

# Engaging with History Complexity in the Virtual Environment: The South Seas Project

Paul Turnbull

**Paul Turnbull** of the James Cook University of North Queensland and the Centre for Cross-Cultural Research, Australian National University, is a past President of H-Net: Humanities and Social Sciences On-Line. He has written extensively on racial anatomy since the Age of Enlightenment and the theft of Indigenous Australian ancestral remains. He has co-edited, with Cress Fforde and Jane Hubert, *The Dead and Their Possessions* (Routledge, 2002). Recent essays include 'Rare Work for the Professors: the Entanglement of Aboriginal Ancestral Remains in Phrenological Knowledge', in Hoorn and Creed (eds.), *Cannibalism, Captivity and Colonialism in the Pacific* (Pluto, 2001).

*The South Seas Project is a joint research venture between the Centre for Cross-Cultural Research, James Cook University and the National Library of Australia. It is focused on the creation of a web-based hypermedia edition of the journals and images documenting Cook's momentous first Pacific voyage (1768–71), together with annotations and essays in various media.*

*The creation of such a complex artifact presents various intellectual, conceptual and technical challenges. In this paper, I explore what seem to me some of the more important of these challenges, notably those relating to the cross-cultural nature of Australian and Pacific history. I also reflect on the problems associated with developing a digital information management and publication system that historians can use to engage in the critical practices they have traditionally undertaken and championed through the medium of print-based communication.*

The South Seas Project is a research venture with two main goals. The first is to produce a web-based companion to James Cook's momentous first voyage of discovery of 1768–71. The second is to contribute to the development of low-cost yet relatively sophisticated tools that will provide historians with the means to publish

web-based historical resources embodying what archivists Gavan McCarthy and Joanne Evans have described as the four key principles or functional requirements of web publication: 'citability, coherence, communicability and endurance'.<sup>1</sup>

This second goal reflects our concern to help resolve a major problem facing Australian historians. The debate over the potential of networked scholarly communication now seems like ancient history. As a result of the development of invaluable online historical resources by major libraries, museums, and other cultural institutions, scarcely an objection is made today to the usefulness of the web as a medium for historical scholarship. One can point to a number of exemplary Australian web-based history projects such as the Joseph Banks Papers and Matthew Flinders Archive produced by the State Library of New South Wales, or the growing number of digital editions of historically important texts offered by the SETIS Project at the University of Sydney. However, each of these ventures has required major funding from various public and private sources. They have also been undertaken by library personnel with high levels of technical expertise. They involve using sophisticated and expensive content management systems that only major archives, libraries and museums can afford.

In short, while a growing number of historians also want to create high quality web-based historical resources of substantial complexity, they are currently constrained in their ability to create resources that similarly meet the functional requirements of web-based publication. By collaborating with the Australian Science and Technology Heritage Centre (Austehc) on the development of its Online Heritage Resource Manager (OHRM) and Web Academic Resource Publisher (WARP) software tools, South Seas aims to provide historians with an inexpensive means of contributing intellectual breadth and depth to the emerging Australian digital historical information landscape.

## **A companion to Cook's first voyage, 1768–71**

The South Seas project will produce what could best be described as a companion to James Cook's momentous first voyage of discovery of 1768–71. Whereas the National Library's highly successful *Endeavour* CD-ROM<sup>2</sup> was designed to provide schoolchildren with a general introduction to the first Cook voyage, our companion – like numerous print-based Oxford and Cambridge companions published over the last decade or so – is a more detailed encyclopaedic reference work. Where it also differs from the *Endeavour* CD-ROM is in adapting and translating the organising principles of the companion genre to the virtual information landscape. And of course we are using networked hypermedia to present, interrelate and interpret various aspects of Cook's initial voyage of discovery.

As the name suggests, companions have served as trusted guides, providing knowledge and critical reflections on original writings by significant figures in literature or philosophy, or on major works of a particular cultural epoch, or artistic movement.

