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# The CULTURAL INTERFACE of ISLANDER and SCIENTIFIC KNOWLEDGE

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### ■ Abstract

The interface between Indigenous knowledge systems and Western scientific knowledge systems is a contested space where the difficult dialogue between us and them is often reduced to a position of taking sides. Storytelling is however a very familiar tradition in Indigenous families where we can and do translate expertly difficult concepts from one generation to the next. This article is based on my attempt to story our way through the difficult dialogue and to posit opportunities for more productive engagements about the place of Indigenous knowledge in our future deliberations at the Indigenous Studies and Indigenous Knowledge Conference series.

### ■ Introduction

When I was asked to join the keynote panel at the 2009 Indigenous Studies and Indigenous Knowledge Conference in Fremantle, Western Australia to address the key conference theme “Indigenous Knowledge and Western Science: Knowledge in Conflict?”, I said to myself “yeah, that’s right Professor Darlene Oxenham, toss me the difficult one”. Now that I think back on it I guess my haste to say “yes” was more to do with joining our international colleagues – Dr Nancy Maryboy and Dr David Begay – on the panel, and to learn more about their work, “Seeing in a different way: Living the cosmic serpent” – than it was to do with me engaging my brain. But after much thought, and particularly with some confidence from Professor Jill Milroy and her family in the ways they narrate stories and deliver poignant messages, I figured I would attempt the “storying” of a tradition from the Torres Strait Islands to speak to the difficult dialogue we are having at the interface of Indigenous and scientific knowledge systems, and to make the appeal for more productive engagements in the educational discourse between them and us, as well as between ourselves.

### ■ Connecting to traditional knowledge

As a small child, I listened to many stories told by my mother, my aunts, my grandmothers, my uncles and my grandfathers. One that intrigued me most was the way dugongs were traditionally hunted. From a young age, I held in my head a picture of my forefathers in the middle of the night standing on a high platform on the reef waiting to spear the dugong. And as a child I had lots of questions. How can you see the dugong at night? How did you know where to put the platform? Why was it at that time of the year?

From listening and asking questions, among other things, I learnt: that the alignment of certain constellations in a particular position in the sky indicates seasonal bloom of a special sea grass that dugongs ate; that walking out to the reef at low tides to observe seagrass beds will tell you where they have been feeding; that experience has shown that dugong will return to start where they finished the night before; and that a moonless night of the month is chosen for the hunt as the phosphorus will light up more clearly as the dugong grazes towards you.

Some of the threads in these stories told of practices going way back, back to what we now call traditional

ways, before motorised boats and artificial spotlights. Contemporary knowledge practices of the time also wove their way through these stories, anchoring my understanding of place and time as continuing on from the past into the here and now. In these stories were connections to knowledge of other species, and endlessly of places, skies, stars, moons, tides, time and, importantly, of people. And in the activity after any hunt, when animals were butchered and distributed or prepared for feasting were the connections from ancient to continuing customs. Attached to all these stories and practices also was our traditional language, with all its nuanced meaning as relations between the dugong hunter, the natural and social environment, and the dugong were unfolded through storytelling.

I never caught a dugong the traditional way from a platform. But how it was done, where it was done, and the rationale behind it has been explained through stories many times over.

### ■ Changing knowledge and practice

By my youth, when motorised boats were the norm, dugongs were hunted whenever they were wanted and Islanders began to take greater numbers of them at a time when they were also increasingly threatened by commercial nets and other pressures elsewhere. We killed by pursuit, using the traditional *Wap*, or harpoon, which my ancestors had used, and I killed quite a few over time. The dugong hunting stories had already moved on accordingly, weaving in talk of boats, long pursuits, and different ways of finding and approaching dugongs.

Once I caught a pregnant dugong, without a *Wap*, and then I let it go because it was pregnant. My uncle scolded me for letting it go, and growled me about not knowing my dugongs. I defended myself. Better to put it back I said, so baby can grow up and mother can have more dugongs. But I was seen to be full of that talk coming into our community from “outside”. “This is our way”, he said. According to my uncle’s knowledge of traditional practice, the pregnant dugong was the best to take. And he was right because it was the best to eat. From my standpoint, it was still the best to eat but perhaps not the best to take.

Conservation discourse had entered my frame of reference and introduced a tension between my uncle’s practice and my own.

### ■ Intersections with scientific knowledge and practice

Torres Strait Islanders were once the primary agents of dugong knowledge and practice in the Torres Strait region. Now, 30 years on from my deployment of conservation discourse against my uncle’s knowledge, Islanders share the Torres Strait dugong knowledge space with marine scientists. The development of new knowledge and practice as part of the effort to sustain

dugong numbers and habitat is now a common sphere of interest to both scientists and Islanders.

Islanders now hunt dugong in a much different knowledge context. The old story about hunting seasons has come a full circle in a different way – through regulation of the catch, regulation of the hunter, regulation of the places to hunt, regulation of weapons, and regulation of use. Today, only the traditional inhabitants, catching for traditional purposes, using the traditional methods, in prescribed areas, can hunt dugongs. The method may be continuous with Islander practices but the conditions on which this knowledge and our continuing practice are contingent have changed.

