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978-1-107-05937-5 - Knowledge and Power in Prehistoric Societies: Orality, Memory and the Transmission of Culture

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KNOWLEDGE AND POWER IN PREHISTORIC SOCIETIES

ORALITY, MEMORY AND THE TRANSMISSION OF CULTURE

In this book, Lynne Kelly explores the role of formal knowledge systems in small-scale oral cultures in both historic and archaeological contexts. In the first part, she examines knowledge systems within historically recorded oral cultures, showing how the link between power and the control of knowledge is established. Analysing the material mnemonic devices used by documented oral cultures, she demonstrates how early societies maintained a vast corpus of pragmatic information concerning animal behaviour, plant properties, navigation, astronomy, genealogies, laws and trade agreements, among other matters. In the second part Kelly turns to the archaeological record of three sites, Chaco Canyon, Poverty Point and Stonehenge, offering new insights into the purpose of the monuments and associated decorated objects. This book demonstrates how an understanding of rational intellect, pragmatic knowledge and mnemonic technologies in prehistoric societies offers a new tool for analysis of monumental structures built by non-literate cultures.

Lynne Kelly is an Honorary Research Associate in the Department of Arts, Communication and Critical Enquiry at La Trobe University, Melbourne. She is the author of ten books on education, one novel and three popular science titles. Kelly is interested in the question of how non-literate cultures memorise so much about their environment in the absence of writing, which has led her to research the mnemonic technologies of oral cultures.

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ORALITY, MEMORY AND THE
TRANSMISSION OF CULTURE

LYNNE KELLY

LaTrobe University



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32 Avenue of the Americas, New York, NY 10013-2473, USA

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www.cambridge.org

Information on this title: www.cambridge.org/9781107059375

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First published 2015

Printed in the United States of America

A catalogue record for this publication is available from the British Library.

Library of Congress Cataloging in Publication Data

Kelly, Lynne, 1951 –

Knowledge and power in prehistoric societies : orality, memory, and the transmission of culture / Lynne Kelly, LaTrobe University.

pages cm

Includes bibliographical references and index.

ISBN 978-1-107-05937-5 (alk. paper)

1. Linguistic paleontology. 2. Anthropological linguistics. 3. Prehistoric peoples.

4. Oral tradition. I. Title.

P35.K45 2015

001.09'01-dc23

2015004550

ISBN 978-1-107-05937-5 Hardback

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ACKNOWLEDGEMENTS

It would be impossible to understand such a different way of knowing without discussions with Australian indigenous people, including staff at The Koorie Heritage Trust in Melbourne and the Ngarn-gi Bagora Indigenous Centre at La Trobe University, Nungarrayi (Warlpiri) and Daryl Pappin (Mutthi Mutthi). The work of the late Carl Couch was very influential, and I am indebted to his colleague, sociologist Dr Shing-Ling Chen. Her invitation to present the inaugural Marshal McLuhan Lecture at the National Communications Association Convention in Chicago in November 2009 enabled me to gain valuable feedback at an early stage, including from the respondent, Dr Lance Strate.

With the assistance of a LaTrobe University grant I was able to undertake a research trip to the United States, during which I gained a great deal from meeting experts including Ron Shutiva and Berni Keyope (Acoma Pueblo), staff at the Indian Pueblo Cultural Center, Albuquerque, Patricia Jollie, Larry Baker, Nancy Sweet Espinosa, Sarah Margoles, Diane Souder, Dr Diana Greenlee, Lisa Waters, Dr Joe Saunders, Susan Haskell and Dr David Curzon. A subsequent meeting in Australia with Southwestern archaeology expert Dr William D. Lipe introduced me to the writing of Tito and Tessie Naranjo and Rina Swentzell of Santa Clara Pueblo. It was Tito Naranjo who had indicated to Dr Lipe the need for archaeologists to engage with the research on primary orality. Dr Lipe's provision of resources and encouragement has been a critical assistance and inspiration.