South Seas will likewise be a companion in this sense, though it will also give readers scholarly editions of the more important manuscripts, books and pamphlets relating to Cook's first voyage. It will include the complete text of the holograph manuscript of James Cook's *Endeavour* Journal, the journal kept by Joseph Banks on the voyage, now in the possession of the Mitchell Library, and the full text of all three volumes of John Hawkesworth's *Account of the Voyages undertaken ... in the Southern Hemisphere ...*<sup>3</sup> The project will also publish for the first time the complete text of Samuel Wallis' log of the 1766–68 *Dolphin* voyage, together with selected extracts from other journals relating to the first encounter between Britons and the peoples of Tahiti. These texts will be presented on the web so that readers can discern, compare and contrast how occurrences on the voyage struck different participants. Readers will also be able to move with ease between these texts and explanatory commentaries, short articles and reflective essays in both written and hypermedia forms.

The case for a networked digital scholarly edition of the National Library of Australia's manuscript of the Cook Journal is especially compelling. The edition of Cook's journals published by JC Beaglehole, some four decades ago, remains a remarkable scholarly achievement.<sup>4</sup> In his editorial commentaries and accompanying biography of Cook, Beaglehole patiently reconstructed and set in historical context many facets of the voyages. However, the costs involved in reprinting and marketing Beaglehole's edition of Cook's *Endeavour* Journal alone are now such that it can only be consulted by a very small fraction of the many people throughout the world fascinated by the navigator's achievements. Currently, the journal is only available in print as one of five volumes in a reprint of the Beaglehole edition, at a cost of \$2 000.

While time has not diminished Beaglehole's achievement, the concerns and interests of scholars of eighteenth-century Pacific voyaging over the past four decades have nonetheless changed in important respects. So too has the outlook and expectations of their audience. For example, Beaglehole could presume his readers had an elementary acquaintance with the mechanics of sailing and navigation. Today far fewer readers know how a craft such as *Endeavour* was sailed, or easily comprehend the specialist terminology that commanders such as Cook and Wallis routinely employed in the course of their journals. Consequently, the interpretive apparatus of our editions of Cook's and other voyaging journals will include explanations of the sailing and navigational techniques of Cook's era. This will be done partly through providing short articles on nautical terms and techniques, but also by interrelating texts such as the Cook and Wallis journals to an online version of the full text of the revised 1780 edition of William Falconer's *Dictionary of the Marine*.<sup>5</sup>

Scholars writing on voyaging moreover are now engaged a conversation in which the life-ways and peoples whom Cook and his companions encountered command much greater attention, and respect. George Forster, the Enlightenment naturalist, who sailed on Cook's second voyage (1772–75), wrote that Cook's voyaging would 'strike

deep roots and ... long have the most decisive influence on the activity of men.<sup>6</sup> Today Forster's words seem remarkably prescient, and especially so in view of the meanings that Cook has assumed within cultural debates in contemporary Australia and New Zealand. Scholars such as Beaglehole have come to be seen as heirs to a tradition of history writing that was overly teleological, and inherently Eurocentric. They are now seen as having taken for granted that imperial discourses were internally generated and hermetic, and as having relegated the world beyond Europe to the status of periphery. Predictably, they represented indigenous people relative to voyagers as exotic backdrops and objects of European initiatives. At best they allowed indigenous people the reflex agency of friendly or hostile savagery.

One telling illustration of this climate of revisionism is the nomination of the manuscript of the Cook Journal held by the National Library of Australia, together with the papers of Eddie Mabo, for inclusion in UNESCO's Register of the World's Memory. The pairing was deliberate, and the journal was described in the course of nomination as follows:

This is the original document, in Cook's handwriting, of his first exploration voyage in the Pacific on HMS *Endeavour* in 1768–71. The first European charting of the east coast of Australia and the first circumnavigation of New Zealand took place on the voyage. This is the key document which foreshadows British colonization of Australia (which actually began in 1788) and presaged the tragic consequences for Australia's indigenous peoples – the oldest surviving culture on Earth – who, under British law, were effectively deemed not to exist (the 'terra nullius' doctrine).<sup>7</sup>

Both the nominations of the Cook journal and Mabo Papers for inclusion on UNESCO's Register of World Memory were successful. Further, they were rated more highly in terms of significance for international understanding of world history and heritage than the key documents relating to the creation of the federated Commonwealth of Australia.

