes that are not yet salient to locals, but which promise to pose enormous problems in the future (Rudiak-Gould, 2014b) (for instance, ocean acidification is rarely a local concern at the moment, but promises to become among the most damaging impacts on Pacific communities in the future). What can local knowledge offer to science? It can localize the science, providing on-the-ground specificity of impacts and adaptation strategies (Kelman, 2011). It can suggest to climate scientists relatively overlooked climate impacts (Finucane, 2009)—a good example being the changing seasonal timing of rain, wind, harvests, and so forth, which is of great concern to many communities around the world, but an impact of climate change that has not been much emphasized in scientific reports (Jennings and Magrath, 2009). It can render the science more holistic, perceiving the multiple drivers of vulnerability and change, of which global warming is but one (Veitayaki and Holland, this volume).

A variety of theoretical resources in anthropology and the wider social sciences and humanities lay a solid foundation for understanding climate science reception. Any ethnographically sensitive discipline would see the “receivers” of discourses not as empty vessels to be filled, but creative agents who reconstruct and reinterpret the message as they receive it (Rudiak-Gould, 2011). Climate change is, among other things, a discourse of *risk* in the anthropological formulation of Mary Douglas (1992) and colleagues (Douglas and Wildavsky, 1982; Verweij et al, 2006) which suggests that individuals and societies will select and respond to risks in such a way that key ideological commitments are upheld. Those pressing for radical change will find apocalyptic risks credible and seek radical solutions to them; those defending the status quo will downplay risks and advocate, at most, conservative responses to them. Sometimes a discourse seems so threatening that the response is to disavow it entirely; in the Pacific this often takes the form of dismissing the idea of climate change on the grounds that God promised Noah never to flood the earth again, an argument that people in Kiribati, Tuvalu, and the Marshall Islands make, and probably elsewhere as well.

In the process of ideologically domesticating climate change, some parts of the scientific and media discourses are discarded, ignored, or forgotten; other, novel parts are grafted on; and the result is a new understanding of the issue, different from any other understanding but still recognizably a discourse in the climate change genre (Rubow, this volume). Though scientists often feel that inaccuracies are introduced in the process—and they are probably right—the net result is not so much bastardization or adulteration as it is reinterpretation. The scientific discourse

of climate change by itself hardly engages people—it is too geographically disparate, too technically esoteric, too invisible in its mechanism, too value-free, too focused on global *climate* and not focused enough on local *weather* (Jasanoff, 2005): “climate is recorded, weather experienced” (Ingold and Kurttila, 2000: 187). By refashioning the idea of climate change, islanders *make* it engageable and actionable (Veitayaki and Holland, this volume).

This is a particularly Pacific brand of a more general process occurring in societies nearly everywhere, where climate change discourses are being “appropriated in support of a wide range of ideological projects” (Hulme 2009: xxviii).⁵ None of this requires scientific dishonesty or denial, for the science of climate change is such an enormous text that “those holding different value perspectives may see in the huge and diverse body of scientific information relevant to climate change different facts, theories, and hypothesis relevant to and consistent with their own normative frameworks” (Sarewitz, 2004: 389), and thus remake it in their image. This volume aims to explore this process in a particular region of the world.

A wide body of scholarship on the Pacific Islands by anthropologists, historians, geographers, and others lays the ethnographic foundation for this volume. The reception of climate change is a process not quite like any other that has previously occurred, but many aspects of it are reminiscent of previous knowledge encounters in Oceania, and research on those historical precedents sheds a great deal of light on the current situation of climate change communication. Pacific Islanders have many times before been told that their well-being is better understood by foreign experts than by themselves, creating feelings of scientific scepticism as well as reluctant dependence; a prime example comes from nuclear testing (e.g. Dibblin, 1988). Pacific Islanders have been told many times before that their homelands are tiny, remote, and inherently vulnerable; this is not an invention of the climate change era, but a longstanding colonial trope that has merely been reinvented and reinvigorated in today’s environmental narratives (Barnett and Campbell, 2010; Farbotko, 2005, 2010; Hau’ofa, 1993). It is essential also to consider previous work on Pacific Islanders’ practical, social, and spiritual attachment to land (Campbell, 2010), now a key influence on their approaches to climate change (see Newell, Hermann and Kempf, Struck-Garbe, Nolet this volume), as well as pre-existing discourses of decline and progress, decaying culture and increasing sin, missionary salvation and virtuous modernization (Tomlinson, 2004; Rudiak-Gould, 2010), which are now being used to understand climate change (Newell, Nolet, this volume; Rudiak-Gould, 2012b). We must also take guidance from previous scholarly documentation of islanders’ great