In the United Kingdom, it was with great appreciation that I spent many hours in June 2010 and July 2013 with Dr Rosamund Cleal, curator at the Alexander Keiller Museum, Avebury, and co-editor of the definitive work, *Stonehenge in its landscape* (Cleal et al. 1995). I was privileged to be able to discuss the theory and application to the British and Irish Neolithic with experts including Dr Sally-Anne Coupar, Dr Alison Sheridan, Adrian Green, Nick Card and the members of the 2013 archaeological dig at the Ness of Brodgar, Orkney. Professor Mike Parker Pearson gave permission to examine the Grooved Ware, which had recently been excavated from Durrington Walls.

I appreciate permission to use images from the Alexander Keiller Museum, Archaeology Southwest, The Crow Canyon Archaeological Center, Deakin

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978-1-107-05937-5 - Knowledge and Power in Prehistoric Societies: Orality, Memory and the Transmission of Culture

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University Art Collection and Galleries Unit, Richard I. Ford, Michael Fox, Damian Kelly, Mary H. Mossier, Djamika Mununggurr, NASA, Poverty Point Station Archaeology Program, Thomas Q. Reeve, Mary Nooter Roberts, Ian Rowland, The Salisbury Museum and The University of Chicago Press.

The Australian archaeologist Professor Iain Davidson offered invaluable advice and encouragement and provided many of his academic papers which were relevant to the topic. LaTrobe University linguists Stephen Morey and František Kratochvíl offered expert insight from their fieldwork with oral cultures. I greatly appreciated the constant advice of my husband, Damian Kelly, an educator, librarian, information technology expert and archaeologist. Lisa Donnelly, faculty librarian and team leader at LaTrobe University Library, provided expert support, the value of which cannot be overestimated. I valued the encouragement of the English Program at Latrobe University, in particular my co-supervisor, Dr Alexis Harley. This project would never have reached fruition without the advice, expertise, diligence, patience and extraordinary flexibility of my PhD supervisor Professor Susan Martin.

Thanks must also be extended for the expert advice and support of Lyn Tranter at Australian Literary Management and the staff at Cambridge University Press, in particular Beatrice Rehl, Asya Graf, Isabella Vitti, Elizabeth Shand, Philip Alexander, Matthew Bastock and the anonymous reviewers.

Lynne Kelly*February 2015*

Cambridge University Press

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PREFACE

Knowledge and Power in Prehistoric Societies offers new insights into the purpose of ancient monuments through an analysis of the methods by which oral cultures maintain a vast store of pragmatic knowledge. It is often commented that enigmatic monumental sites were built by people who left no record because they could not write. Although their lack of literacy is critical, their use of orality is even more so. This book concentrates on what they almost certainly could do: they could maintain a massive corpus of knowledge through mnemonic methods used universally by oral cultures.

There is a robust body of research on the way knowledge is stored in cultures that have no contact with writing. The most influential texts in this field are Jack Goody's *The domestication of the savage mind* (1977), Walter Ong's *Orality and literacy: the technologizing of the word* (2002 [1982]) and Ruth Finnegan's *Literacy and orality: studies in the technology of communication* (1988). These works all make the point that in order to memorise and recall vast tracts of narrative, oral cultures developed many standard 'tricks of the trade' – oral technologies to aid them, such as formulaic and stereotypical expression, standard themes, adding characterising epithets to names, repetition, redundancy, praise and blame formats, and in particular rhythm and rhyme and dance. Vivid characters in stories form a mythological corpus. Narratives encode the knowledge base of the culture.

However, this body of research has rarely been drawn upon in the interpretation of the archaeology of sites built by oral cultures. To aid such an analysis, it is necessary to extract the material indicators associated with the storage of knowledge in non-literate cultures. It is these material indicators which may remain in the archaeological record. The analysis of formally structured performance sites and the topology of memory aids indicate that there are many generalities which can be observed in terms of the essential mnemonic technologies employed.

Given that the human brain is similar across the world, it is not surprising to find that the range of technologies is similar across a wide variety of oral cultures. Given that human cultures vary greatly, as do the materials available, it is also not surprising to find these general categories of memory aids are implemented very differently across disparate cultures.