The shifting meanings and values attributed to Cook's first voyage in Australia's cultural history over the past two and a half centuries is a complex and fascinating subject. So much so, that even though the South Seas Project is generously supported by the National Library of Australia, and has secured funding through the Australian Research Council's industry linkage scheme for 2000–03, we can explore only some of the more salient historical contours of Cook's voyaging.

We have chosen to focus on how the achievements of the voyage were understood within European, and indigenous Oceanic cultures, during the second half of the eighteenth century. However, even this presents formidable challenges. As Glyndwr Williams has shown, the *Endeavour* voyage was the outcome of a growing conviction by Britons that national destiny and fortune lay in the Pacific.<sup>8</sup> The achievements of Cook proved a catalyst for colonial ambition,<sup>9</sup> and provoked a fascination with

indigenous life-ways and culture that Michelle Hetherington, in connection with her recent magnificent exhibition at the National Library of Australia, has aptly described as the 'Cult of the South Seas'.<sup>10</sup> Publishers and booksellers capitalised on this hunger for voyaging narratives, producing numerous editions of accounts by Cook and those who sailed with him on his first and subsequent voyages. Perhaps one of the best illustrations of contemporary demand for voyaging narratives is the first volume of the new *Hawaiian National Bibliography*, covering the years 1780 to 1990. Nearly half the works listed relate to the Cook voyages.<sup>11</sup>

Accounts of the exploits of Cook and those who sailed with him generated interest in other voyages to the Pacific, both real and imaginary. The social diversity of readers enthralled by the South Seas was remarkable, and was reflected in the wide variation in production quality and price of these works.<sup>12</sup> Voyaging narratives were only one part of this rich cultural legacy. Integral to the romance of the South Seas in Enlightenment culture was the desire to see this world and the many curiosities of material culture with which the voyagers returned. Images of voyaging and encounter with the indigenous peoples of Oceania were avidly collected, examined and admired by different but often overlapping metropolitan communities of curiosi, virtuosi and savants. A thriving popular market for South Sea scenes and artifacts emerged. Images initially engraved for inclusion in published accounts of voyages were widely reproduced for a large and socially diverse audience.

This visual record and the many items of material culture procured during the Cook voyages inspired poetry. They also inspired theatrical works and what, in their day, were experiments in multimedia, such as the highly popular pantomime of 1785–89, *Omai; or, a Trip round the World*, which featured dazzling scene designs and costumes by the celebrated painter and stage illusionist, Jacques Phillipe de Louterbourg.<sup>13</sup> The visual record of the Cook voyages was also to assume critical importance in the evolution of late eighteenth-century anthropological thought, and, by the end of the century, ideas of racial difference.

Much as in print-based works like the recent *Age of Revolution and Romanticism: An Oxford Companion*, the South Seas Project will offer a range of essays and short articles.<sup>14</sup> Many will seek to explicate the meanings and values Cook's first voyage assumed in eighteenth-century European culture, although there will be some exploration of the more influential or interesting ways in which Cook's achievements have been interpreted and represented in the subsequent course of Australian history.

## **Cross-cultural history in hypermedia: New partnerships and challenges**

In focusing on the cultural legacies of the first Cook voyage, we are particularly concerned to build upon research over the past decade that has sought to redress the

failure of earlier scholarship on Cook and contemporary European voyagers in one particular respect. This, as previously mentioned, is in its failure to explore the actual extent of indigenous agency in shaping European perceptions and subsequent discourses on the life-ways and cultures of the peoples of Oceania.