5 “Our discordant conversations about climate change reveal...all that makes for diversity, creativity and conflict within the human story—our different attitudes to risk, technology and well-being; our different ethical, ideological and political beliefs; our different interpretations of the past and our competing visions of the future” (Hulme 2009: xvi).

environmental knowledge, gained through gardening, fishing, sailing, and sheer curiosity, now undergoing processes of both decay and invigoration (Johannes, 2002), both of them partly as a result of climate change.

This volume is the result of a session entitled “Appropriating Climate Change: Pacific Reception of a Scientific Prophecy” at the European Society for Oceanists 2012 conference in Bergen, Norway. The contributors include both Pacific Islanders and Westerners, from a variety of academic and professional backgrounds, reporting from urban and rural communities in Kiribati, the Marshall Islands, the Cook Islands, Samoa, Fiji, and Papua New Guinea, as well as the halls of the United Nations. Two presentations at the session, by Mark Stege, and by Hans Thurlstrup and Jennifer Rubis, are not included in this volume, but provided important illustrations and provocations. Stege discussed Climate Education Week, an outreach program held in the capital of the Marshall Islands, which communicated discourses of climate change and saw students planting the ocean shore of their school with native plant species traditionally used to protect against salt spray, wind damage, and erosion, thus “planting resilience.” Stege made clear that it would be misleading to see this purely as a “climate change adaptation” or “climate change outreach” program. Thurlstrup and Rubis discussed the enormous value of indigenous ecological knowledge and traditional techniques for climate change adaptation through the UNESCO-coordinated Climate Frontlines initiative (see UNESCO, 2012), and demonstrated that Pacific Islanders can quite easily take up climate change discourses: while the greenhouse effect is new, changes in climate and the necessity of responding to them are certainly not, and in that sense, climate change hardly needs to be appropriated at all, as its central premises are already built into indigenous cosmologies.

1.3 Pacific Climate Cultures

Elfriede Hermann and Wolfgang Kempf’s chapter takes us to Kiribati, where scientific narratives of “climate change” have been received not only by government officials but by locals of many walks of life and levels of formal education. These “prophecies” of sea level rise and other existential threats to the country are understood to have power in themselves—“the power of anticipation,” as the authors put it—to create despair and inaction as well as hope and engagement. While noting that I-Kiribati respond to climate change with diverse attitudes ranging from scepticism to intense concern, Hermann and Kempf focus on the way in which locals have managed to appropriate the discourses in empowering ways through song. Traditionally, I-Kiribati songs are used to declare intentions and to make binding promises: prophecies in themselves that help to shape the future rather than merely anticipate it. More recent musical compositions exercise their power through the evocation of emotions—vis-à-vis climate change, the dominant emotions are love, fear, and sadness. Hermann and Kempf analyse a particular song, “Koburake!” which was written before discourses

of global warming and sea level rise were in wide circulation, yet remarkably contains a prophetic reference to the I-Kiribati homeland disappearing under the ocean. The song, both in its original intended postcolonial meaning and its newer reinterpretation as a song of climate change, illustrates the confluence of agency and disempowerment that discourses of climate change foster: a sense of powerlessness in the face of a global process that no one country can stop, combined with a call to arms for airing islanders' plight to the world.