FROM CROCODILES TO STONEHENGE

In writing *Crocodile: evolution's greatest survivor* (Kelly 2006), I became aware of just how accurately the behaviour of the local species of crocodilian was recorded in oral tradition. Mythology served as a method by which details of animal identification and behaviour could be readily stored and retrieved. Oral tradition stores a vast amount of pragmatic scientific knowledge, but stores it in a manner totally alien to those with Western scientific training. Although the vast majority of writing on oral tradition refers almost exclusively to religion and history, a few researchers, such as Watson-Verran and Turnbull (1995) and Majnep and Bulmer (1977), address the issue of the natural sciences and the methods by which they are and were encoded in mythology. Journals on ethno-science, such as *Archaeoastronomy: The Journal of Astronomy in Culture*, and books such as Goddard and Kalotas (2002) and Wyman and Bailey (1964) present such knowledge in the format of Western science, making brief reference to the way in which the knowledge was encoded in song or mythology.

All humans are inhibited by their unreliable memory, hence my question became: How do oral cultures retain so much information? In particular, how do they retain the pragmatic knowledge they need to survive as a society: how animals behave, what to eat and what to avoid at all costs, how to use plants for medicines, how to bind wounds and how to avoid inbreeding. How do they know who has rights to what land and which animals; where to find resources such as water in the desert, flint in the ground or moths at a distant mountain at a very specific time of year; and how to navigate to gatherings and know when those gatherings will be, in order to set off in time?

It is well recorded that traditional cultures retain a complex classification of animals and plants – way beyond what is eaten (Goody 1977, p. 59; Majnep & Bulmer 1977, pp. 45–9; Fowler 1999, p. 419; Turnbull 2000, p. 150; Wyman & Bailey 1964). They need to: tangle with the wrong invertebrate or eat the wrong fungus, and it can be fatal. The stars are used for navigation and time-keeping, as well as metaphor for mythology that talks of ethics and moral behaviour. There are lessons from the past to provide knowledge for the future, especially about how to survive in times of extreme resource stress. So how do the knowledge keepers within traditional cultures remember so much information without writing?

All oral cultures explored, including the mobile Australian Aboriginal cultures and the sedentary Pueblo farmers, the African Luba and Yoruba, the New Guinea Tsembaga, the New Zealand Maori and the Melanesian seafarers – every culture I explored used formal teaching methods to instil the songs, stories and dances as the young reach higher and higher levels of initiation into the culture. But the oral technologies, so thoroughly documented in the research on primary orality, were still not enough.

It was from talking to Australian Aboriginal people that I recognised that at every level of initiation into knowledge there were material memory aids involved. From hand-held inscribed objects to art on bark and rock, to the landscape itself – all linked to ‘the Dreaming’, or, as many of the indigenous Australians I spoke to prefer, ‘the Law’ or ‘the Knowledge’. Searching further, I found that oral cultures all over the world use a vast array of physical mnemonic devices – some representational and others abstract, some public and others highly restricted. Secrecy served to ensure that critical knowledge remained unadulterated. In every culture I studied, the dichotomy between public and restricted knowledge was enshrined in traditional law. The cultural patterns which emerged served to optimise memorisation of the knowledge gained over hundreds, if not thousands, of years.

When standing at Stonehenge, staring at the immense stones that the Neolithic British oral culture had erected five thousand years ago, I could see how perfectly they had constructed a knowledge theatre that changed over the millennia in tune with emerging social complexity. Yet I could find no reference to the research on primary orality in the archaeological literature on the British Neolithic.

It seemed that the role of artificial knowledge systems had rarely been alluded to in the archaeological debate. The more I read on Neolithic Britain, the more I could see physical mnemonic structures. The more I read on world archaeology of monumental sites created in the early stages of settlement, the more my theory of the mnemonic device seemed to answer key questions about the reasons why ceremonial spaces were laid out the way they were, and the purpose of enigmatic objects associated with them. Thus began a journey of applying the thinking which arose from the research on primary orality to the reports of archaeological sites from small-scale prehistoric cultures the world over.

PRIMARY ORALITY

Oral cultures exhibit a dichotomy in speech patterns between everyday speech and formal narrative. The latter employs the standardised procedures mentioned above, which are referred to as ‘oral technology’ or ‘orality’ (Couch 1989, p. 589; 1996, p. 7). In particular, the role of song, dance and mythology may be viewed as mnemonic technologies. ‘Primary orality’ is an information technology, a tool that increases the ability of humans to process information and so increase the amount and complexity of information preserved in cultures with no access to writing.

