



Environment & Society Portal



The White Horse Press

Full citation:

Goodall, Heather. "Riding the Tide: Indigenous Knowledge, History and Water in a Changing Australia." *Environment and History* 14, no. 3 (August 2008): 355–84.

<http://www.environmentandsociety.org/node/3343>.

Rights:

All rights reserved. © The White Horse Press 2008. Except for the quotation of short passages for the purpose of criticism or review, no part of this article may be reprinted or reproduced or utilised in any form or by any electronic, mechanical or other means, including photocopying or recording, or in any information storage or retrieval system, without permission from the publishers. For further information please see <http://www.whpress.co.uk>.

# Riding the Tide: Indigenous Knowledge, History and Water in a Changing Australia<sup>1</sup>

HEATHER GOODALL

*Faculty of Humanities and Social Sciences  
University of Technology Sydney  
PO Box 123, Broadway NSW 2007 Australia  
Email: Heather.Goodall@uts.edu.au*

## ABSTRACT

Indigenous people's knowledge of their environments, often called Traditional Environmental Knowledge [TEK], is widely invoked today in many arenas of environmental analysis and natural resource management as a potential source of beneficial approaches to sustainability. Indigenous knowledge is most often discussed in this literature and practice as if it were a static archive of data, largely unchanging since the point of colonisation and/or modernisation in the area under study. This paper discusses the contested and relational nature of indigeneity and challenges the ahistorical conceptualisation of indigenous knowledge. It does so by drawing on the work of historians and anthropologists to argue that indigenous knowledge, about environmental and other matters, should be seen as a process rather than an archive. This approach offers a way to understand how indigenous knowledge of environments might continue to be meaningful and relevant in conditions of rapid environmental change. A case study of one such situation is the upper Darling River region in Australia, colonised by the British from the 1840s. Water courses, springs and water holes have been critically important both in the conservation of indigenous environmental knowledge and in shaping the way it has developed in interaction with the long and challenging conditions of colonisation. Tracing the historical changes in indigenous knowledge offers the possibility not only of identifying continuing viable alternatives to western agricultural or conservation strategies but also of identifying environmental change over the time of colonisation, particularly in relation to areas associated with the passage and use of water.

## KEYWORDS

Aboriginal, indigenous knowledge, TEK, history, water, Darling River, natural resource management, conservation, memory, colonisation.

Indigenous knowledge and water are at the centre of the conflicts in Australia today over land ownership. Federal Court Judge Olney used metaphors of water to naturalise his 1998 rejection of the Native Title claim by the Yorta Yorta people of the Murray River to be recognised as the continuing custodians of their land and the river running through it: 'The tide of history has indeed washed away any real acknowledgement of their traditional laws and any real observance of their traditional customs'.<sup>2</sup> This was the Yorta Yorta's seventeenth attempt since the 1860s to reclaim secure title over their land from the colonising British who had taken control of the Australian continent in 1788. Central to the Yorta Yorta's increasingly bitter demands, just as it was to the Olney judgement, is the question of history. What does the passage of time and the effect of dramatically changing conditions mean to the complex of beliefs, understandings and practices which are 'indigenous knowledge'? Is such knowledge a fixed archive which can be eroded and 'washed away' over time as Justice Olney claimed?

The questions around the continued presence and value of 'indigenous knowledge' are of high interest in environmental politics both internationally and locally. Since the World Parks Congress in Durban in 2003, the recognition of indigenous people's rights to and knowledge of environmentally sensitive and endangered lands has been escalating.<sup>3</sup> In Australia, one of the most progressive non-government environmental advocates, the Wilderness Society, has recently launched a national program engaging actively with Aboriginal people in planning and implementing its Wild Country campaigns across the continent. At all levels of government, conservation agencies have recognised the importance of indigenous knowledge in various ways. Yet in each of these initiatives, the meaning of 'indigenous knowledge' is uncertain and undefined. So while the importance of indigenous knowledge rises on the agenda of government and non-government conservationists, so too do the continuing unresolved questions about how to understand indigenous knowledge in contemporary circumstances.

This essay will argue that 'indigenous knowledge' can be more effectively understood as a process rather than as an archive, both before and after colonisation. Water and rivers have played a key role in the continuing practice of such cultural processes by Australian Aboriginal peoples, not only in the recently colonised 'remote' areas but throughout the turbulent centuries of intensive colonisation in the country's south east. This means putting the recognition of historical change back into the analysis of indigenous knowledge both before and after the invasion by the British. It contradicts the more usual 'watershed' view of colonial impact which suggests that there is an unbridgeable difference between indigenous life, or indeed ecologies, before and after the invasion. The cost of an argument which reintroduces history like this into the post-invasion period is that it destabilises the concept of 'indigenous knowledge', opening it up to questions about its loss or dilution. The result of recognising historical change

is to offer a more fruitful way to recognise the high value of indigenous people's understanding of changing places and environments both past and present.

The focus for this discussion is the floodplain of the upper Darling River in rural north western New South Wales, an inland delta crossed by several interlaced rivers which flow into the Darling. Australia is the driest continent on earth and so water everywhere is a key resource. The upper Darling is more fertile than other areas but its waters are unpredictable: it faces severe droughts and expansive floods, so Aboriginal harvesting demanded extensive knowledge of its extreme conditions.<sup>4</sup> Water is a constant presence in the early collections of the legends of the Yuwalaraay and the Ngiyampaa, suggesting its central role in the symbolic as well as the material life of pre-invasion Aboriginal societies along the river.<sup>5</sup> The region was first invaded violently by the British in the 1830s and penetrated by the settler grazing economy by the mid-1840s. Settler management has since then been aimed in essence at controlling its water: storing it in weirs and dams, modifying flows to contain the rivers strictly within surveyed banks and locking up the land in between as private property. My work has involved a series of projects investigating the relationships between Aboriginal people, settlers and environmental change in the Darling River region and in Central Australia.<sup>6</sup>

The Darling River in rural New South Wales is not the type of area usually discussed in relation to indigenous environmental knowledge in Australia. Popular accounts of conservation movements and their interaction with indigenous knowledge concentrate on northern and Central Australia as does the new initiative of the Wilderness Society, focusing on the remote Aboriginal communities living a most recognisably 'traditional' lifestyle and whose lands have only recently been drawn into the western economy.<sup>7</sup> The vast majority of identified Indigenous Protected Areas advertised enthusiastically by the Federal government as heralding a new era of recognition of indigenous knowledge, are also all in northern and north-western Australia. Yet the state with the greatest number of Aboriginal people is the longest settled, intensively farmed and densely populated New South Wales in the south east, which holds 30 per cent of the overall Aboriginal population of 500,000.<sup>8</sup> It is followed closely by the adjoining south-eastern areas of Queensland. In the upper Darling itself, which straddles these two states, between 40 per cent and 50 per cent of the region's rural population of 50,000 are Aboriginal.<sup>9</sup> Does this mean that the majority of the Aboriginal population, located in this south-eastern quadrant of the continent, has no 'indigenous knowledge' of interest in conservation matters? If so, how are the nine 'co-managed' protected areas in NSW to be managed?<sup>10</sup> What role will Aboriginal people play in them? While there are no simple answers, the themes of water and history are central to understanding how indigenous knowledge has been sustained and is mobilised in these south-eastern states today.

## RELATIONAL INDIGENEITY

Perhaps the first unresolved question concerns the meaning of the word 'indigenous' (or 'aboriginal', meaning 'original'), which continues to be widely used in Australia and in much of the west, as if it is a simple concept which has a global meaning. The concept of 'indigeneity' is a complex one which invariably involves an interaction between the self-representation of the individuals and groups asserting their indigeneity on the one hand and, on the other, the pressures and goals of allies and enemies, whether within the nation state or internationally.<sup>11</sup> Aboriginal analysts in Australia have been cautious in their use of the term, reserving it for the context of international comparison and preferring to use local language names for groups of Aboriginal people within Australia.<sup>12</sup> An unproblematised definition of 'indigenous peoples' tends to be used by researchers and activists working in 'first world' and 'settler colonial' situations, where Europeans became the majority population after displacing small-scale societies practising economic forms labelled 'hunter gatherer' or 'shifting cultivator'.<sup>13</sup> For analysts like Baviskar and Li, working in India and Indonesia respectively, the definition of indigeneity is relational and unstable and needs to be considered cautiously. Nor can cultures and economic practices be regarded as congruent, because societies alter their economic strategies in conditions of pressure. People regarded as shifting cultivators in India could move to dependence on harvesting (hunting/gathering) if circumstances changed and at other times might chose cultivation over harvesting, regardless of their categorisation by others as 'tribals' or as 'farmers'.<sup>14</sup> This continuing complexity is evident in the Durban and later IUCN documents, which by 2006 had recognised the shared interests and at times shared identities across groups identified as 'indigenous peoples, mobile peoples and local communities'.<sup>15</sup>

## THE MYTH OF TIMELESSNESS AND PRESSURES FOR STATIC INDIGENOUS KNOWLEDGE

Unresolved questions also exist around whether 'indigenous knowledge' was a fixed body of information before and after colonisation and then after 'modern' development. The confusion around this question is reflected in the variety of terms used to identify indigenous environmental knowledge. Some authors have referred to it as Traditional Ecological Knowledge<sup>16</sup> and others discuss it as 'pre-colonial' or 'non-western'.<sup>17</sup> The implication of each of these terms has been that this body of knowledge was static in time and was opposed to 'western' systems of scientific knowledge of environments and their changing ecologies.