As Bernard Smith, Greg Denning, Anne Salmond and Nicholas Thomas have shown, there is still much to learn about the complexity of cross-cultural interactions in Oceania during the second half of the eighteenth century.<sup>15</sup> Drawing on Bernard Smith's pioneering study of how the wealth of visual imagery produced by late eighteenth-century European voyagers shaped European perceptions of indigenous Australian and Oceanic societies, Salmond and Thomas have written compelling studies of the cross-cultural interactions that occurred during Cook's voyaging. They have shown in particular how the lives of indigenous peoples and Europeans were changed through the play of complex, fluid and sometimes extremely localised cultural forces.

In the process, Salmond and Thomas moreover have highlighted the conceptual limitations of relying solely on the printed word to explain the actions and likely intentions of indigenous peoples as recorded by voyagers.<sup>16</sup>

Over the past decade, a small number of historians in Australia and the Pacific have begun exploring whether visual and sonic softwares can simulate the cognitive weight that oral, visual and kinaesthetic modes of communication have in representing the past. Some have sought to assess whether these new tools can be employed in ways that explain histories of cross-cultural interaction with greater accuracy than print-based narration allows.<sup>17</sup>

In the South Seas Project, we are similarly engaged in exploring whether hypermedia can be a means of transcending the conceptual limitations of working purely with words. Our sense is that the cheap and 'user-friendly' tools now available for interrelating text, vision and sound offer great potential for representing the historical intricacies of cross-cultural interaction, and for doing so in ways that elucidate the often neglected historical significance of visual sources and items of material culture. They appear to offer greater potential for strengthening indigenous interpretations of past events, and for illuminating hitherto overlooked signs of indigenous agency in determining what occurred. However, at this stage of the project, we can speak only of the *potential* of hypermedia.

One lesson to be drawn from the works of historians and philosophers of science over the past two decades is that the knowledge produced through the employment of a specific technology is also the product of the cultural resources to hand. Indeed, the history of the biomedical sciences in Australia and Oceania in the century after 1840 is characterised by numerous disturbing examples of where regimes of measurement and analytical techniques deemed entirely free of subjectivity fabricated 'truths' of indigenous inferiority. Before assessing the potential of hypermedia, our

aims and assumptions need to be scrutinised by indigenous colleagues and knowledge custodians. The burden of our colonial past requires that we resolve to everyone's satisfaction how these resources will be created, and the cultural protocols and agreements in respect of intellectual property to be observed in their presentation by the web.

Conversations so far suggest that we would do well to draw on the experiences of those researchers who of late have been involved in recuperative community histories. Like these projects, South Seas will need to ensure not only that indigenous participants have ownership and control of the resources we produce, but also that we produce information resources that fulfil community expectations in respect of heritage and culture. This could well mean the 'repatriation' of information in digital formats for use in cultural centres, school curricula and cultural tourism initiatives.

Indigenous control and ownership of information raises further questions. Irrespective of the specific nature of the information appearing on the web, there will be a lot of information. This means developing a content management and publication system that can automate much of the routine work involved in the creation, storage and presentation of a large number of different kinds of digital objects. Several researchers on the project have a long history of involvement in the construction of heritage and historical websites.

They know from experience that automating the more mundane tasks of creating and managing web-based resources can allow time and energy to be focused on ensuring the coherence and accuracy of the information presented. Further, what is produced must comply with, and in some respects be designed to anticipate, emerging standards for creating and describing networked information resources. Otherwise what is produced will neither be found easily, nor will it enable the kind of informed and reflective discussion we hope South Seas will encourage.

At the same time, information management needs must not compromise the intellectual and cultural integrity of the information being offered.

In thinking about how to ensure the intellectual and cultural integrity, the disciplines of ethnographic filmmaking and oral history obviously afford valuable lessons, given that objects presenting indigenous perspectives on the past are likely to be streaming video clips or blends of sound and still images. There is also possibly much to learn from indigenous knowledge systems.