In the past, societies that developed effective information technologies had a better chance of survival than those that did not (Ong 2002 [1982]; Couch & Chen 1988; Couch 1996). Although there are vigorous debates about the ways

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in which literacy impacts on thinking, there is a very high level of agreement among writers in the field of primary orality about the way in which oral technologies are used to enhance memory. It is this area of agreement which underpins the development of the ten indicators of mnemonic monuments which evolve from this study. Knowledge which is no longer being repeated, no longer being deliberately and actively remembered, is lost.

Oral tradition is often represented as collections of child-like myths which, as will be shown, represent the public level of the first layer of oral tradition, usually that taught to children. They are not representative of the higher levels of knowledge maintained by initiated adults.¹

Secondly, oral tradition is often equated with oral history, which neglects a significant proportion of the content. Oral tradition encodes a body of knowledge gained from past experience, but which is constantly refined in the present: knowledge of animal behaviour and plant properties, genealogies, geology, climate and seasons, geography, astronomy, how to run a calendar and how to control access to resources. Recognition of this fact in journals addressing the ethnosciences, such as ethnoastronomy and ethnozoology, is slowly increasing.² When indigenous sciences are acknowledged, oral tradition can be seen in a more complex and realistic light. Without a body of knowledge built up over many generations and constantly refined, without a structure to that knowledge, and without a method by which that knowledge is retained in memory, essential pragmatic information about the environment will be lost. Enmeshed with that information will be a complex array of cultural knowledge which is essential for a group of individuals to survive and flourish in relative harmony.

Finally, oral tradition is linked to well-known epics, such as the *Rigveda*. Couch (1989, p. 589) argues that scholars have given undue significance to epics (see, for example, Havelock 1986; Lord 1960, 1991). In fact, epics are not commonly found in purely oral traditions (Finnegan 1970; Vansina 1971, p. 450; Clunies Ross 1986, p. 262; Goody 2006; 2010).

PRIMARY ORALITY AND THE ARCHAEOLOGICAL RECORD

Small-scale traditional cultures store oral tradition in structured formats. The role of these indexed knowledge systems is greatly underrepresented in the archaeological context. The power associated with control of knowledge is evident in most, if not all, oral cultures documented on contact or still extant. It is that power which gives the vital clue as to who was running the organised, yet apparently egalitarian, cultures who built many of the world's most enigmatic monuments.

The cultures which built Stonehenge, Chaco Canyon and Poverty Point, among many other prehistoric monumental sites, were oral cultures. A great

deal is known about the archaeology of these sites – their physical structures, changes over time and associated artefacts. Yet the understanding of primary orality has not been used previously in archaeological interpretation on these sites. It seems that the two fields, although both interpreting aspects of oral cultures, have not yet been used to inform each other.

In their book *Archaeologies of Memory*, Van Dyke and Alcock (2003) explore the role of memory in archaeological interpretation through a number of chapters written by experts on major archaeological sites and enigmatic incised objects. Only one of these, that written by Lillios (2003), makes any reference to primary orality. Lillios proposes that incised plaques may be mnemonic to genealogy. Through an understanding of the formal memory structures used by oral cultures, a new insight into the purpose of enigmatic decorated objects also emerges.

Most physical anthropologists agree that modern humans have been essentially alike in behaviour and cognitive ability since the emergence of *Homo sapiens* somewhere between 100,000 and 40,000 years ago (Renfrew & Bahn 2008, p. 393), well beyond the time span of the cultures explored here. However, most discussions about ancient small-scale cultures depict them as groups of humans who eat, shelter, procreate, die and, at times, build monuments. There will usually be reference to ‘rituals’ and ‘ceremonial’, but these will be represented as serving no purpose other than in connection with ‘primitive’ superstition and social harmony.³ The oral tradition of the society which built the monuments is presented as a much simplified version of contemporary oral cultures, while there is no reason to suppose the culture only 5,000 years ago would have lacked the complex knowledge seen in contemporary mobile hunter-gatherer and non-stratified sedentary cultures, such as the Australian Aboriginal and the American Pueblo, respectively.