There have been strong pressures which have led to a focus on pre-colonial 'tradition' as the model for all 'indigenous knowledge' and which have defined this as if it were unchanging even in pre-colonial cultures. One pressure has

arisen from settler interests in the European dominant colonies. Lands which had been shaped by centuries of harvesting or swidden agriculture were mis-read by settlers as previously untouched and stable 'wilderness'. These myths of a 'pristine wilderness' were used to justify undisputed settler possession and have continued to shape relationships between indigenous colonised peoples and dominant populations in countries with settler colonial backgrounds like Australia, Canada and the United States.<sup>18</sup> Another pressure to see indigenous knowledge as static has arisen from the western environmental movements which emerged in the 1960s and which rejected 'modern' commercial exploitation of environments but retained the mythology of pre-modern 'wilderness' where indigenous people were depicted as exotic 'noble environmentalists' living 'in harmony' with the non-human environment. This movement continued the assumption that indigenous societies had taken no role in shaping and managing a 'wild' environment.<sup>19</sup> The mythology of 'wilderness' held by early conservation advocacy groups was used to exclude Aboriginal people from a role in management and this continues to be a pervasive attitude among the more conservative wings of the movement, as Aboriginal environmentalist Fabienne Bayet-Charlton has described.<sup>20</sup> The unrealistic yardstick of 'noble environmentalist' is used to criticise contemporary Aboriginal people who do not live a recognisably 'traditional' lifestyle, and who use guns and four-wheel-drives to hunt game or who seek an economic return on community owned land.<sup>21</sup>

Yet the pressure to consider indigenous knowledge as a static repository of pre-colonial knowledge has not arisen only from colonial settlers and non-indigenous conservationists. The victories of long-fought Aboriginal campaigns to have their rights of prior ownership to land recognised in Land Rights and Native Title legislation have ironically locked inflexibilities into the small gains made from those achievements. Both the bureaucratic nature of land registration under these acts and the intensely adversarial court cases necessary to 'prove' title have shaped the outcomes to fit entirely into a model of western property rights based on a slice of time frozen at the point of colonisation. The tests of evidence rely on biological inheritance and settler-authored historical documentary records. The flexibility of traditional cultural land responsibilities and the complexity afforded by oral accounting of land affiliation are ignored.

One of the few Aboriginal people to have written about indigenous environmental knowledge in the long-settled south east is Tex Skuthorpe, a Yuwalaray man from the Nhunggabarra clan on the Darling River floodplain, whose long history of creating visual art and storytelling about the river will be discussed below. His recent writing in collaboration with a western researcher in Business Knowledge Management has been directed towards environmental management but depicts indigenous knowledge as a timeless, static and 'intact' pre-invasion knowledge system which can be viewed whole and in opposition to western land management. Nhunggabarra society, according to Skuthorpe and Sveiby, ended in 1828 with the first appearance of British invaders.<sup>22</sup> While few other Aboriginal

analysts would agree with the depiction of an abrupt end to indigenous society or culture, there has still been a focus on considering indigenous knowledge of the environment as it exists in remote areas. Marcia Langton is the most widely published Aboriginal analyst of land and environmental knowledge and she has addressed indigenous knowledge largely in terms of its maintenance and resilience in conditions of high retention of traditional languages and of relative ecological stability and biodiversity maintenance.<sup>23</sup> Neither Skuthorpe nor Langton answer questions about how to understand indigenous knowledge under conditions of long colonisation and intensive cultural interaction.

### INDIGENOUS KNOWLEDGE AND ENVIRONMENTAL MANAGEMENT

The attempt to integrate the knowledge of indigenous people into environmental management has largely been enacted within this paradigm of a static repository which was complete prior to colonisation. Its fragments now need to be 'captured' in order to use it to restore health to ecologies disrupted by globalising commercial management. The result has usually been to present 'indigenous knowledge' as if it were a list or a database because these are the forms in which such information is recognisable to scientifically trained professionals and it is the most readily searchable for use in planning resource management.<sup>24</sup>

Yet 'indigenous knowledge' is not held or transmitted within indigenous communities in the form of a list or a database. It may be passed on during practical activities but it might also be remembered and orally performed as narrative in very different genres to the catalogued arrangements of data familiar to the cultures of literacy. Several theorists have drawn cautionary attention to the idea of straightforward 'information transfers'. Bruno Latour's work has demonstrated how 'field work' and the necessity to catalogue specimens of everything from soil samples to 'knowledge', changes the meanings we can make from that material.<sup>25</sup> Virginia Nazarea has asked whether the cultural production of environmental knowledge is reducible to the Linnean taxonomic systems of western science.<sup>26</sup> Oral narratives are dismembered in the same damaging way for legal or historical research.<sup>27</sup> Roy Ellen argues that rather than static, permanent structural relations, classifications should be seen as situational and dynamic.<sup>28</sup>

The Dene people of Canada have asserted that indigenous knowledge must be seen in a holistic sense to include both everyday knowledge and the more formal narrative 'stories' which are recognised as oral tradition. They hosted an international symposium in 1990 which suggested both the strengths and the limitations of the concept of Traditional Environmental Knowledge.<sup>29</sup> The course of the discussions between indigenous people from very different areas demonstrated the continuing questions around the actual use of such knowledge and the difficulties of taking the outcomes beyond the static database approach.

Work which does recognise historical change is Firket Berkes' extensive research with Aboriginal people in Canada and elsewhere.<sup>30</sup> Rejecting romantic notions of essentialised indigenous knowledge, Berkes explores the responsive capacity of indigenous and local knowledge systems as environments change. Trained in natural resource management rather than cultural analysis, he distinguishes everyday environmental information gathered in hunting and gathering from the formal narrative conventions of 'stories', ceremonies and mythology. Berkes is only able to trace processes of flexibility and historical change in the elements of indigenous knowledge which comprise everyday environmental understanding, which is transformed by feedback in isolated communities in which the 'resources', like caribou, remain under the sole control of the indigenous people. Then 'social learning' occurs when, for example, ecological feedback demonstrates over-harvesting, thus allowing adjustments to occur over time.

The most recent work on indigenous knowledge engages anthropological approaches with natural resource management but it largely returns to considering remote rather than long-settled societies. Benjamin R. Smith's 2007 account of the development of hybridised knowledge systems in the mid Cape York area of sub-tropical northern Queensland points out the fragmented nature of western science, rather than just the local indigenous system.<sup>31</sup> Change is discussed in Smith's account as being the active engagement of a relatively stable pre-invasion indigenous knowledge system with a localised variant of western science, producing a hybridised and responsive body of environmentally specific new approaches to land management. It still does not allow us to understand the long and heavy impact of colonial economies and social controls on indigenous knowledge in the south east of Australia, or indeed in any long settled area.

## THINKING THROUGH ORAL TRADITIONS

Historians may have something to contribute to this work because they have tried to make sense not only of what may have happened in the past, but of how the past has been represented. This has included the oral traditions of societies which did not use writing as well as the historiographies of societies which rely on written accounts of the past. Even literate societies, like those of Europe, have oral traditions maintained by marginalised groups such as the Roma or women midwives. There was a great deal of interrogation of oral tradition by historians in the 1960s, as western trained historians like the Belgian Jan Vansina tried to fit the oral narratives of African and Pacific societies into the rigid templates then demanded of written sources in order to justify their use.<sup>32</sup>

Vansina revised his earlier simplistic approach in 1985 and made a major contribution to the better understanding of the flexible creation and reception of oral tradition.<sup>33</sup> This in turn allowed rich insights into the social processes of memory and historical change in cultures which did not use writing. Written

sources have themselves since been opened up for intensive critique, first on the basis of their frequent origin within colonial processes and later as discourse analysis has effectively undermined claims for unquestioned 'authenticity'. It is clear, as recent African historians have demonstrated, that every medium, whether written, visual or oral, has its own qualities but that none can be drawn on as a source without careful interrogation.<sup>34</sup> However, the question has now reemerged in the very different forum of conservation politics as indigenous knowledge is celebrated but at the same time called on to carry the burden of finding solutions to major environmental crises, without allowing such reflection on how such knowledge might be constructed and transmitted.

Yet while oral tradition is open to creative interventions in the socially mediated and interactive performances of any oral culture, this is not at all how oral traditions present themselves within indigenous societies, including Australia's.<sup>35</sup> Instead oral traditions contain a rhetoric of enduring permanence built structurally into their narratives which asserts an unchanging quality to their forms and content.<sup>36</sup> The words used to describe oral tradition in Pitjantjatjara country in central Australia, for example, is *Tjukurpa* or Law, suggesting unchanging permanence, while the identification of the narrative participants as ancestors locates the stories far in the past. Such narrative strategies assert authority by claiming trans-human creation of both stories and their forms, by ancestral or divine figures whose power is said to be far greater than that of today's human population.

Certainly some types of knowledge are transmitted unchanged over many generations, entrusted to skilled experts in verbatim memorisation and faultless recall. These are generally those few relating to survival, which no society can afford to lose, like the skills of over-the-horizon navigation in Pacific Island cultures or those of inland desert navigation in Australia.<sup>37</sup> Most oral knowledge is passed on in the far more flexible conditions of performance, often, as in much Australian ceremony, in participatory and interactive settings. Here there are opportunities to engage apparently unalterable narratives with the historical changes in both environment and social life. The important observation from historians working on oral tradition is that this process was occurring in 'pre-colonial' times. It is how such oral performances have always been created and how they are able to negotiate the continuing dynamic of lived change with the cultural imperative of appearing to be enduring and authoritative. There was therefore no 'colonial watershed' in the way that indigenous oral societies recorded, transmitted and enacted cultural learning. Oral traditions have always been a dynamic form, which engaged with and reflected changing social and environmental circumstances however much they then presented themselves as fixed, received truth. This continued after settlement began just as it had beforehand.