For example, the knowledge system of the Yarralin people of the Victoria River district of Australia's Northern Territory is underwritten by the presumption that all sentient beings are not just created by ancestral spirits, but are the living embodiment of those creative entities. Each being moreover is conscious of its place and purpose within the schema of ancestral creation, and communicates aspects of that knowledge

to other beings. Hence the investigation and appraisal of phenomena is a process of learning what things say about themselves and other beings. As Deborah Bird Rose writes of the Yarralin, they see their country as 'alive with information for those who have learned to understand':

Crocodiles (*Crocodylus johnstoni*), for instance, only lay their eggs at one time of the year. Yarralin people know that it is time to hunt for crocodile eggs when the black march flies start biting. These annoying flies carry a message: 'the March flies are telling you the eggs are ready'. This sort of knowledge is accurate. If we know that crocodiles lay their eggs toward the end of the dry season, the calendar can tell us that they will probably start sometime in September or October. March flies tell us exactly.

Yarralin do not understand this relationship, as western observers would, in terms of cause and effect, as Bird explains:

No one tells the March flies to bite because the crocodiles are laying eggs. Rather, in the big river country where Yarralin is located, March flies know when it is time to hatch and forage. Their time is also crocodile time. Neither causes the other, nor is caused by an external other. In following their own Laws they communicate themselves; those who know the interconnections find information in their actions.<sup>18</sup>

To the outsider, the attributes of fellow beings discernible to Yarralin clearly reflect a specific cultural geography. So too does the knowledge they acquire from studying the relations between beings.

This is not to suggest that western science has managed to avoid precipitating into its practices and intellectual products the wider cultural forces in which it is located. As much recent historical research has demonstrated, western science equally has a cultural history. Where western knowledge systems differ from indigenous ways of knowing is in how they speak about our fundamental relations to objects.

It has been helpful to think of the character of knowledge systems such as that of the Yarralin when conceptualising our requirements for a content management and publication system. It has led us to think of a system in which the burden of interpretation rests with those involved in the creation of specific digital objects, or the design user interfaces through which these objects may be accessed.

We want to ensure that objects reside within an information framework that enables them to 'tell things about themselves', while conveying what they say in ways that ensure they are easily discovered, archived and capable of being interrelated with additional objects situated within other virtual resources.

To this end, the project team spent several weeks in September 2000 thinking about the essential categories in which eighteenth-century European, Maohi and indigenous Australian societies understand the world.



Importantly, this exercise took place some weeks after a chance conversation with Gavan McCarthy, Director of the Australian Science and Technology Heritage Centre. From Gavan we learnt about two tools developed by the Centre: the Online Heritage Resource Manager (OHRM) and the Web Academic Resource Publisher (WARP).<sup>19</sup>

When we took up comparing European, Oceanic and indigenous Australian classificatory systems, the logic and functionality of the OHRM and WARP tools provided us with a valuable guide. They enabled us to experiment with distilling the complexities of these classificatory schemas into a typology that preserved, and extended without undue complication, the descriptive schema currently employed within the international archival community to organise presentation of heritage and historical information by the web.

The results of this exercise were far from perfect and, at the time, provoked dissent within the project team. For example, what Europeans ordinarily take to be a natural phenomenon was understood within the traditional Maohi cosmology as a manifestation of one or more of the gods. However, after engaging the problem over several weeks, it became clear that describing the entities likely to be encountered in the course of the project beyond place, time, people, organisations, natural phenomena, cultural artifacts and concepts risked introducing too much complexity into the system.

Also, it struck us that most necessary distinctions in how entities were perceived in different cultural contexts could be acknowledged and explored within interpretive texts, video and other objects. By keeping the number of entity types small to gain efficiencies of information management, it should be possible to ensure easy discovery of objects within a complex web of interrelationships while minimising the interpretive function of hyperlinks.

Enhancing discovery will also help prevent the infringement of rights in respect of indigenous knowledge if and when such knowledge is offered in connection with the project. In contemporary Australia, infringements of indigenous intellectual and cultural rights in print rarely happen, and when they do are relatively easily discovered. They rarely happen because non-indigenous authors generally respect indigenous rights and aim to behave with 'good manners' in dealing with matters of religious or cultural significance. Infringement of rights are relatively easily discovered because of the existence of bibliographic standards and systems enabling the efficient and accurate retrieval of print-based information sources, be they scholarly books, popular magazines or newspaper articles. We need similar mechanisms for encouraging 'good manners' in the networked information landscape.