Renfrew and Bahn, in a popular archaeology textbook, write that ‘small-scale societies of hunters and gatherers, generally of fewer than 100 people ... lack formal leaders, so there are no marked economic differences or disparities in status among their members’ (2008, p. 178). The map accompanying the above quote indicates that the Australian Aboriginal cultures are included. In all Australian Aboriginal cultures there are clear disparities in status. Elders gain respect, status and access to restricted knowledge, sites and sacred objects through initiation.

Formal recording and teaching of oral tradition and the role of initiation into restricted knowledge is not mentioned in any archaeological texts or papers that I can find. Nor is there any discussion of structures or artefacts possibly being mnemonic to knowledge. There is often mention that such items may act as reminders, but I will argue that these were created and decorated to suit mnemonic teaching purposes for complex knowledge systems, not just as simple reminders of past events.

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In *Knowledge and Power in Prehistoric Societies* I will illustrate how these understandings offer a new interpretation for the purpose of the monumental structures at the mound-building site of Poverty Point in the American Southeast and the Ancestral Puebloan site of Chaco Canyon. I will also demonstrate how this same approach may be applied to the megalithic monuments and associated decorated artefacts of the British and Irish Neolithic, in particular the Stonehenge/Durrington Walls complex of monuments. Each site is different. Each culture has its own way of implementing a knowledge system and leaving traces in the archaeological record. Kidder, Ortmann and Arco refer to the three specific sites named above as '*sui generis*', arguing that 'some sites are simply unique' (2008, p. 9). Although I agree that these sites are unique, I believe they all can only be fully understood with an understanding of the way a knowledge system may have functioned.

Although I feel confident to argue that the control of knowledge was the principal source of power in these ancient cultures, it is beyond the scope of this book to make claims about the content of their beliefs. Although I am able to make informed suggestions about the genres of knowledge stored through the analysis offered in Chapters 4 and 5, I cannot offer any details on the mythology or cosmology of these long-lost cultures. I will argue that it is only the mnemonic structures and artefacts that are left in the archaeological record. The content of the knowledge system was stored in living memory, and with all human memory now long dead, that content can never be retrieved. Hence this book also serves as a grave warning. The imperative to store the knowledge of contemporary oral cultures is immediate. If we do not do so before literacy and colonialism destroy what is left, then the knowledge stored within these cultures will be lost forever.

An archaeology that takes account of the role of knowledge systems in prehistoric cultures, of how objects and spaces aided in the transmission and retention of important cultural knowledge, stands to produce compelling, and, in many cases, radically new, understandings of prehistoric sites.

KNOWLEDGE IS POWER

Or so it used to be. Australian Aboriginal cultures in their traditional state, American Indian cultures resisting the influence of the colonisers and African cultures still practising their ancient knowledge systems all provide ample examples of the way in which those who controlled the knowledge also controlled society. The role of knowledge in the exercise of power is underrepresented in archaeological interpretation of prehistoric social structures.

Mike Parker Pearson, the British Neolithic archaeologist, and Ramilisonina wrote:

We employ cross-cultural generalizations as a means of assessing the likelihood of certain aspects of social organization being shared between different cultural contexts. We may define these generalisations as probability analogies since they work on the principle that, if a certain relationship is found amongst most traditional societies today, then there is a probability that this relationship probably obtained in most societies in the past (1998a, p. 309).

Archaeologists describe monument building eras, such as the British Neolithic, the Archaic of the American Southeast and the Ancestral Puebloan era of the American Southwest, as showing no signs of a wealthy elite, no physical signs of a hierarchy. Yet, to build such monuments as Stonehenge, Poverty Point and Chaco Canyon there must have been an organising hierarchy. It is this feature which leads to the first, and the most definitive, of the ten indicators of a mnemonic monument described below. I propose that, as in contemporary Australian Aboriginal hunter-gatherer cultures and Pueblo sedentary societies, the power granted to elders in these cultures was based on their access to knowledge.