As stories about historical events moved into oral traditions, whether this happened before or after colonisation, they lost their chronological markers and

took up the thematic, narrative and locality-related markers which allowed them to be fitted seamlessly into the existing oral performance. Only in situations of sudden cultural change can we see this process occurring. A striking example is the development by the Yanyuwa people in the Northern Territory of a whole ceremonial performance known as ‘Aeroplane Dance’ which tells the story of the rescue of a World War 2 American bomber pilot whose plane had crashed nearby in 1942. The traditional narrative form of the dance and song cycle was able completely to dramatise the sequence of events, and only the unusual subject matter demonstrated that this was not a ‘traditional’ event, but instead a recent ‘historical’ event which had been woven seamlessly into a traditional genre.<sup>38</sup> Examples from the western inland desert, but also many other areas, show how the key symbols of western imperialism in Australia, like Captain Cook’s voyage of 1770 in which he claimed the country for the British Crown, have been appropriated into the very traditional narrative and performative genres of oral traditions to offer a powerful counter analysis of colonialism.<sup>39</sup>

Not only does oral tradition allow the recording and analysis of recent, historical events. The flexibility of oral tradition and traditional knowledge also allows societies to have some mechanisms to cope with enormous, sudden changes like displacement and distant resettlement. Francesca Merlan has described this process as it occurred in Katharine, a town on the edge of the tropical wetlands in the Northern Territory to which the Jaywon people were moved for resettlement. They were then at some distance from their traditional country and while continuing to maintain interest in that original country, they paid close attention to their surroundings in Katherine, expecting and seeking a meaningful connection to their new inescapable home. As Merlan has written:

...there is always the possibility of the ‘discovery’ of existing but newly revealed and interpreted significances, whether or not these be clearly attributed a mythic dimension<sup>40</sup>

One such site was ‘Catfish’, an area near a long established Aboriginal camp in the town which over many years came to be seen as a place of significance which offered a link to more distant ceremonial stories in the areas from which people had migrated.<sup>41</sup> The concepts of revelation and discovery allow communities to feel that close attention to the new site might be rewarded with the affirmation of traditional legitimacy. The many genres of oral traditions which may carry environmental knowledge are often transmitted in this participatory performance mode, which offers the capacity to be responsive to the recording of changes in the environment within which humans were participating. The possibility of discovering newly revealed episodes to story cycles, particularly in unfamiliar places, offers a powerful stimulus to close observation of environments. This dimension of pre-invasion cultural process developed even more importance with the increasing experiences of displacement which occurred after British settlement.

## MAKING PLACES, MAKING PEOPLE

Seeing how apparently unchanging oral tradition actually develops as a flexible and interactive engagement with the past and the present leads us to consider the broader questions of how societies relate to places. Arjun Appadurai has sketched out an ethnography of modernity which might encompass both small scale and large scale societies. He argues convincingly that the link between small scale societies and place, which is so often presented as if it were just as unchanging and enduring as oral tradition, is in fact a work in progress. He argues that 'locality', (the ways humans know and understand material places), is an 'inherently fragile' social creation, reached and sustained only because societies work at it.<sup>42</sup> Rather than 'local knowledge' being the enduring record of a revealed truth about an ideal and stable environment, Appadurai focuses on the ceremonies which are seen to be a record of the connection between people and place. He argues that they are the means to continuously create and then regenerate that bond. He discusses the way these processes intersect with the ordinary, everyday conditions of life, making what is actually uncertain and precarious look ordinary and taken for granted.<sup>43</sup>

Appadurai describes the production of 'local subjects', that is people who are confident of their links and ownership of the places they live in because they know them, and the networks of social relations between 'local subjects', people who feel they are secure because they *have* a place. It is this which Appadurai argues is the central role of much of the performative ceremony in any society. His argument is helpful in considering societies undergoing substantial change and in states of displacement, such as the present case study on the Darling River floodplain and in other research in which I am involved with Aboriginal people living on a river in suburban Sydney. Many are recent migrants from rural areas and struggle with producing locality in drawing on their conceptions of themselves as Aboriginal.

Kingsley Palmer's discussion of dramatic change in remote desert societies of Western Australia offers other insights into indigenous knowledge and place making. Palmer argues that the concept of a responsible adult in traditional, pre-invasion societies was one who had and was exercising custodial rights over country. Land custodianship developed in a flexible way over a person's life, and the social processes of marriage and alliance linkages reshaped responsibilities to and power over land, which all meant that attention to places was a necessary part of daily life. Palmer documents this flexible means by which extension of traditional social processes could generate affiliations to new places when western desert peoples were forcibly moved into the iron ore mining areas of the Pilbara.<sup>44</sup> The possibility of such flexibility in creating *locally*-affiliated people must have existed throughout the two centuries of colonised land and social relations in the south east, offering a means to understand how the Aboriginal communities devastated by invasion violence and either displaced themselves

or taking in people displaced from elsewhere, might have been able to make some form of cultural recovery. The expectation that such a process could occur placed demands on newcomers that they accumulate the knowledge about the new homeland which would allow them to fulfil appropriately the roles of owner and custodian. So both customary social arrangements and resulting custodial roles could contribute to a means to cope with disruption and dislocation in the turbulent conditions of colonial life.

### HISTORY AND THE DARLING FLOODPLAIN

By drawing history back into the analysis, we can consider how the changes caused by colonial economies and technology intersected with indigenous peoples' continued interactions with their environments. The upper Darling floodplain is an area of relatively fertile grasslands which was subject to intense, violent invasion in the 1830s. Rivers, creeks and water holes were invariably the places over which Aboriginal owners and British settlers fought because the water sources were vital to both for the survival of people and livestock. For each, these waters held a symbolic value far beyond their essential biological and economic role. For Aborigines, water forms a key structural role in traditional narratives, as the local stories collected on the Darling floodplain in the 1890s by Katie Langloh Parker demonstrate, where many of the stories are about the creation of rivers and springs.<sup>45</sup> They tell about ancestral heroes battling over water or creating river beds in their travels or burrowing the invisible, underground water channels which are said to connect one river or spring with another, which the ancestors used to travel secretly across country to outwit their enemies, rescue their loved ones or revenge their deaths. So it is unsurprising that water might be a significant element in contemporary narratives. But it has played a more complex role.

Settler pastoralism became the dominant economic land use by 1860 and Aboriginal workers were recruited into the pastoral companies as seasonal and casual workers. In that role, and for most of the twentieth century, Aboriginal people would not be regarded as living a 'traditional life'. Yet today, despite the dramatic changes which have occurred, most of the Aboriginal population in the upper Darling area know where their family's traditional country, in the broadest sense, and their language area lies and they live in reasonable proximity to it. Most of these Aboriginal people regard themselves as being traditional owners of land in the region in which they are living and they exercise an active role in land campaigns or management processes. In these rapidly settled areas of the south east, at least until the 1920s, stock densities on large properties were low enough to allow some compatibility of economies, and Aboriginal workers combined subsistence harvesting with stock work and droving. This meant they were effectively subsidising the settler economy but it allowed Aborigines to

maintain both ceremonial and kinship obligations across wide distances. But from the 1920s onwards the big pastoral runs shifted to mechanised pastoral management or were cut up into smaller, family-run grazing businesses using less labour or were turned into more intensively farmed wheat and horticultural farms, making further compatibility with Aboriginal subsistence harvesting virtually impossible. The fencelines around properties had been of little significance when Aborigines were widely employed on the properties and they had continued to move freely across land they still regarded as their own country. But with the widespread loss of employment, the fencelines became closed borders. Most recently, rising hostility by white property holders to Aboriginal claims for land and native title have meant that the gates into the few remaining hospitable properties have been locked and real access to country had been choked off.

Water had always been essential to the pastoralists and Aboriginal knowledge of where to find water and how to move between water sources was an invaluable resource for the stockowners who employed Aboriginal drovers, shepherds and stock workers. Periods of high employment in the pastoral industry had meant learning a whole new range of uses for water knowledge as Aborigines developed skills in managing large numbers of sheep and cattle in relation to the rivers, soaks and springs they had known as far more fragile watering points for people and native stock like kangaroos. The developing settler infrastructure involved expanding the watering points. First, settlers dug earth tanks, in technologies for rainwater harvesting learnt from India via the British. Then, in 1878, the ground water resources from the Great Artesian Basin was tapped by the first deep bores at Bourke in north western NSW and then in south western Queensland, increasing the number of off-river water supplies not only for domesticated stock but for native marsupials and birds, allowing kangaroo and emu to multiply rapidly.

But water remained scarce and the legal structure of access to it reflected its high value for life rather than profit. In NSW the rights to flowing water had been retained in the public hands, in a careful set of decisions in the mid-nineteenth century, which were made after inquiries in all colonies into the riparian property models available in British and United States. Beyond public rights in flowing water, the access to water was retained as a public right.<sup>46</sup> Both water itself and, in theory, the routes across land to gain access to it remained open to the general public, including Aboriginal people, even as their real access to the lands of pastoral properties began to close down with the loss of employment. The most reliable access routes to water were the Travelling Stock Routes (TSRs), long strips of land also reserved for public ownership for drovers moving stock long distances to markets. The TSRs included access to watering points at regular intervals along each route, following the natural above ground water courses and so showing the way water flowed.