So the stories we tell of dugong hunting continue to change. The language and concepts of Western science are woven in. References to water quality, damage to sea-grass beds, kill rates, pollution, conservation, sustainable practice, scientific projects, fisheries policy, rangers, local and environmental politics – these all enter contemporary storytelling.

But the stories of old also continue on, and the old knowledge in those stories continues to pass down along with the traditional references to our forebears, places, events and practices. Ironically, the State regulation of dugong hunting, on the basis of scientific advice, works to maintain traditional practices as Islanders comply with the conditions forced on us by the activities of others elsewhere. For dugongs are threatened by a range of factors other than the risk of over-hunting by Islanders.

To be an Islander who knows his dugong now, in a practical sense, means having to engage with the conditions on which our knowledge and practice is now contingent. And under these conditions we constantly engage the regulatory frameworks of the State and scientific understanding of dugongs and their habitat. Islanders in the Torres Strait routinely express frustrations about scientific marine studies in the Torres Strait. But the frustrations are not with scientific method or the scientific knowledge produced, which are recognised in clear distinction from Islander knowledge. Islanders are not arguing with scientists about how or what to know of dugongs. We are quite secure in how and what we know of dugongs and quite mindful of what we might not know. We do recognise that dugongs can be understood through different methods of inquiry.

Frustrations occur when research agendas do not always appear to respond to Islander concerns about sustaining the marine environment and its resources in the interests of our people. Our concerns are with the unsustainable practices of others whose activities affect our marine environment and its resources and so affect our lives. Research agendas are policy and political contests but in the everyday world they lead to questions about the legitimacy of scientists to be in our communities. Yet, Islanders, as long-time negotiators

of the terms and conditions of everyday life, share a common interest in their intersection with scientists, and that is sustainability of the marine environment and its resources. Marine resources are the life-blood of our people, our knowledge, our customs, our traditions and our practices, and importantly our futures. Data produced by scientists can be wielded in support of our own agendas and against policy and political interests.

On the ground there is genuine interest by Islanders in scientific approaches to studying and building knowledge of marine species and habitat, and a great deal of interest in gauging where Islander knowledge and practice applies or does not apply. There is insistence on ethical research practice, respectful communication, respect for our knowledge, recognition of the place of our knowledge in scientific discourse, on proper attribution of Islander knowledge and recognition of Intellectual Property and access and benefit-sharing arrangements. There are requests for meaningful dissemination of information to community. There is keenness for our children to know what scientists are doing, and how they are doing it. There is insistence that outcomes in scientific reports are deposited in a central location so Islanders can utilise the corpus to support our own policy objectives.

But there is no assumption on the part of Islanders that the answers to marine species and environmental sustainability pressures in our region reside in our knowledge. We do not presume that our knowledge practices can deal with the complex effects of inter-related practices occurring on a global scale.

#### ■ Children as learners of knowledge

Like me two generations ago, Islander children growing up in the Strait today are the inheritors of tradition and inheritors of a world greatly changed over the last few generations. As I was, so they are witnesses to ongoing change. Their identification as Torres Strait Islanders is multiple, often tied to more than one place, group, time and to nation. Historical accounts tell them of disruption and change; academic analysis tells them of boundaries, dissonance, and loss. Islander stories and the way they deploy traditional knowledge concepts and language, tell them of continuity with old knowledge and practice in changing times and tell them something of their history that may not appear in others' accounts of us.

For children to confidently know their marine environment and take charge of their futures requires knowing and working with two knowledge systems. These knowledge systems can be viewed as *irreconcilable* on cosmological, epistemological or ontological grounds as they are most often described though the international discourse on Indigenous knowledge. Or they can be viewed in terms of

their entanglements, synergies, and the shared conversations that can occur around the common interests explored through them.

The importance of traditional language in understanding traditional knowledge cannot be underestimated but to what level of understanding can a discrete, formal curriculum of traditional language deliver on marine knowledge? The stories of marine knowledge and practice, the context in which they are told, the purpose which they fulfil, and most importantly the practice of this knowledge out on the sea, are the central transmission components of continuing traditional knowledge practices in everyday life. A child participating in this sort of learning learns the relevant traditional expressions of knowledge passed down, and can think through this language system when enacting knowledge into practice. A child learns that this knowledge is also social practice connected to custom – custom that changes dynamically as the conditions on which it is contingent change.

Torres Strait children today also come from a tradition already predisposed to looking for synergies with new knowledge and practice. This provides one basis of ever-changing but still distinctly Torres Strait Island custom. Our historical relationship with Western forms of knowledge, science and all the disciplines is complicated, sometimes infuriating, and often tragic. These knowledges and the re-ordering they give to how we know and understand the world now have to be a central part of our everyday lives. But our storytelling teaches children that we know other things as well, that we do other things in particular ways for particular reasons. Importantly our stories convey to children the understanding that we have always developed and practised knowledge.