I acknowledge that, as Renfrew says, ‘Modern hunter-gatherer societies are the product of forty centuries of sapient evolution, just as much as urban ones. They should not be regarded as living representatives of the Palaeolithic past’ (1998, p. 4). Methods found in contemporary Australian Aboriginal knowledge systems can be traced back for over 40,000 years (Haynes 2000, p. 53). Hence, it is considered justified to propose that the generalisations about oral knowledge systems can be translated into prehistory, as archaeologists currently transfer generalisations about human physical attributes and needs. It would be highly speculative to transfer the beliefs of any contemporary culture into the prehistoric era. However, it is logical to consider that the technologies by which they formally taught and painstakingly memorised their knowledge might have analogies in the more distant past. A deeper appreciation of the demands of knowledge retention and transmission in oral cultures opens up possibilities for radical reinterpretation of archaeological sites and artefacts globally.

BIAS TOWARDS THE NATURAL SCIENCES

When almost no background knowledge is available, as for the aceramic Neolithic, such reconstruction can border on science fiction. That is when every figurine becomes a ‘fertility goddess’ and every misshapen boulder becomes a ‘cult stone’ (Flannery and Marcus 1996, pp. 360–1).

It is possible only to speculate about whether the people who constructed the monumental sites believed in a sun god, worshipped ancestors, sacrificed

Cambridge University Press

978-1-107-05937-5 - Knowledge and Power in Prehistoric Societies: Orality, Memory and the Transmission of Culture

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animals (or even each other), believed the stones had health giving properties or entered into narcotic induced trances. However, it is possible to be fairly certain that they had detailed knowledge of the environment and food sources, communicated with each other, sang, danced, had sex, used a range of medicines, resolved disputes, abided (mostly) by social laws, punished those who transgressed the laws, had ideas about where the land, animals, plants and themselves came from and were curious about the world around them. What is universal is not the content of beliefs and rituals, ceremonies and rites, but the imperative to store knowledge in their oral tradition when they had no writing. Without this knowledge, they simply would not have survived.

In focusing on the pragmatic and scientific aspects of the knowledge encoded in ritual and ceremony, I am not in any way denying the spiritual component within the complex integrated nature of oral tradition. Spirituality is a topic dealt with far better by the many experts that operate in this field.

Our differences – our histories and religions – are widely discussed when considering oral tradition. This book focuses on our commonalities – knowledge of fauna, flora, astronomy, geology, seasons and weather as well as closely linked disciplines such as navigation and maintaining a calendar. Kangaroos bound and bees make honey whether the observer is literate or non-literate. It is the way in which these observations are remembered, utilised, interpreted, stored and conveyed which depends very much on whether the culture is oral or literate, mobile or sedentary, small or large scale.

One reason for the failure of literate cultures to recognise non-literate knowledge systems results from the feeling of superiority of early colonists and their missionaries. The vast majority simply didn't attempt to understand traditional ways of representing knowledge. As Walter Ong writes, 'We – readers of books such as this – are so literate that it is very difficult for us to conceive of an oral universe of communication or thought except as a variant of a literate universe' (Ong 2002 [1982], p. 2). Until the last few decades, very few even tried.

In a detailed analysis of science in indigenous knowledge systems, Watson-Verran and Turnbull wrote that 'there is no great divide between the past and the present, between scientific and traditional knowledge' (1995, p. 119). Similarly, Finnegan (1988, pp. 61–6) argued that the role of literature in literate societies is found in the orality of non-literate cultures all over the world. It is reasonable to assume that prehistoric cultures capable of building Stonehenge, Poverty Point or Chaco Canyon, at most 6,000 years ago, had a complex knowledge system. Although the specific content of a given contemporary knowledge system cannot be transferred into a prehistoric past, cross-cultural generalisations of mnemonic methods may be invaluable in interpreting symbolic structures. Studying the role of those who maintained the knowledge in contemporary traditional cultures can indicate signs of similar roles in ancient cultures.

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METHODOLOGY IN EXPLORING ORAL TRADITIONS

This book engages with anthropological studies as well as with archaeology, history, a range of ethnosciences, information technology, communication theory and theories of education and memory. The research would not be possible from within the boundaries of a single discipline. When researching oral tradition, it is difficult to discriminate that which is sound in the view of the indigenous people themselves. It must also be acknowledged that oral cultures, like all societies, are in a constant state of change.