## REMEMBERING COUNTRY THROUGH WATER

The ways in which Aboriginal people in rural NSW today are documenting their environmental knowledge reflects this history. Earlier general research in anthropology<sup>47</sup> or history<sup>48</sup> was framed in a search for the sites of cultural significance or social history, like work sites, camp sites and conflict sites. Later historical and environmental studies<sup>49</sup> have been focused on water because the severe impact of water scarcity has been felt during the last 25 years of low rainfall or drought, and government agency catchment management strategies, such as Streamwatch, emerging in this situation in the 1990s tried to learn more about alternative approaches. Most recently, rather than imposing a priority theme, studies have asked Aboriginal people to map out the places of significance to them, seeking to chart an alternative geography defined by Aboriginal people rather than by the infrastructure of settler fences and surveys, and to identify those places where Aborigines are aware of the presence of high environmental knowledge among members of their community.<sup>50</sup> The results for all of these methodological approaches are strikingly similar: water, rivers and springs appear frequently and are of high significance in all these studies as Aboriginal people recount important places and tell the stories which carry environmental knowledge. Such accounts are fragmentary. There are many stories which appear no longer to circulate and there are only segments of others which are known. More notable is the geographic unevenness of the information: it largely focuses on places along or close to rivers, springs or water sources.

*(i) Lists/ecologies/networks*

The types of information which can be derived from these documentations in collaboration with Aboriginal people tend to occur in three forms. Firstly there is the sort that readily translates as catalogued items into databases and encyclopedia entries of 'traditional' knowledge. This offers a rich body of information on the biology and hydrology of water. There are many forms of plants and fish, water creatures, birds and land animals both in and around rivers, lagoons, estuaries and springs which have been recorded in this format according to their distributions and uses for nutrition, medicine or crafts like weaving and fishing, as well as for their cultural meanings and presence in various stories and performances.<sup>51</sup> What is evident from these studies is the prevalence of knowledge about water-related biota throughout the Aboriginal community. Cotter points out that although water sites are most commonly the location of high concentrations of environmental knowledge among the Gamilaraay, people speak also about travelling stock routes along which they travelled between water points and the higher stoney ridges which have not been intensively developed. She argues that sustained access and relatively lower levels of damage from the incoming settler industries have each contributed to this higher transmission of knowledge about native species.<sup>52</sup> The Gamilaraay and Pikampul people working with Thompson

on Boobera Lagoon and the Wiradjuri working with English and Gay on the Macquarie Marshes have all explained that they were very conscious of the loss of their access to other places on their country and that these water sites have become increasingly important to them for this reason.

These lists of plants and animals are different from those which tend to be generated in the 'local knowledge' of white grazing and cotton farming residents in the Darling floodplain, because the purposes brought to activities by farmers have been different from those of most Aborigines, despite often sharing a productivist dimension to their interest.<sup>53</sup> Graziers have been looking for sloping banks down which they can safely lead stock to drink, whereas Aborigines have been interested in steep or high banks as valuable sites for yabby fishing and other forms of harvesting. Cotton farmers want empty water, with no fish or reeds which will clog up the pumps so they can fill their storage tanks, and they want predictable even flows to water their crops. Aborigines want variable flows, to make the fish run and to refresh the river for the many other species of river creatures which they use.

Although it is older people who are most often the contributors of such information in this study, younger people were involved too and were active in learning, particularly in relation to frequent activities like fishing. Thompson, Cotter and English and Gay each argue that cultural knowledge, meaning both the stories within which such biological information is entwined and the context in which these stories are retold and discussed are essential to understanding the full meaning of the animal, fish or plant to the Aboriginal people involved. Rather than a classificatory database of individual species, the stories suggest the ecologies of interaction within which such lifeforms are actively sustained. The contexts for transmission allow an insight into the distribution of species, for example, are they found below the waterline or above, in drought or flood, what season are they present. Context offers information about the practical enactment of the knowledge about particular species: whether it is eaten or avoided, for example, or how it might be found. Perhaps most importantly, it suggests the conditions necessary for this form of knowledge transmission to continue. Continued fishing, for example, means continuing conversations about bait, habits of fish, troublesome or interesting insects on the bank, the state of the river and of course the stories about them all. Contexts also indicate the anomalies which signal change. Phrases like 'we used to get ...' or 'you don't see them now ...' are common in discussions about species and about behaviours of the river water. People involved in the above studies and in my own research in the north west talk frequently about the river water being more or less turbid than it was in the past, having more or less of any species of reeds or mussels or the invasive carp and of the water itself moving in a different way. They grieve particularly about the loss of 'the freshes', the unpredictable small changes in the flow pattern as water entered the system in the some distant northern tributary and flowed suddenly past.

(ii) *'Water shows us country'*

The second form of indigenous knowledge documented in the upper Darling area is much harder to dismember into a taxonomy. It might be thought of more usefully as an approach to land and water management embedded in narrative, rather than as an item of data. One example is the awareness commonly expressed among Aboriginal people on the floodplain that the river system cannot be thought of as being 'naturally' confined within banks. This approach is evident in the landscape paintings of Tex Skuthorpe, who as an artist has been teaching young Aboriginal people for many years, in work which tends to contradict his recent published work arguing that the circulation of Nunggabarra knowledge had ceased. A painting he did in the early 1990s of the Yuwalaraay region showed three rivers flowing south west into the Darling and a fourth which ended just to the north of the main river, in the Narran Lake. Official maps of the area show the rivers neatly confined to their banks, flowing past the towns and paddocks on down to the south. Tex used concentric lines, a feature of traditional Yuwalaraay graphic design previously incised on skins and wood, to show the flow of water beyond the river banks, onto the floodplain and through the areas identified as townships. In the ebbs and flows of the concentric designs he has drawn young fishlings, mussels and other animals which breed on the plains when the river is in flood. His painting depicts a 'flood dependent' ecosystem, which needs flooding to regenerate. This painting, like so many of the ground designs and earth sculptures of the region, is a medium intended to be one element in complex performative oral genres which are interactive and participatory. So Tex talks about his painting and as he does so he explains the traditional Yuwalaraay stories of the area. 'The water *shows* us the country' is a phrase Tex repeats often in his explanation, stressing the need to see not just one but many floods to gain a deep understanding of the landforms beyond the river banks, made up of subtle variations of low black soil and higher stony ridges. The water not only creates the land of the floodplain by depositing its black silt. More than the shape of the country, the flow is important for the meanings it reveals. Tex explains that an important site in his country is a series of rocks within a river bed. Only when the level of the river reaches a certain depth does the water flowing over the rocks make visible the shape of the ancestral being whose spirit is embodied within the rock, allowing the story not only to be told but to be seen. Again, Tex repeats, 'the water *shows* us'.<sup>54</sup>

Another example is suggested in the cautionary approach to the environment embodied in the narrative of the Kurriya at Boobera Lagoon. Thompson has documented the extensive oral tradition about this site, actively passed on to many younger people in frequent visits to the area over many generations under colonial conditions.<sup>55</sup> The Kurriya is a powerful and frightening ancestral figure with creative powers. Through these powers, it created much of the region's landforms and watercourses, above and beneath ground. It is understood by Aboriginal owners to rest in the deep recesses of Boobera Lagoon, a large body

of water understood to be permanent because it was fed from a mysterious and very deep underground water source which never ran dry, a fact witnessed by many Aboriginal people who relate how they saw the waters rising in the middle of dry periods with no explanation.<sup>56</sup> Hydrologists now believe that there are strong indications that the Lagoon is fed by a deep recharge spring from the Great Artesian Basin, but there is as yet no conclusive evidence.<sup>57</sup> While the narrative refers to the water source, the real issue of concern for Aboriginal communities is the terrible power of the Kurriya, the need to respect and protect it and particularly to avoid swimming in or making noise near the Lagoon, due to the spirit's ability to consume anyone who goes into the water. The recounting of this story makes it clear that this power to destroy has continued since the invasion and is just as effective against white settlers and their stock as it is against Aboriginal people.<sup>58</sup>

The Lagoon has over the last fifteen years been the site of a new conflict as Aboriginal people tried to gain protection over the Lagoon not only from the stock of graziers and the cotton farmers who were seeking to irrigate, but also the region's boating recreation body, whose high power waterskiing activities was not only damaging the Lagoon's banks but desecrating the cultural meaning of the site with their noisy and intrusive presence on the water. The central effect of the Kurriya narrative was to protect the water body by denying entry to it. The impact of the settler activities is now clear: siltation from stock and power boat bank erosion as well as clearing for grazing and irrigated farming has silted up the floor of the lagoon and appears to have obstructed the underground water recharge inlet to the lagoon from the Great Artesian Basin.<sup>59</sup> This precise outcome is not explicit in the Boobera Lagoon narrative, but if the general precautionary principle had been honoured in this case, impacts on the water body would have been minimised and siltation would not have occurred. Aboriginal people are arguing that their knowledge contained an approach which would have protected an important resource, of value to both settlers and Aborigines, which has now been harmed and perhaps irreparably damaged by ignoring the warnings inherent in the traditional narrative.