Over the next year we will be engaged in developing and refining a content management and publication system, based on the OHRM and WARP tools developed by the Australian Science and Technology Heritage Centre. At the same time, we will complete the editions of the journals and other historical documents that lie at the core of this

networked digital companion, together with annotations, commentaries and a range of interpretive essays. When these tasks are substantially completed, we will turn our attention to exploring the potential of hypermedia for cross-cultural history.

## South Seas and the National Library

South Seas, as mentioned above, is supported by the Australian Research Council's industry linkage program. It is one of a small number of research projects involving humanities scholars currently funded by the program, and like a number of these projects involves scholars and staff of a major cultural institution researching issues of mutual interest.

In our partnership with the National Library of Australia, we are particularly concerned to identify solutions for making a greater proportion of the Library's wealth of documentary and visual resources relating to European Pacific and cross-cultural encounter in the eighteenth-century Pacific widely available in useful, electronic forms.

The National Library is determined to ensure all Australians have access to the historical record of Australia and, as far as possible, that of our region. In fact, since its foundation in 1901, the Library has placed a high priority on preserving our cultural memory as a source of vicarious knowledge by which we might realistically envisage the future. In common with other major cultural institutions, over the past decade, the Library has sought to improve access to historical information illuminating our cultural diversity and the evolution of our social institutions.

The Library's collections tell many stories about us, as individuals, communities and as a nation. However, in common with other cultural institutions, the Library is conscious how much more could be learnt if it were possible to transcend the physical and funding constraints on its desires to bring its collections to a much wider audience.

The National Library has a long history of identifying and exploiting the potential of new information technologies that goes back to the early 1950s, and the then Director-General Harold White's championing of microfilm, electrostatic copying and teletext.<sup>20</sup> Since the late 1970s, much of the research and development work undertaken within the National Library has been directed towards creating systems for meeting the information needs of readers who may rarely or perhaps never visit the Library. With the rapid integration of networked digital technologies into the fabric of everyday life since the mid-1990s, the Library has invested heavily in the development of digital services and networked information resources.

The National Library has been particularly concerned to address growing demand on the part of schools and many younger Australians for online access to historical information resources. However, the costs of digitally reproducing documents and visual sources are such that, for the foreseeable future, only a minute fraction of what

the Library holds can be reproduced in digital forms. Acknowledging that it must necessarily be highly selective in what it offers virtually, the Library has sought to identify items in its collections that currently interest Australian researchers, educators and the general public.

One collection in particular has captured the imagination of literary scholars and historians since its purchase in the early 1960s: the 15 000 rare and important maps, manuscripts, prints, paintings and books relating to Australian and Pacific exploration collected by Rex Nan Kivell.<sup>21</sup> Scholarly interest in the Nan Kivell collection has moreover been heightened over the past six or so years by the Library's sponsorship of the David Nichol Smith Conference, at which the history of Pacific voyaging and cross-cultural encounter in the eighteenth century have been major themes.

The South Seas Project has selected for digitisation by the Library some of the more historically significant items in the Nan Kivell collection, supplemented by materials in other collections such as the manuscript of the Cook journal. In our choice of materials, and in accompanying articles and essays, we hope to stimulate new avenues of historical inquiry, and ideally encourage other scholars of voyaging to contribute to the project.

However, this raises the question of how hypermedia can best be integrated into conventional history practice. Today a growing number of projects serve to demonstrate that networked hypermedia can be used to enrich history teaching and learning, and as media not simply for the dissemination of research outcomes, but also for undertaking research. The criticisms that historians wanting to work in hypermedia regularly confronted in departmental seminars and at conferences in the early days of the web are rarely if ever heard these days. Prejudice remains, though these days it tends to be confined to conservative colleagues championing the book as the only medium allowing the past to be reconstructed, in all its richness and complexity, in promotion committees and when anonymously refereeing research applications.