To see general patterns in indigenous knowledge systems, I needed to explore a broad range of oral traditions and avoid becoming too immersed in a single set of beliefs and practices. I chose initially to read as broadly as I could on Australian Aboriginal cultures, as I already had a strong background in the native flora and fauna. I was keen, however, to ensure that my reading reflected indigenous understanding as much as possible and so I relied on advice from indigenous sources from the outset. In particular, the Koorie Heritage Trust in Melbourne and the Ngarn-gi Bagora Indigenous Centre at La Trobe University acted as my guides in this matter.

There were a number of resources which I felt were valuable but which were rejected by indigenous advisors and so have not been included in this research. For example, *The teaching stones of the outcast tribe* (Anonymous 1988) gave examples of stones which acted as mnemonic to story and were used for teaching. It was rejected by staff members at the Koorie Heritage Trust as being of suspicious authenticity. *Gwion Gwion: Dulwan Mamaa: secret and sacred pathways of the Ngarinyin Aboriginal People of Australia* (Doring 2000) gave me specific examples of songs linked to rock art. It was considered reputable by the Ngarn-gi Bagora Indigenous Centre but its authenticity was questioned by the Koorie Heritage Trust. Given the vast array of material available, I have limited myself to that which is recommended consistently by indigenous individuals and organisations, or is recommended through the texts of those recommended titles.

For other cultures, such as African, Polynesian and Inuit cultures, I sought references from indigenous writers or those who had worked closely enough with the cultures to learn the language and be initiated to some degree. Although I drew cross-cultural generalisations from as broad a scope of oral cultures as possible, it was necessary to understand how non-literate knowledge systems fit within the totality of a culture. To this end, two cultures were selected as case studies, enabling me to explore hypothetical ideas about the transition from mobile to sedentary lifestyles – the transition I had identified as being critical in the changes over time in the Stonehenge landscape.

Of Australia's many hundred hunter-gatherer language groups, the Yolngu of northeastern Arnhem Land have worked with anthropologists and linguists

to release a great deal of material into the public domain under their own terms. Living in a remote location, their culture was able to survive the onslaught of colonisation into an era when growing respect for indigenous people meant a slightly less devastating initial contact period.

Of the sedentary agricultural oral cultures, one of the best documented and most accessible were the American Indian cultures. Of these, it soon became clear that the Pueblo had best managed to stay on their own land through the shattering of Native American cultures by colonisation, and had also released information on their own terms, with Native Pueblo anthropologists such as Alfonso Ortiz (1969; 1972) and Tessie Naranjo (1995) offering an invaluable insight by writing from an Indian perspective for non-Indian readers. A complex of language groups, contemporary Pueblo were also linked to Ancestral sites.

For American Indian anthropology, I relied on recommendations from staff at the National Museum of the American Indian in Washington, and the Indian Pueblo Cultural Center in Albuquerque, and by archaeologists such as Larry Baker and Dr William D. Lipe, who worked closely with various Indian language groups in the American Southwest.

If the purpose of Neolithic monuments such as Stonehenge was as a knowledge centre in an emerging complex society, similar structures should be able to be identified in other cultures going through the same process. I soon found many enigmatic monumental structures which fell into the same early settlement stage. In no case could I find analysis of the role of formal knowledge systems in the theorised social structures.

From the many possible options, I chose two sites as secondary case studies. Poverty Point in Louisiana consists of monumental mounds constructed by a hunter-gatherer culture in the early phase of mound building along the Mississippi River. At a more complex social scale, Chaco Canyon in New Mexico was an early Ancestral Puebloan site in the American Southwest, representing a large farming culture. The added advantage of Chaco Canyon was the link to contemporary Pueblo people.

THE STRUCTURE OF THE BOOK

The first chapter of the book introduces the ten material indicators in the archaeological record which may identify the presence of a knowledge elite as the primary purpose for the construction of a monument. In the following chapters, the ethnographic evidence for each indicator is discussed to demonstrate why each indicator has been included as a critical aspect of the maintenance of a non-literate information system.