(iii) *Water and colonialism narratives*

The third form in which indigenous knowledge can be identified is in emerging narratives and performances about the ways Aboriginal societies in south eastern Australia have engaged with and remembered colonial life. This process is normally discussed in terms of loss, considering the decimation of population, the disruption of ceremonies and the denial of access to country have all made it harder to perform and transmit the fullest versions of any oral tradition. But the conditions of colonialism have intensified Aboriginal people's experiences with water and this has been reflected in the ways indigenous knowledges about water are expressed. One of the narratives of colonialism relates to the way

Aboriginal people's knowledge of water sources was used by settlers when they hired Aboriginal stockworkers and drovers. Aboriginal people based their new employment on established traditional knowledge, but they had to learn innovative ways to manage the limited water sources they knew because they now had to water large flocks of sheep or herds of cattle. Once artesian water was discovered, in 1878, the new bores became additional watering points on the long routes for droving stock across the arid areas down to metropolitan markets. There was some congruence with the previously Aboriginal-known mound springs, the naturally occurring outlets from the deep artesian sources, but many of the bores were in country which before had been entirely unwatered. Aboriginal drovers became confident authorities in navigating from water to water, building the new water knowledge into the traditional frameworks. Many, like George Dutton in far western NSW, were able to incorporate their fulfilment of custodial and ceremonial obligations into their droving routes, maintaining an active ceremonial life by taking part in long ceremonial routes across long distances in the central desert areas of South Australia, Queensland and the Northern Territory, all adjoining to the NSW border and accessible to Dutton because he was a respected drover.<sup>60</sup>

Such interweaving of traditional water knowledge and European pastoral skills was not all the drovers did. As they travelled, they taught young male relatives new trades, and they also taught them the invasion histories of the country over which they travelled. Wilpi, an old Wangkumara man I interviewed in Bourke, recalled how as a young droving apprentice, he was taught by his elders as they moved from water hole to water hole:

Old fellas used to tell us, 'you want to come out, learn to work' and we was pleased to too, didn't know what horses was like. So we went down onto the Cooper then, onto the flood water country then, they took us out there. And the old fellas used to show us sandhills here and sandhills there, all different islands, y'see. And they had names for these waterholes, see, where all the Abos got shot down there when the troopers came in to shoot them. They was killin' cattle, see, at the waterhole. So anyway, they told us all these names, showin' us where they were shot and all..... So we went out, we were workin' with'em there, oh for a good while, riding' about with'em, mustering cattle and they used to say, 'well, you go to a waterhole', you know they name'em there. Like they call'im *Watuwara*, that's 'water where the birds live', then next, where they shot the Murris<sup>61</sup>, they call that *Thuliula*, that's a mussel see, *Thuliu*, and the next one, about a mile away, they call that 'little *Thuliula*'. ....<sup>62</sup>

This was an oral transmission of the memory of invasion violence across generations, and into the present, not only conserving but situating historical knowledge. It allows Aboriginal people to pose a counter narrative to the colonisers' history of 'peaceful settlement', which continues to be retold in school history texts of the twenty-first century. Where there are some European authored accounts of

these incidents of invasion violence, the differences between indigenous oral accounts and the non-indigenous written accounts can offer important insights into the way indigenous people have understood invasion and colonisation.<sup>63</sup> What researchers have not yet done is identification of the environmental knowledge, and changing ecologies under the impact of settler land management, which may be entangled in these new narratives.

Virtually all of these stories of massacre violence occurred at water places either because the conflict was over a contested watering site or because Aboriginal people were camped beside water when they were attacked. It is the role of water places as both resource and as a central element in the human use of the landscape which structured the patterns of violence. Just in the area of the upper Darling there is Hospital Creek, Boobera Lagoon and Myall Creek, where massacres occurred which were partially documented by Europeans. Others remain known only in the oral record, but no less powerful for that. Such emplaced oral accounts were experienced by young Aboriginal people growing up in the 1910s and 1920s. The stories continue to be retold in the same manner today, tangled up with language learning and family histories, taught to young Aboriginal people as their families travel. But they are also of high importance in the ways rural Aboriginal communities induct and orient newly arrived non-Aboriginal lawyers, teachers and other staff in Aboriginal-controlled organisations. I was one of those people, taken out to see Hospital Creek by local Aboriginal spokespersons Kevin Williams and Tombo Winters in the 1970s. I was shown the creek side location of this disturbing story, was introduced there to bush foods and traditional medicines, and was shown the landscape conditions around the creek. Nick McClean, a current graduate student and environmental activist, has recorded similar experiences with Ted Fields, a senior Yuwalaray man from Walgett.<sup>64</sup> There are deep analytical and symbolic dimensions to these stories, offering political analyses and histories which are embedded in the land and which demonstrate continuing Aboriginal knowledge to both younger Aboriginal people and to non-Aborigines, testing newcomers, challenging their complacency and demanding their allegiance.<sup>65</sup> This has become very much a ritual occasion – and certainly an important example of the ‘place-making’ which Appadurai has discussed as *making* local subjects, in which political, social and cultural knowledge is imbricated with environmental knowledge.

Finally, there are the narratives of family life which circulate actively. They are located in the intersection of life story and oral tradition, but again environmental knowledge is threaded throughout the narratives as they anchor episodes to places of work, camping and water. Working life under colonialism involved movement for Aboriginal families, as the jobs available on the Darling River pastoral properties were seasonal. Aboriginal people had a ‘beat’ of stations they regularly worked on, living in the camps on the station, and travelling across country, often on the TSRs, from station to station for the next job. Children

grew up familiar with camping out next to creeks and waterholes, gathered round campfires listening to stories under the stars at night, and navigating more by the water courses than fencelines. Many people working around Boobera Lagoon, for example, camped on the lagoon when they were travelling between jobs, and so children learnt the stories about the Kurriya and how they must not swim in the lagoon.<sup>66</sup> But many people were forced to live more sedentary lives, particularly after 1912 when the state government began systematically to remove any Aboriginal children it could argue were 'neglected', in order to incorporate them into an indentured labour scheme which it hoped would 'cure' them of their desire to return to their families.<sup>67</sup>

Rivers again played a critical role. Rental accommodation was invariably segregated, and many Aboriginal families lived on vacant land near the river banks. The river was a necessary economic resource. While families lived near towns, they often had to do without paid work and the fish, yabbies, mussels and birds to be found around the rivers became their only source of nutrition. When parents were working on properties out of town, or mothers were employed cleaning in the hotels or hospitals or private white town homes, grandmothers particularly would take children out along the river to fish and catch yabbies. Long days on the river bank became opportunities for teaching and learning about country. As access to the wider countryside began to close down because employment was falling, the only remaining safe places for Aboriginal people to live and travel along became the rivers. Whether going fishing for food (or for the love of it), to escape the pressures of the hostile white town or the increasingly crowded camps, many Aboriginal people found their main access to their country was now along the river banks.<sup>68</sup>

The rivers clearly reflected the harsh politics of country racism. White townships frequently planned their development so the rivers functioned as a border and a barrier to Aboriginal access. Aboriginal people were allowed to camp but only on the 'other' side of the river or out of town – always the floodprone side. There were unofficial curfews in most towns in which Aboriginal people could not be seen on the 'white' side of the river after dark and times when Aboriginal people remember swimming the river towards the camp to escape arrest from police for breaking the curfew, while in other situations men who had been drinking in the camps tried to swim the rivers drunk to avoid arrest, and sometimes didn't reach the safe side at all.

The continuous struggle to protect children from removal was intimately linked to the river as well. Women recall swimming in the rivers away from the camp with children on their backs to escape the authorities who had come to take children away. Even if children were enrolled in schools (from which they were often excluded on racial grounds) they would be vulnerable if they were noticed for not being clean enough or for having pediculosis or scabies, the perennial minor contagious infestations faced by all children in poor schools. But for Aboriginal families, it could mean the intervention of the state to take

away their children, so faces had to be shining and nails scrubbed. Even so, children still faced the humiliating line up each day to check their heads and nails. Such daily attention meant many buckets of water hauled up the steep river banks by women to boil in the coppers so there would be hot water to wash kids and clothes. If school children did develop scabies or head lice, there were traditional remedies involving infusions from local plants. But as mothers recall: 'that meant *another* bucket of water!'<sup>69</sup>

The river banks were important for other reasons. The Darling and its tributaries on the flood plain have banks with deep gullies and tangled gum tree roots in black silty soil, which forms a sucking, impassable bog when wet. On the riverbanks Aboriginal people were also safe, at least to some extent, from the pursuit of police who came to regulate their lives, control who they associated with and sometimes to take their children. Transgressive meetings for drinking, gambling and sex were all possible, for whites as well as Aborigines, and at night the river banks were sites where daytime colour bars were sabotaged. Some of the most powerful political campaigns of the 1970s were assertions of the collective energy regained from having river banks as safe places in which to conserve a sense of identity and counter solidarity. The demands to restore rights to land in NSW were generated by the urgent need to reclaim rights to water as in Brewarrina in 1974, and in later years when the cultural identity of the Aboriginal community was reasserted to demand control over local cultural festivals which had appropriated Aboriginal river symbols.<sup>70</sup> Water sites have been sites of segregation but also of resistance, sites of massacres and exclusion but also of learning and social regeneration.

#### IMPLICATIONS: HISTORY, WATER AND INDIGENOUS KNOWLEDGE

Indigenous knowledge has been sustained since the invasion although in substantially altered forms, at some times reflecting pre-invasion conditions and at others reflecting newly emerging content arising from traditional bases but in engagement with very changed conditions. The capacity of indigenous people in conditions of historical change to identify and reflect on environmental changes is an important dimension of the broader value of indigenous knowledge. It is not a dimension which is welcomed by the contemporary Australian state or its legal structure. In 2002 the High Court decision on the Yorta Yorta appeal against Olney's 'tide of history' judgement was one of a cluster that year which narrowed the already limited rights available to Aboriginal traditional owners. It confirmed Olney's approach that no indigenous knowledge, however directly based on continuing oral tradition, but which had been generated after the invasion began, could be considered as 'authoritative' or 'legitimate' tradition. The decision effectively excised history from any consideration of what indigenous knowledge might be or of the high value it might hold.

This discussion in this paper demands the question be posed: to what extent, if at all, can what has been described in this paper be regarded as 'indigenous knowledge'? It has been explicitly dismissed as such by Justice Olney in the Yorta Yorta native title case. It has been largely ignored by the conservation movement to date.