Cecilie Rubow shows how Cook Islanders came to understand a series of damaging cyclones as “impacts of climate change.” Rubow uses cyclones ethnographically to examine the discursive appropriation of climate change by Cook Islanders, and also more generally to symbolize our postmodern condition, in which nature and culture are messily hybridized, categories become tangled and ambiguous, and global processes refract in innumerable locally specific ways. She emphasizes the diversity of local responses to climatic hazards and discourses, which include dismissal as well as opportunistic embrace, excitement as well as fear, and which are expressed in religious, scientific, and political registers. At the same time, her case study demonstrates how a particular discourse—that of climate change—bundles together numerous processes into a single super-category. In the Cook Islands, issues as disparate and multiclausal as invasive species, damage to coastal infrastructure, and water pollution are being recast as sub-issues under the climate change umbrella. While climate change impacts rip apart, climate change discourses tie together.

Maria Louise Bønnelykke Robertson's case study from Kiribati approaches climate change through the lens of predictability and unpredictability. For many Westerners, anthropogenic tampering in the climate system raises the fear that the weather will no longer be stable and knowable, while also raising the hope that with improved forecasting and modelling the weather will become more knowable than ever (and, through geo-engineering, perhaps controllable as well). But, writes Robertson, Pacific Islanders rarely conceive such hopes or fears when they hear of anthropogenic climate change, because they have always understood the climate as partly predictable, partly unpredictable; climate change is no surprise at all. Robertson draws a detailed portrait of the I-Kiribati navigator Teueroa, who dismisses scientific narratives of climate change despite her close observation of a changing, dynamic local environment. Media discourses of climate change sometimes imply not only that the climate is changing but that the *fact* that the climate is changing constitutes a change from the (stable) past; Teueroa rejects this reasoning. Robertson's study demonstrates that local acceptance and rejection of climate science does not hinge entirely on the first-hand observation of confirmatory local changes, but on an exegesis of the moral and ontological underpinnings of Western notions of nature and the decision to accept or reject those underpinnings.

Emilie Nolet explores the reception of the 2012 floods in Nadi, Fiji, and surrounding villages, showing how differing causal interpretations of the disaster are linked to differing political commitments and policy preferences. National government

and media have predominantly attributed the floods to “climate change,” with the implication that the hazard will intensify in the future and therefore relocation of poorly-positioned settlements will become necessary. Other voices have pointed the finger at local development activities, including the impacts of intensive tourism, suggesting very different policy outcomes. Still other Fijians interpret the floods as a divine sign of coming Judgment Day, meaning that the best response is fatalistic resignation; or as God’s punishment of indigenous Fijians for their imitation of Western ways, implying that the best response is to reclaim traditional lifeways and to oppose political leaders who weaken the authority of indigenous Fijian chiefs. The conversation on climate change is thus also a conversation on culture, development, power, rights, and ethnicity. As Cultural Theory would predict, the idea of climate change is being used to justify and push forward political preferences.

John Connell takes a critical look at the media and activist application of climate change discourse to the Carteret Islands, on the fringes of Papua New Guinea. Causes of environmental change on this atoll include not only climate change-induced sea level rise but also tectonic change and the local construction of seawalls and removal of mangroves. Carteret Islanders’ response has been a complex series of migrations to and from nearby Bougainville Island, driven not only by environmental threats on their home atoll but also by economic considerations, negotiations with landowners on Bougainville, and Bougainville’s civil war. This complex story, writes Connell, has been collapsed by journalists, filmmakers, and NGOs into a simple story of climate change-induced exile; they have appropriated the Carteret Islands as proof of, and an emblem of, climate change. Some sources even report, very much erroneously, that the islands have already been entirely evacuated and scientists had predicted the complete submersion of the islands by 2015. However, in an intriguing twist to Connell’s account, some Carteret Islanders themselves have embraced this simplistic and misleading narrative: they have performed the role of “climate change refugee” and played into Western assumptions of needy noble savages in order to obtain assistance for a relocation that they were planning anyway. As Connell writes, they have turned the problematic narrative of “climate change exile” into a weapon of the weak.