Viewing oral tradition as a structured information system is an original way to conceive non-literate knowledge systems. The link made between primary

orality and the material mnemonic technologies offers an invaluable segue into the archaeological record. Chapter 1 offers a generalised set of oral and mnemonic technologies to be applied in the archaeological context, referred to throughout as the ‘ten indicators’.

Chapter 2 addresses the relationship between knowledge and power in non-literate cultures which will be used to support the claim that knowledge was the source of power in the ‘egalitarian’ British Neolithic, American Archaic and Ancestral Puebloan cultures.

Chapters 3 and 4 look at the mnemonic technologies used by oral cultures, and generalises these in a way which will aid the recognition of oral technologies in the archaeological record.

Although the role of religion and history are acknowledged as a significant aspect of oral tradition, it is the critical role of the use of plants and animals for pragmatic purposes and as conceptual metaphor that is explored in this book, along with methods for storing information about genealogies, navigation and timekeeping. As control of the ceremonial and agricultural calendar is a powerful role within most, if not all, traditional cultures, astronomical knowledge is seen as a key indicator of a knowledge elite. Astronomy is also explored as used as an aid for navigation and metaphor for myth. Chapters 5 and 6 address the depth of such information stored in a broad range of documented oral cultures.

Five case studies support the theory presented. Chapters 7 and 8 explore these ideas in terms of the Australian Yolngu and the North American Pueblo cultures. Chapters 9, 10 and 11 demonstrate how this theoretical framework may offer a new tool with which to explore enigmatic monuments and associated artefacts. The sedentary agricultural culture centred on Chaco Canyon and the associated outlier communities are considered ancestral to contemporary Puebloan cultures, which can offer insight into the purpose of ritual and ceremonial behaviour in their ancestral sites. Enigmatic aspects of Chacoan material remains appear to fit well with the concept of Chaco Canyon as a knowledge centre. The framework is then applied to the early North American mound-building cultures, in particular the hunter-gatherer site of Poverty Point in Louisiana, offering a new interpretation of the purpose of the mounds and some of the associated artefacts.

Applying this framework to the British and Irish Neolithic, I offer a radically new interpretation for the purpose of these monuments and some of the associated artefacts, and the sociopolitical structure of the cultures who built them. The Stonehenge complex of monuments is examined in detail. The theories currently circulating for the purpose of Stonehenge include an astronomical observatory, a site for healing and a cemetery. These become epiphenomena when the Stonehenge monument complex is explored as a memory theatre for the transition to a sedentary farming community in which the oral specialists become an ever more restrictive social elite.

Cambridge University Press

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Through a theoretical framework for the interpretation of ceremonial sites and decorated objects, this book offers archaeologists a new tool with which to examine old problems.

THE SCOPE OF THIS BOOK

As a result of this research, so many new areas of interest opened up that it is impossible to include more than a portion of the outcomes in this book. Regrettably, a detailed study of mnemonic technologies associated with primary orality was beyond its scope. Only brief reference is made to the orality/literacy divide, which is becoming an ever more blurry line. The impact on art, in particular, is well worth a detailed study. A superficial investigation at museums and art galleries indicated that art styles changed as literacy developed, reflecting the reduction in the role of art as mnemonic to knowledge along with an increase in what appeared to be purely aesthetic properties. A brief overview of the way in which the theoretical framework might offer new insights into a range of other archaeological sites, such as Easter Island and the Nasca Lines, is offered in the final chapter, but will also have to wait until a future publication.

What is not covered in this book, nor will emerge in future, is the way to extract the actual beliefs and knowledge encoded in the mnemonic structures discussed. I do not believe that the specific content of ancient oral knowledge systems can ever be discovered. The knowledge existed only in living memory. However, I do believe that some indication can be found when the archaeological record is explored through the lens of primary orality. For example, it may be possible to link the distribution of formal deposits in ceremonial sites to a ceremonial cycle, indicating what type of knowledge may have been of consequence during particular rituals and ceremonies at particular times of the year. At this stage, I don't believe this kind of analysis could be anything more than highly speculative. I would be delighted to be proven wrong.

It is only through academic debate and the application of the ideas presented in this book by others that the value of the insights offered here can be fully realised.