There are a number of reasons to consider this as indigenous knowledge. First, it is based on and sourced in pre-invasion knowledge of oral traditions, formal and informal. Secondly, its production and circulation occurred because it is motivated by the desire to fulfil traditional social and cultural goals of achieving responsible adult roles by becoming knowledgeable land custodians. It is expected by Aboriginal people of themselves and each other that they will notice and comment on the state of the land and waters around them, and that they will care about what happens to them. This reflects a continuing social and cultural process of engaging with the material environment to generate locality and from there, to relate to people as neighbourhoods, even if far flung. Thirdly, this knowledge of the state of the rivers has been acquired and to some extent intensified because of the historical conditions of colonisation in the repression, dispossession and impoverishment of indigenous peoples. This has forced them into an even more continuous and intimate relationship with rivers and river banks than would ever have been the case under the conditions of mobility of pre-invasion life. Their knowledge about rivers, creeks and waterholes now records the events of the invasion and the exercise of colonial power. Finally, this new knowledge has been recorded in stylised forms and retold in conventionalised performances which echo the processes of pre-invasion indigenous knowledge. The memories of massacres, conflicts and a life working in the grazing industry are now inscribed onto the landscape through being incorporated into stories which are themselves embedded in places. Such stories are retold, across generations, in a similar way although no longer in the same forms as those transmitted in pre-invasion oral traditions. So the stories record the events in a traditional way, but the content of the stories, is a dramatised and analysed account of colonial interactions.

What are the implications then for the practice of research in environmental history and conservation to recognise historical change and to see indigenous knowledge as a process rather than an archive? Once rivers and water sources are understood to have played a critical role, not only in sustaining life or the pre-invasion oral tradition, but in the historical, social, spatial and political life of Aboriginal people, it is no surprise that such places will have concentrations of meaning and significance for Aborigines including much knowledge about pre-invasion conditions. Waterways are the places which will offer a partial glimpse of the ecological relationships in pre-invasion times, in very different environmental conditions of active Aboriginal management, more riverine flooding and less artesian water. The extent to which oral traditions have been retained is the extent to which these narratives which thread human dramas

with environmental details and embed them in places are available. And so research in collaboration with indigenous communities to record and sustain such knowledge associated with rivers is a priority.

There are insights too into approaches to land management which are outside western development paradigms, although still productivist. They may differ from the goals of some environmental movements which seek to reduce production of any sort from protected areas. The conception of a river which assumes that water will be present across the floodplain, rather than being 'normally' confined in a river bed is a significantly different approach to living with variable environments than is found in the British-Australian water management strategies. This parallels approaches that Rohan d'Souza has discussed, relating to eastern Indian deltaic systems, between a managed landscape which is 'flood dependent' and the British strategy to control rivers which generated a 'flood vulnerable' landscape.<sup>71</sup> Benjamin Weil has identified similar contrasts in relation to the western Indus river.<sup>72</sup> So collaborative work with indigenous communities should be seeking to learn the broadest forms of narrative and performative expressions of community knowledge, in order to understand approaches to and interpretations of environmental relationships, rather than expecting to reduce indigenous knowledge to a taxonomy.

The body of knowledge held by indigenous people in western NSW today offers an account of changes in the environment under colonial economies of the last 200 years. While not systematic or blanket coverage, it is unique and invaluable for identifying the types and pace of change. It is geographically focused as well, as Aboriginal people have increasingly found that only the rivers and their banks remained accessible to them. Other special places, about which environmental knowledge might have been retold and learnt have not been visited so often or recently because the access to them has been closed off. Nevertheless, given the central role water plays in both pre-invasion and settler post invasion economies, working towards gathering perceptions of change in rivers, springs and water systems will continue to be of high importance.

Aboriginal people in north-western NSW continue to be deeply concerned about the ongoing changes. The interest in fulfilling custodial responsibilities continues to be relevant and enacted by Aboriginal people, perhaps the most important continuation of the social processes of indigenous tradition. The most detailed oral traditions about important places away from the rivers have become harder to maintain in active circulation as access has been cut off, but Aboriginal interest in re-engaging with off-river land management and regeneration has been rising. This is most evident where Aboriginal people have real security of tenure over significant areas of land, a possibility which has been rare until recently. Only now, with some land acquisitions directly in Aboriginal hands and tentative steps towards co-management of some protected areas, have communities begun to reacquaint themselves with the country from which they had been excluded for many years. With their communities still living in impoverishment,

they have often had to make hard decisions between managing the few acres they have for short term profit or giving up hopes of profits in order to develop regeneration strategies.

Water remains an urgent priority. One elderly Yuwalaraay Walgett man explained to me in 2000 his worries about the large amounts of water being sucked out of the river by cotton irrigation pumps on one of the properties he knew well, his traditional country and land he had worked as a stockman on horseback for most of his life. He decided to show me the damage so we drove across the black soil plains towards the river. We entered the property and crossed ungrazed and heavily wooded paddocks to where we should have been able to see the water, but found our way blocked by a massive water storage, with bulldozed earthen sides rising 15 or 20 metres and stretching far into the distance on either side. This was where the river water was going. More deeply disturbing for this knowledgeable senior man was that he had lost his way on country he had known intimately. The huge scale of the water storage meant that all his landmarks had been wiped out. He eventually admitted that he was defeated, humiliatingly lost on his own country. But he was beaten only in the short term. Soon after, he embarked on the process of recording his knowledge of the complex watercourses, tracing out the water and the stories with young researchers, black and white, in tow.<sup>73</sup> He sustained his recordings until his death in 2006, drawing together his memories of traditional stories and performance, his historical knowledge and awareness of change. Most importantly he was teaching: his stories, overflowing again, continue to dissolve the symbolic walls of that massive water storage. In a way that doesn't look at all like a traditional ceremony, this Yuwalaraay man was producing *locality*, making indigenous knowledge live on.

## ACKNOWLEDGEMENTS

My thanks to the friends and colleagues who have read drafts of this paper and offered valuable critiques and, even more important, asked difficult questions. These people are in no way responsible for any of the essay's conclusions. I am grateful to Mahesh Rangarajan, Gunnel Cederloff, Ranjan Chakrabarti, Libby Robin, Tom Griffiths, Denis Byrne, Peter Thompson, Peter Read, Michael Adams, Heidi Norman, Damian Lucas and Nick McClean, as well as to the two anonymous referees for this Journal. Allison Cadzow and Lindi Todd were careful and insightful editors who allowed this final version to take shape.

## NOTES

<sup>1</sup> This paper was first discussed in a presentation to The History of Waters conference at Jadavpur University, Kolkata, India, March 3, 2006. An early version will be published in the conference proceedings, to be edited by Professor Ranjan Chakrabarti, for the

Association for South Asian Environmental History. When used in relation to human beings, Australian Aboriginal people sometimes refer to themselves or other *people* as 'Indigenous people' but this usage and spelling is not universal. The use of capital 'I' to spell the word 'indigenous' is varied around the world. In this essay, 'indigenous' is used as an adjective without capitalisation.

<sup>2</sup> Atkinson, 1995; Commissioner for Social Justice, 2002.

<sup>3</sup> Borrini-Feyerabend et al., 2004; IUCN, 2003; World Council on Protected Areas/IUCN, 2003.

<sup>4</sup> Australian Aboriginal people usually identified as 'hunters and gatherers', are more usefully described as 'harvesters' in acknowledgement of the high degree of environmental knowledge, planning and active intervention in the landscape which allowed reliable food gathering. Aboriginal responses to British agriculture from 1860 included a range of strategic adoptions of farming in independent blocks across the south eastern coastal and central districts at precisely the same time as the settler government was pronouncing them irretrievably primitive and unable ever to learn the rudiments of farming. This paper uses the term 'harvesters' to describe the Aboriginal economy and society.

<sup>5</sup> Langloh Parker, 1953 [1897]; Robinson, 1965, pp.126, 131.

<sup>6</sup> Goodall, 1996; Flick and Goodall, 2004; Goodall, 2002; 1994; 1999; 2001; Goodall and Lucas, 1997.

<sup>7</sup> Mulligan and Hill, 2001.

<sup>8</sup> ABS, 2004.

<sup>9</sup> Chief Health Officer, 2004.

<sup>10</sup> NSW National Parks and Wildlife Service: <http://www.nationalparks.nsw.gov.au/npws.nsf/Content/Which+parks+are+co-managed+in+NSW>

<sup>11</sup> Baviskar, 2005.

<sup>12</sup> Bayet-Charlton, 2003; Langton and Rhea Zane, 2003.

<sup>13</sup> As an example, consider the difference between the work of Tania Murray Li, researching in Indonesia, with that of Ronald Niezen, discussing First Nations societies in Canada. Li, 2000; Niezen, 2000.

<sup>14</sup> Cederlof, 2005; Morrison, 2005.

<sup>15</sup> IUCN, 2003; Kothari, 2006.

<sup>16</sup> Johnson, 1992.

<sup>17</sup> Sillitoe, 2007, *passim*.

<sup>18</sup> Cronon, 1992; Dove et al., 2007; Griffiths and Robin, 1997.

<sup>19</sup> Adams, 2004; Cronon, 1996; Dove et al., 2007.

<sup>20</sup> Bayet-Charlton, 2003; Langton, 1996.

<sup>21</sup> Adams and English, 2005; Head, 2000; Head et al., 2005.

<sup>22</sup> Sveiby and Skuthorpe, 2006, p. 164.

<sup>23</sup> Langton, 1998; 1996; Langton and Rhea Zane, 2003.

<sup>24</sup> See, as one example, the itemised list of plants and their uses known to the Kamilarai and Pikampul peoples around Boobera Lagoon in northwestern NSW. Hawes, 1993.

<sup>25</sup> Adams, 2004; Adams and English 2005; Latour, 1999; 1987.

<sup>26</sup> Nazarea, 1999.