South Seas encountered the latter in late 2000, incidentally, when first applying to the Australian Research Council's Industry Partnership Research Scheme. The project was damned by one referee as 'not research' on the grounds that we were foolish enough to believe it necessary and possible to establish standards for ensuring the discovery, on-going management and archiving of historical information in digital forms.

Even though a growing number of historians are investing time and intellectual energy in the creation of hypermedia, there are problems to be resolved before it can be said that is possible to engage in the same, or analogous, practices in hypermedia that have traditionally been sustained by printed-based communication.

Consider how the cycle of creation, reception and revision of historical knowledge sustained by print-based publication routinely occurs. Drawing on another researcher's

work, whether for the purpose of validation, revision or pointing out inaccuracies or incompleteness, involves the employment of various technical conventions, the most obvious being quotation and referencing the work in question. Writing a history book or journal article moreover rarely involves quotation or referencing the work of one or two scholars. Books dealing with major themes in nineteenth-century Australian history, for example, can make reference to over 500 other books and articles and contain equally as many references to unpublished archival sources.

History students quickly learn that accuracy in citation is paramount. But in the routine ebb and flow of debate between historians, the accuracy or otherwise of quotations or references are questioned only when by virtue of close acquaintance with a particular book or archival sources a researcher senses that something is wrong. Scholarly discourse ordinarily proceeds on trust. We accept that work published by scholarly presses has been scrutinised by experts. In the course of reading the work we may note the publication details or location of a source that has been used. Rarely if ever do we take the work to an archives or library and systematically assess the accuracy or otherwise of the references it contains. If we did historical discourse would grind to a halt.

Looking at the conventions within print that sustain historical practice in this way serves to highlight what is arguably the greatest challenge confronting historians wanting to use hypermedia as a research medium: persistence. Currently we cannot be sure online digital materials will continue to exist, or be sure that if they do, they can easily be found and used.

In the virtual realm, we as yet have only rudimentary mechanisms for sustaining the conditions of trust enabling the repertoire of practices employed in print-based historical scholarship. Consider the case of the South Seas 'companion'. Quotation and references to print-based or archival resources poses no problem. But how do we create a work in which complex interrelationships are drawn between digital objects that reside within the project, or are located elsewhere in the virtual information landscape? With print-based monographs, the matrix of information in which the book is anchored, and which underpins the determination of its significance, meaning and trustworthiness is stable, and will remain so. Indeed, it is likely to become more secure by virtue of bibliographical software and online resource finding aids making it easier for writers of books and paper-based journals to provide accurate references to print-based materials.

By way of contrast, the apparatus sustaining hypermedia-based scholarship currently has the stability of a house of cards.<sup>22</sup> The matrix in which it is located is easily broken or fractured as websites are redesigned, or moved to new domains – the phenomenon sceptics call 'link rot'. Compounding the problem is the growing use by cultural institutions of dynamic databases, from which web pages are generated on the basis of user queries. This may make sense for internal information management purposes,

but dynamic rendering makes it difficult, and often impossible, for others to create hypermedia resources that rely upon being able to make persistent and citable links to specific pieces of information.

In order to resolve the latter problem, our decision has been to embrace the approach to content management and web publication exemplified by OHRM and WARP. This approach involves employing a system wherein there is clear separation of content from HTML/XML output. In other words, the journals, essays and other core texts of South Seas will be rendered as static HTML pages. Links within South Seas will never unintentionally change name nor break.

However, this approach, coupled with providing detailed metadata in each page of the site, is only a partial solution for stabilising discovery and use of South Seas Project resources. As the National Library has maintained for several years, what is needed to achieve stability in the ever-changing virtual landscape is the employment by creators of information of a reliable and widely endorsed scheme for persistent identification and permanent naming of Internet resources.