Jennifer Newell’s chapter notes the relatively high awareness of climate change discourses in Samoa, to the point that some Samoans feel oversaturated with the message. According to Newell, this stems not from Samoa’s vulnerability to climate change impacts but from its positioning as the Pacific region’s hub for administering climate change-related funding. This opens the door to cynical manipulation of the climate change aid game, in which damages from local development are opportunistically recast as “climate change impacts,” thus absolving local developers and leaders. It also opens the door to a productive discussion on continuity and change, on which aspects of Samoan tradition should be maintained and which should be adapted or abandoned in order to navigate a changing world. Communal care, what a social scientist might call “social capital,” is considered favourable for

climate change adaptation. But other Samoan traditional practices are ambiguous. Are open-walled Samoan house structures an asset during extreme weather, or a liability? Does ancestral attachment to land foster environmental stewardship or simply prevent people from seeing the need to relocate inland? Newell's case study shows that climate science does not enter a vacuum: it is taken up into a complex field of pre-existing debates, shaping them as it is shaped by them.

Marion Struck-Garbe explores Papua New Guinea artists' use of visual media to depict, make sense of, and to challenge, climate change. Their works have addressed the threat of land loss (and the cultural losses that are seen to stem from it) on low-lying communities; coral bleaching and the resulting decline in marine resources for shoreline communities; and deforestation (a cause of climate change, not merely a consequence of it) by industrial logging. It is abundantly clear that these artists are responding not only to local climatic changes, but also to media stereotypes and scientific discourses of climate change: depictions of the Carteret Islands must owe part of their inspiration to the media narrative that John Connell's chapter explores, and artwork that is intended as a protest against the greenhouse gas emissions of industrial nations clearly builds on scientific and media accounts of global anthropogenic climate change.

Joeli Veitayaki and Elisabeth Holland's chapter draws on their experience with facilitating resource management planning by means of a home-grown sustainable development community programme on Gau Island, Fiji. As such, their contribution also voices a wide-spread in-between space precisely where local peoples are mediating and portraying vernacular concerns in the lingua franca of scientific terminology, and through modernist policy document and funding cultures—an important interface that can entail eclipsing indigenous terms and disguising the “bottom-up” character of initiatives (Crook 2007b). For example, Veitayaki and Holland show that Pacific Islanders can respond proactively and positively to climate change forecasts, but only if communicated properly: the forecasts must be made to speak to existing local concerns and to acknowledge the many other drivers of change. According to Veitayaki and Holland, the English phrase “climate change” or a vernacular translation should not even be used in the initial phases of the project; it should be introduced later, once the community has already shown interest in drafting a community resource management plan. The value of the phrase “climate change,” suggest the authors, is its potential to help secure funding and to communicate local resource management plans in a way that outsiders can relate to. The Lomani Gau project, as it is called, does not attempt a clumsy separation of “climate change” issues from “environmental” issues more generally or from “economic” issues; all are integrated. Veitayaki and Holland reject the assumption that tradition is a panacea for climate change adaptation. On Gau, the customary exclusion of women and youth from formal decision-making bodies is detrimental to climate change adaptation. On the other hand, the *tabu* system by which traditional leaders may declare particular

resources off-limits is of great value for conserving particularly important resources and for encouraging compliance without outright enforcement.

Nalau Bingeding critically examines the response of Papua New Guinea, especially its government officials, to discourses of climate change. Bingeding's central argument is that the country's climate change agenda is externally driven, beholden to the requirements of donor organizations rather than citizens. The result, writes Bingeding, is that while numerous government programs are branded as "adaptation" or "mitigation," little if any benefit has been seen on the ground. Adaptation is pursued piecemeal, without coordination, or ignored entirely; the destruction of the country's carbon sinks—its forests—continues despite promises to curtail commercial logging; delegates are sent without any clear agenda to UNFCCC summits; REDD is pursued without adequately addressing the issue of green grabbing; and enormous potential for renewable energy development is recognized but not acted upon. Bingeding's case study is a sobering reminder that the embrace of climate change discourses is a far cry from a real conviction to reduce vulnerability and culpability. Climate science is a tool that can be used in many ways, as both a weapon of the weak and an act of symbolic violence by the powerful.