## RIDING THE TIDE

- <sup>27</sup> Goodall, 1992.
- <sup>28</sup> Ellen, 1993.
- <sup>29</sup> Johnson, 1992.
- <sup>30</sup> Berkes, 1999.
- <sup>31</sup> Smith, 2007.
- <sup>32</sup> Vansina, 1965.
- <sup>33</sup> Vansina, 1985.
- <sup>34</sup> White et al., 2001.
- <sup>35</sup> Merlan, 1998; Myers, 1986; Vansina, 1985.
- <sup>36</sup> Magowan, 2001.
- <sup>37</sup> Vansina, 1985.
- <sup>38</sup> Graham and Wositsky, 1994.
- <sup>39</sup> Mackinolty and Wainburranga, 1988; Rose, 1984.
- <sup>40</sup> Merlan, 1988.
- <sup>41</sup> *Ibid.*; Myers, 1986; Kolig, 1980.
- <sup>42</sup> Appadurai, 1996.
- <sup>43</sup> *Ibid.*, p. 181.
- <sup>44</sup> Palmer, 1983.
- <sup>45</sup> Langloh Parker, 1905.
- <sup>46</sup> Powell, 1976; 1991.
- <sup>47</sup> Beckett, 1978.
- <sup>48</sup> Goodall, 1996.
- <sup>49</sup> Goodall, 2001; Lucas, 2004.
- <sup>50</sup> Cotter, 2006; English, 2002; English and Gay, 2005; Flick and Goodall, 2004.
- <sup>51</sup> Byrne and Nugent, 2004; Cotter, 2006; English, 2002; English and Gay, 2005.
- <sup>52</sup> Cotter, 2006.
- <sup>53</sup> Goodall and Lucas, 1997.
- <sup>54</sup> Goodall, 2001; Herman, 1996.
- <sup>55</sup> Thompson, 1993.
- <sup>56</sup> Interviews with Ted Fields, 2000, conducted by author for work in progress.
- <sup>57</sup> Eigeland, 1993.
- <sup>58</sup> Goodall, 1995.
- <sup>59</sup> Eigeland, 1993.
- <sup>60</sup> Beckett, 1978.
- <sup>61</sup> Local language word for 'Aboriginal people' or 'our people'.
- <sup>62</sup> Goodall, 1996, p. 34.
- <sup>63</sup> Goodall, 2003; Rose, 1991.
- <sup>64</sup> Nick McClean, 'Narran Lakes Oral History Project', unpublished Honours Thesis, UTS, 2007.
- <sup>65</sup> Reece, 1982.
- <sup>66</sup> Thompson, 1993.

<sup>67</sup> There is now a large literature on this policy, which existed in different forms in each state. The children so ‘apprenticed’ or otherwise removed are now often referred to as the ‘Stolen Generations’. Haebich, 2000.

<sup>68</sup> Flick and Goodall, 2004.

<sup>69</sup> Goodall, 2006a.

<sup>70</sup> Goodall, 2006b.

<sup>71</sup> D’Souza, 2002.

<sup>72</sup> Weil, 2006.

<sup>73</sup> Research being undertaken collaboratively with Nick McClean, conservation activist, for ‘Rivers Lakes And Plains: Stories from Yuwalaray Country – The Narran Lakes’, unpublished Honours thesis, UTS, 2007.

## BIBLIOGRAPHY

ABS. 2004 ‘Aboriginal and Torres Strait Islander Population’. In *Year Book Australia 2004*. Canberra: Commonwealth of Australia.

Adams, Michael, and Anthony English. 2005. “‘Biodiversity is a Whitefella Word’: Changing Relationships Between Aboriginal People and the NSW National Parks and Wildlife Service’. In *Power of Knowledge and the Resonance of Tradition*.

Adams, Michael. 2004. ‘Negotiating Nature: Collaboration and Conflict between Aboriginal and Conservation Interests in New South Wales, Australia’. *Australian Journal of Environmental Education* 20: 15–23.

Appadurai, Arjun. 1996. *Modernity at Large: Cultural Dimensions of Globalisation, Public Worlds Vol 1*. Minneapolis, London: University of Minnesota Press.

Atkinson, Wayne. 1995. ‘Yorta Yorta Struggle For Justice Continues: a background statement to the Yorta Yorta native title claim, 1993’. LaTrobe University.

Baviskar, Amita. 2005. ‘Adivasi Encounters with Hindu Nationalism in MP’. *Economic and Political Weekly*, November 26, 2005: 5105–5113.

Bayet-Charlton, Fabienne. 2003. ‘Overturning the Doctrine: Indigenous People and Wilderness – Being Aboriginal in the Environment Movement’. In *Blacklines: Contemporary Critical Writing by Indigenous Australians*, edited by Michele Grossman. Melbourne: Melbourne University Press.

Beckett, Jeremy. 1978. ‘George Dutton’s Country’. *Aboriginal History* 2: 2–31.

Berkes, Firket. 1999. *Sacred Ecology: Traditional Ecological Knowledge and Resource Management*. Philadelphia: Taylor and Francis.

Borrini-Feyerabend, Grazia, Ashish Kothari and Gonzalo Oviedo. 2004. *Indigenous and Local Communities and Protected Areas: Towards Equity and Enhanced Conservation: Guidance on Policy and Practice for Co-managed Protected Areas and Community Conserved Areas*. Edited by Adrian Phillips, *Best Practice Protected Area Guidelines Series No 11*: World Commission on Protected Areas [WCPA] – The World Conservation Union [IUCN].

Byrne, Denis, and Maria Nugent. 2004. *Mapping Attachment: A Spatial Approach to Aboriginal Post Contact Heritage*. Sydney: Department of Environment and Conservation.

- Cederlof, Gunnel. 2005. 'the Toda Tiger: Debates on Custom, Utility and Rights in Nature, South India, 1820–1843'. In *Ecological Nationalisms: Nature, Livelihoods and Identities in South Asia*, edited by Gunnel Cederlof and K. Sivaramakrishnan (Delhi: Permanent Black) pp. 65–89.
- Chief Health Officer. 2004. 'The Health of the People of New South Wales'. NSW Health Dept.
- Commissioner for Social Justice. 2002. *Native Title Report*. Canberra: Human Rights and Equal Opportunity Commission.
- Cotter, Maria. 2006. 'The Gamilaraay Resource Use Project'. Pers. comm, May 2006.
- Cronon, William. 1992. 'A Place for Stories: Nature, History, and Narrative'. *Journal of American History* 78, no. 4: 1347–1376, doi:10.2307/2079346.
- Cronon, William. 1996. 'The Trouble with Wilderness, or, Getting Back to the Wrong Nature'. *Environmental History* 1: 7–55, doi:10.2307/3985059.
- Dove, Michael R., Daniel S. Smith, Marina T. Campos, Andrew S. Mathews, Ane Rademacher, Steve Rhee and Laura M. Yoder. 2007. 'Globalisation and the Construction of Western and non-Western Knowledge'. In *Local Science vs Global Science: Approaches to Indigenous Knowledge in International Development*, ed. Paul Sillitoe (New York & Oxford: Berghahn Books), pp. 129–154.
- D'Souza, Rohan. 2002. 'Colonialism, Capitalism and Nature: Debating the Origins of Mahanadi Delta's Hydraulic Crisis (1803–1928)'. *Economic and Political Weekly* March 30, 2002: 20.
- Eigeland, Neil. 1993. 'Hydrology'. In *Boobera Lagoon: Environmental Audit*, edited by Inverell Research Service Centre (Inverell: NSW Department of Land and Water Conservation), pp. 87–130.
- Ellen, R.F. 1993. *The Cultural Relations of Classification: An Analysis of Nuauulu Animal Categories from Central Seram*. Cambridge: Cambridge University Press.
- English, Anthony, and Louise Gay. 2005. *Living Land Living Culture: Aboriginal Heritage And Salinity*. Sydney: Department of Environment and Conservation (NSW).
- English, Anthony. 2002. *The Sea And The Rock Gives Us A Feed: Mapping and Managing Gumbaingirr Wild Resource Use Places*. Sydney: NSW National Parks and Wildlife Service.
- Flick, Isabel and Heather Goodall. 2004. *Isabel Flick: The Many Lives of an Extraordinary Aboriginal Woman*. Sydney: Allen and Unwin.
- Goodall, Heather. 1992. 'The Whole Truth and Nothing But ... Reflections of a Field Worker on the Intersections of Western Law, Aboriginal History and Community Memory'. *Power, Knowledge and Aborigines: A special issue of the Journal of Australian Studies* 35: 104–119.
- Goodall, Heather. 1994. 'Colonialism and Catastrophe: Contested Remembrance of Measles and Bombs in a Pitjantjatjara Community'. In *Memory and History in Twentieth Century Australia*, ed. Kate Darian-Smith and Paula Hamilton (Melbourne: Oxford University Press), pp. 55–76.
- Goodall, Heather. 1995. 'The significance of Boobera Lagoon to Aboriginal People re a request for protection of the Lagoon under Section 10 of the Commonwealth Aboriginal and Torres Strait Islanders Heritage Act'. Prepared at the request of the Toomelah Community.