Recently, the Library commissioned a detailed study of the strengths and weaknesses of various identification systems.<sup>23</sup> It is now in the process of refining a scheme, which South Seas Project will employ in order to test how well it allows the creation of resources which refer to objects in various Library information resources, such as the online map collection, and the Images One pictorial database. In fact, a distinguishing feature of South Seas will be that visual images and maps digitised for the project will not actually reside in the same digital repository as the project's editions of voyaging accounts and accompanying essays, articles and hypermedia resources. Images and maps will be added to existing digital repositories and linked to the project through the Library's persistent identification scheme.

The 'distributed' nature of South Seas will mean that, in the future, it should be relatively easy by means of metadata to use specialist software applications to discover not only South Seas content, but also related digital information resources held within other national and overseas cultural institutions. For example, a wealth of nautical charts, sketches, cultural artifacts, biological and zoological drawings and specimens gathered during the course of the three Cook voyages exist in museums and libraries throughout the world. As cultural institutions are gradually making information about these materials accessible through the web, it becomes possible to bring this wealth of information together virtually in interesting and useful ways.

## **Historians and the emerging virtual historical landscape**

The migration of historical practice into the networked environment is underway. So far it has largely been a response by professional historians to the steadily worsening

economics of print-based scholarly publication. However, a growing number of historians are alert to the fact that widespread social application of networked communication has, among many other things, disposed Australians to want historical information in digital forms. As I argued elsewhere, we have got to the stage where Australian historians not only need to go public but also cannot afford to ignore engaging with new online audiences.<sup>24</sup> The recent National Inquiry into School History Teaching has likewise concluded that the history profession needs to explore the implications of increased use of information technology in history teaching and learning.<sup>25</sup>

The sense of the South Seas team is that we will see increasing demand not just for digital history, but for online resources that encourage interactivity. Much as the practice of public history is centered on encouraging community participation in critically knowing the past, hypermedia history is likely to evolve in ways that facilitate public discovery and active participation in reinterpreting the past.

As familiarity with technology becomes more widespread, what seems likely to emerge is an information landscape comprised of resources created by individuals, community organisations, schools and local cultural institutions.

The challenge for historians will be to encourage the creation of resources that encourage a rich sense of historical consciousness and minimises the tendency of history to evaporate in the play of techno-cultural discourse associated with the web. Together with digital librarians, they will also need to encourage the creation of resources that incorporate standards for information discovery, use and preservation. If an historically informed and stable landscape emerges, exciting things will be possible, such as the creation of software applications that aggregate, interrogate and interpret large amounts of content – to generate and share new insights into our history and cultural heritage.

However, online resources that aim to represent the past in its richness and complexity are necessarily complex artifacts in information management terms. They require tasks such as accurate meta-description, indexing of content, and management of hyper-relationships between digital objects to be automated where possible. Content management and publication systems that alleviate these burdens and allow concentration to be focused on the intellectual worth of what is being prepared for online publication are beyond the budget of even medium-sized cultural institutions, and likely to remain so.

Indeed, the capacity of universities, local cultural institutions and organisations to buy commercial systems for creating networked historical information resources is limited, and the economics of using such systems to produce resources are even less attractive to commercial publishers than the production of conventional historical books.

The issue is no longer one of whether Australian historians will embrace networked digital communication, but rather how they can overcome resource constraints to share their expertise and insight with new audiences through the web. There are a growing number of excellent online resources produced by leading Australian libraries, archives and museums. But if left to these institutions alone, the growth of a trustworthy historical information landscape will be slow and necessarily selective. Also, for every one good resource currently on the web, there are many created by enthusiastic amateurs containing factual inaccuracies or offering dubious interpretations of events. We believe it is vital that historians have the means to participate in the creation of web-based resources. If we do not find economic and effective ways for them to do so, then we run the very serious risk of leaving people to imagine the past in inaccurate and trivial ways.

## ENDNOTES

- 1 Gavan McCarthy and Joanne Evans, 'The Open Resource Scholarly Network: New Collaborative Partnerships between Academics, Libraries, Archives and Museums', unpublished paper presented at VALA 2002 Conference, Melbourne, 6–8 February 2002.
- 2 [www.nla.gov.au/pub/endeavour/](http://www.nla.gov.au/pub/endeavour/).
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