Where knowledge traditions mix, however, eyes should be wide-open. The case to include traditional knowledge content in school curricula argues it as a means to preserve this knowledge, to strengthen culture and identity, and as a cognitive “hook” to connect children to the wider global set of knowledge. In this process, it is critical that our marine knowledge, transmitted through stories and through its practice *in situ*, is not inadvertently codified into any science curricula in a way that confuses children about how we came to our knowledge and how science has evolved its particular way of doing knowledge. Nor should we entertain the deception that a science curriculum, populated with Torres Strait content is a substitute for traditional forms of transmission and practice. Nor should we assume that our traditional marine knowledge can be a substitute for science. But nor should we raise children to view our knowledge as informal and as less valid than scientific knowledge. The validity of both knowledge sets is contingent on the conditions which have led to its development and which continue its meaning and utility. We need

to recognise the different knowledge realms and the contexts and purposes of their methods and practices. We need to privilege both in the appropriate context for appropriate purposes.

Children learning about both knowledge approaches through the appropriate methods will find their own thoughtful connections if they can come to a conscious awareness of the meanings and conditions of both. For Islander children, what is taught in classrooms and what is learnt in everyday life may be best continued on these different paths. What we might think more about in education is the top level structure for thinking about knowledge – the meta-awareness our children need to become knowledgeable about the existence of different ways of learning, knowing and doing and to feel their way confidently along both these paths. We need to move our children beyond our intellectual concerns of knowledge as a contest to viewing knowledge as a useful site for extending inquiry, thinking, and problem-solving.

Torres Strait knowledge transmitted orally and through its continued practice, will always be subject to a dynamic process of transformation over time. How we can teach children to be more mindful agents of that transformation is an important site for further conversations at the Indigenous Studies and Indigenous Knowledge Conference series.

#### ■ The Indigenous knowledge discourse

However, this perspective of the knowledge interface in practice in peoples' lives is unlikely to satisfy those who come to understand Indigenous knowledge through the academic discourse or through comparative analysis of its position vis-à-vis Western colonialism, knowledge, or science, in particular. This Torres Strait perspective is likely to be read as a capitulation to science and the Western order of things from that standpoint. But in the Torres Strait Islander context, lived immersion at the interface of Islander and Western systems reveals the knowledge dynamics constantly at play, and not the workings of any discrete traditional knowledge system as a whole, or any complete capitulation to the order of Western knowledge. Lived immersion reveals the presence of both and the historical contingency of knowledge practice. What we carry through of old knowledge is the evidence of the vibrancy and value of that knowledge in contemporary everyday practice. What we take up of Western knowledge reveals the changing everyday context that give rise to the practical need to engage these sets of knowledge and practice. A very old wise man from Mer Island once described it this way: we no change our ways we plus them in ours.

Islanders' political contests over scientific knowledge and research are struggles to be wielded through a wider matrix of discourses and do not

occur in a simple intersection between scientific ways of understanding the marine environment and Islander ways of understanding the same environment. Science can be used as another weapon for Islanders to wield in our own interests. Scientific knowledge does not threaten how we know dugongs because we have always known dugong. Rather, science extends what we know, or reveals both the limits of our knowledge and the limits of scientific knowledge. But we do need to watch science watching our world. And we do need to reflect and surveil ourselves as we watch or do science at this interface. It is up to Islanders to develop a wider discourse that relates these two knowledge traditions for our own purposes and which can reflect our very real and lived position at the interface of different knowledge systems. This is why we have this focus in the Indigenous Studies and Indigenous Knowledge Conference series.

Where Torres Strait Islanders' current knowledge and practice of dugongs sit within our older traditional knowledge is a different question. The dynamic transformation of traditional knowledge and practice and whether it now fits within academic prescriptions of what constitutes Indigenous knowledge is a different site for inquiry. Any attempt to call in how Islanders are complicit in the transformation of knowledge practice at the expense of our knowledge traditions is an attempt at imposing an order borne out of abstraction and generalisation that does not recognise *our agency as a people of knowledge*, nor the reality of our current situation where the pressures on marine environments and species is a global issue. To be regulated by an Indigenous knowledge discourse, which generalises from the Indigenous universal to the particular, is to be once again encircled by an imposed order of thought. The Indigenous Studies and Indigenous Knowledge Conference series are a useful site to work the other way, beginning with local Indigenous particulars to build a more sophisticated analysis to contribute to the wider Indigenous knowledge discourse which is currently shaping an emerging field of Indigenous intellectual thought. This is why Professor Jill Milroy, myself, and others have been arguing for an Indigenous Learned Academy in Australia for the past few years.

Torres Strait Islanders, like other Indigenous peoples, need to keep on telling our stories as a people whose knowledge continues to be relevant to *our* lives. In our stories are the language and knowledge that we have always depended on for life. In our stories is our history as people who developed and practiced our own knowledge for millenia. In our stories is continuity amidst change. Only we can tell our children these stories.

We need to story our place in the world first and foremost as a people of knowledge.

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### ■ About the author

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