- Goodall, Heather. 1996. *Invasion to Embassy: Land in Aboriginal Politics in NSW 1770 to 1972*. Sydney: Allen and Unwin.
- Goodall, Heather. 1999. 'Telling Country: Memory, Modernity and Narratives in Rural Australia'. *History Workshop Journal*, 47: 161–190.
- Goodall, Heather. 2001. 'The River Runs Backwards: The Language of Order and Disorder on the Darling's Northern Flood Plain'. In *Words for Country: Landscape and Language in Australia*, ed. Tim Bonyhady and Tom Griffiths (Sydney: UNSW Press), pp. 30–51.
- Goodall, Heather. 2002. 'Mourning, Remembrance and the Politics of Place: A Study in the Significance of Collarenebri Aboriginal Cemetery'. *Public History Review* 9: 72–97.
- Goodall, Heather. 2003. 'Evans Head and Area, in Respect of the Application for a Determination of Native Title, Number NG 6034 of 1998: Lawrence Wilson v Minister for Lands and Conservation'. Prepared for the Federal Court of Australia.
- Goodall, Heather. 2006a. 'Gender, Race and Rivers: Women and Water in Northwestern New South Wales'. In *Fluid Bonds: Views on Gender and Water*, ed. Kuntala Lahiri-Dutt (Kolkata: Stree Books), pp. 287–304.
- Goodall, Heather. 2006b. 'Main Streets and Riverbanks: The Politics of Place in an Australian River Town'. In *Echoes from the Poisoned Well*, ed. Sylvia Hood-Washington, Paul Rosier and Heather Goodall (Lanham, MD: Lexington), pp. 255–270.
- Goodall, Heather, and Damian Lucas. 1997. "'Country Stories": Oral History and Sustainability Research'. Paper presented at the Sustainability and Social Research, Centre for Rural Social Research, Charles Sturt University, Wagga Wagga.
- Graham, T. (Producer/Director), and J. Wositsky (Writer/Researcher). 1994. *Ka-waya-wayama: Aeroplane Dance* [Motion picture]. Lindfield, Australia: Film Australia.
- Griffiths, Tom, and Libby Robin, eds. 1997. *Ecology and Empire: Environmental History of Settler Societies*. Edinburgh: Keele University Press.
- Haebich, Anna. 2000. *Broken Circles: Fragmenting Indigenous Families 1800–2000*. Fremantle: Fremantle Arts Centre Press.
- Hawes, Wendy. 1993. 'Flora and Fauna'. In *Boobera Lagoon: Environmental Audit*, ed. Inverell Research Service Centre (Inverell: NSW Department of Soil and Water Conservation), pp. 18–74.
- Head, Lesley, David Trigger and Jane Mulcock. 2005. 'Culture as Concept and Influence in Environmental Research and Management'. *Conservation and Society* 3.
- Head, Lesley. 2000. 'Conservation and Aboriginal Land Rights: When Green Is Not Black'. *Australian Natural History* 23: 448–454.
- Herman, Russ. 1996. *Tex Scuthorpe Interview at Tranby, digital video*. Film.
- IUCN. 2003. *The Durban Accord*. Durban, South Africa: Vth IUCN World Parks Congress.
- Johnson, Martha, ed. 1992. *Lore: Capturing Traditional Ecological Knowledge*. Hay River, CA: Dene Cultural Institute, International Development Research Centre.
- Kolig, Ernst. 1980. 'Noah's Ark Revisited: On the Myth-Land Connection in Early Aboriginal Thought'. *Oceania* 51: 118–32.

- Kothari, Ashish. 2006. 'Theme on Indigenous and Local Communities, Equity and Protected Areas'. Curitiba, Brazil: 8th Conference of Parties of the Convention on Biological Diversity.
- Langloh Parker, K. 1905. *The Euahlayi Tribe: A Study of Aboriginal life in Australia*. London: Archibald Constable.
- Langloh Parker, K. 1953 [1897]. *Australian Legendary Tales*, ed. H Drake-Brockman. Angus and Robertson.
- Langton, Marcia, and Ma Rhea Zane. 2003. 'Traditional Lifestyles and Biodiversity Use: Composite Report on the Status and Trends Regarding the Knowledge, Innovations and Practices of Indigenous and Local Communities Relevant to the Conservation and Sustainable Use of Biodiversity. Regional Report: Australia, Asia and the Middle East'. United Nations Environment Program, edited by Secretariat of the Convention on Biological Diversity.
- Langton, Marcia. 1996. 'What do we mean by wilderness? Wilderness and Terra Nullius in Australian Art'. *The Sydney Papers* 8, no. 1.
- Langton, Marcia. 1998. *Burning Questions: Emerging Environmental Issues for Indigenous Peoples in Northern Australia*. Darwin: Centre for Indigenous Natural and Cultural Resource Management.
- Latour, Bruno. 1987. *Science in Action: How to Follow Scientists and Engineers Through Society*. Cambridge, Mass: Harvard University Press.
- Latour, Bruno. 1999. 'Circulating Reference: Sampling the Soil in the Amazon Forest'. In *Pandora's Hope: Essays on the Reality of Science Studies* (Cambridge Mass.: Harvard University Press), pp. 24–79.
- Li, Tania Murray. 2000. 'Constituting Tribal Space: Indigenous Identity and Resource Politics in Indonesia'. *Comparative Studies in Society and History* 42: 149–179, doi: 10.1017/S0010417500002632.
- Lucas, Damian. 2004. 'Shifting Currents: A History of Rivers, Control and Change'. PhD, University of Technology Sydney, 2004.
- Mackinolty, C, and Paddy Wainburranga. 1988. 'Too Many Captain Cooks'. In *Aboriginal Australians and Christian Missions*, ed. T. Swain and D.B. Rose (Adelaide: Australian Association for the Study of Religions), pp. 355–360.
- Magowan, Fiona. 2001. 'Crying to Remember: Reproducing Personhood and Community'. In *Telling Stories: Indigenous History and Memory in Australia and New Zealand*, ed. Bain Attwood and Fiona Magowan (Sydney: Allen and Unwin), pp. 41–60.
- Merlan, Francesca. 1998. *Caging the Rainbow: Places, Politics and Aborigines in a Northern Australian Town*. Honolulu: University of Hawai'i Press.
- Morrison, Kathleen. 2005. 'Environmental History, the Spice Trade and the State in South India'. In *Ecological Nationalisms: Nature, Livelihoods and Identities in South Asia*, ed. Gunnel Cederlof and K. Sivaramakrishnan (Delhi: Permanent Black), pp. 43–64.
- Mulligan, Martin and Stuart Hill. 2001. *Ecological Pioneers: A Social History of Australian Ecological Thought and Action*. Cambridge: Cambridge University Press.
- Myers, Fred. 1986. *Pintupi Country, Pintupi Self*. Washington and Canberra: Smithsonian Institute and AIAS.

- Nazarea, Virginia D. 1999. 'A View From a Point: Ethnoecology as Situated Knowledge'. In *Ethnoecology: Situated Knowledge/Located Lives*, ed. Virginia D. Nazarea (Tucson: University of Arizona Press), pp. 3–20.
- Niezen, Ronald. 2000. 'Recognising Indigenism: Canadian Unity and the International Movement of Indigenous Peoples'. *Comparative Studies in Society and History* 42: 119–148, doi:10.1017/S0010417500002620.
- Palmer, Kingsley. 1983. 'Migration and Rights to Land in the Pilbara'. In *Aborigines, Land and Land Rights*, ed. N. Peterson and M. Langton (Canberra: AIAS), pp. 172–179.
- Powell, J.M. 1976. *Environmental Management in Australia, 1788–1914*. Melbourne: Oxford University Press.
- Powell, J.M. 1991. *Plains of Promise, Rivers of Destiny: Water Management and the Development of Queensland, 1824–1990*. Bowen Hills, Qld: Boolarong Publications.
- Reece, Robert. 1982. 'Aboriginal Community History: A Cautionary Tale'. *Australian Historical Association*.
- Robinson, Roland. 1965. *The Man Who Sold His Dreaming: Verbatim Narratives by Contemporary Aborigines*. Sydney: Currawong Publishing, 1965.
- Rose, Debbie Byrd. 1984. 'The Captain Cook Saga'. *Australian Aboriginal Studies* no. 2.
- Rose, Debbie Byrd. 1991. *Hidden Histories*. Canberra: Aboriginal Studies Press, 1991.
- Sillitoe, Paul, ed. 2007. *Local Science vs Global Science*. New York/Oxford: Berghahn Books.
- Smith, Benjamin R. 2007. "'Indigenous" and "Scientific" Knowledge in Central Cape York Peninsula'. In *Local Science vs Global Science*, ed. Paul Sillitoe (New York: Berghahn Books), pp. 75–90.
- Sveiby, Karl-Erik and Tex Skuthorpe. 2006. *Treading Lightly: The Hidden Wisdom of the World's Oldest People*. Sydney: Allen and Unwin.
- Thompson, Peter. 1993. 'Aboriginal Cultural Heritage'. In *Boobera Lagoon: Environmental Audit*, ed. Inverell Research Service Centre (Inverell: NSW Department of Conservation and Land Management), pp. 206–282..
- Tribunal, National Native Title. 2002. 'Background Information on Native Title Proceedings re Members of the Yorta Yorta Aboriginal Community v. State of Victoria and Others'. Commonwealth Government.
- Vansina, Jan. 1965. *Oral Tradition: A Study in Historical Methodology*, translated by H.M. Wright. Chicago: Aldine Publishing Co. First published in French 1961.
- Vansina, Jan. 1985. *Oral Tradition as History*. London: James Currey.
- Weil, Benjamin. 2006. 'The Rivers Come: Colonial Flood Control and Knowledge Systems in the Indus Basin, 1840s–1930s'. *Environment and History* 12: 3–29, doi: 10.3197/096734006776026818.
- White, Luise, Stephan F. Miescher and David William Cohen, eds. 2001. *African Words, African Voices: Critical Practices in Oral History*. Bloomington and Indianapolis: Indiana University Press.
- World Council on Protected Areas/IUCN. 2003. *Recommendations, Durban, Vth WCPA/IUCN World Parks Congress*. Durban, South Africa: IUCN.