Historicising Human Antiquity in Australia, 1860-1960

Amy Elizabeth Way, B.A., M.Res.

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Department of History and Archaeology

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Statement of Originality

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

Signed: _____ Date: _____16/12/2020_____

Amy Elizabeth Way

To Alison Perry,
and Alison Holland,
who kept me fighting.

To Michael Way,
and Michael Nicholls,
who kept me smiling.

And to Caitlin Adams,
who edified me in, and with,
sense, sensibility
and sisterhood.

Table of Contents

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Abstract

In 1859, leading British scientists reached a consensus that overthrew traditional chronologies and asserted that human beings had existed on Earth for upwards of hundreds of thousands of years. For Australian historians and archaeologists, the consensus on human antiquity was an intellectual revolution that would not be fully realised in Australia for another century. Existing literature argues that the reality of Australia's extensive Aboriginal occupation was not 'discovered' or broadly understood until the 1960s, when the twin revolutions of professional archaeology and radiocarbon dating propelled the country's human history into the national and international spotlight. Until this point, common settler understandings placed Aboriginal Australians at only a few thousand years old.

This dissertation contests the claim that it took one hundred years to apply an understanding of human antiquity to Australia's Aboriginal population. In the decades following the British consensus in 1859, Australia's human antiquity *was* Aboriginal, but as the twentieth century dawned, public and professional recognition of that aboriginality began to turn on a dime of racial politics and shifting methodological goalposts. By warping their disciplinary paradigms, scientists could claim a deep *human* past for Australia, while simultaneously maintaining that Aboriginal antiquity was 'not proven.' Even in moments when a distinctly Aboriginal antiquity was proven, such knowledge was often disconnected from living Aboriginal peoples. Current scholarship claims there was no 'scientific' discovery of Aboriginal antiquity until the 1960s because evidentiary support and appropriate professional interpretation was lacking. These narratives' oversimplified periodisation of amateur versus professional, ignorance versus enlightenment, not only elide the shifting levels of recognition that were given to Australia's human antiquity, but ignore the nuanced and insidious process of contradictory cognition and intellectual dispossession that professional scientists were all too embroiled in. To redress these narratives, this dissertation refocuses a historical gaze on the concept of human antiquity in an in-depth intellectual history of its conceptualisation in Australia. Doing so provides crucial context for Australia's current academic interest in the deep human past, while also confronting the role it plays in national and cultural narratives.

Introduction

The Fiction of a New Beginning: Aboriginal antiquity in histories of deep time

'Each scientific revolution alters the historical perspective of the community that experiences it.'[1]

In Aberdeen, Scotland, September 1859, at the 29th meeting of the British Association for the Advancement of Science, eminent geologist Sir Charles Lyell addressed the society's geological section. 'No subject,' he began, 'has lately excited more curiosity and general interest…than the question of the antiquity of the human race.'[2] For much of the early nineteenth century, discoveries had been made across Britain and continental Europe suggesting the age of the human species should be 'carried further back in time than ever before imagined.'[3] Many of these discoveries, however, had been met with caution and reluctance. Lyell himself had stated only four years earlier there was 'every reason to infer' the human race was 'extremely modern.'[4] And yet, after hearing of the recent excavations at Brixham Cave, in southwestern England, and having examined a set of flint implements collected from France, Lyell conceded the evidence now suggested a human antiquity that was 'great indeed if compared to the times of history or tradition.'[5] Despite its brevity, the significance of Lyell's three-page address was not lost on his audience. Although not personally responsible for the research that had led to the

[1] Thomas S. Kuhn, *The Structure of Scientific Revolutions: Fourth Edition*, (Chicago: The University of Chicago Press, 2012), xliii
[2] Charles Lyell, "Introductory Address by the President: On the Occurrence of Works of Human Art in Post-Pliocene Deposits," *Report of the 29th Meeting of the British Association for the Advancement of Science (1859)*, (London: Taylor and Francis, 1860), 93
[3] Lyell, "Introductory Address by the President: On the Occurrence of Works of Human Art in Post-Pliocene Deposits," 93
[4] Charles Lyell, *Principles of Geology; or the Modern Changes of the Earth and Its Inhabitants*, Ninth Edition, (London: J. Murray, 1855), 148
[5] Lyell, "Introductory Address by the President: On the Occurrence of Works of Human Art in Post-Pliocene Deposits," 94

announcement, Lyell's status as one of Britain's most prolific and esteemed geological authorities gave his opinion considerable weight in Britain, and indeed, with interested audiences abroad. After decades of squabbling and proclamations from scholars whose qualifications, or nationality, appeared questionable, Lyell's address marked a British-led consensus on the idea that human beings were ancient on earth, pushing the Bible's suggested 6,000-year timeline for human history to one that encompassed hundreds of thousands of years.

Lyell's address, and the broader intellectual moment of which it was a part, has long been recognised as a watershed in humanity's conception of their own past.[6] Announced just two months before the publication of Charles Darwin's ground-breaking *On The Origin Of Species*, the 1859 acceptance of 'the antiquity of man' features frequently in scholarship as a revolutionary beginning; the dawn of a new age of scientific and intellectual thought. For Australian historians and archaeologists, however, the consensus on human antiquity was an intellectual revolution that would not be fully realised for another one hundred years. While humans as a species may have been ancient on earth, the reality of Australia's extensive Aboriginal occupation, it is argued, was not 'discovered' or even broadly understood until the 1960s, when the 'twin revolutions' of professional archaeology and radiocarbon dating propelled the continent's human history into the national and international spotlight.[7] Up until this point, the common understanding of Australia's human past placed Aboriginal Australians at only a few thousand years old.

The notion that it took until the 1960s for scientists in particular, and non-Indigenous Australians in general, to gain a proper understanding of Australia's vast human antiquity is chiselled into the bedrock of Australian archaeology. It is part of a larger foundational narrative that positions the discipline's mid-century formalisation as the decisive break between an amateur period of sporadic 'skulduggery' and the later boom of

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[6] See Jacob W. Gruber, "Brixham Cave and the Antiquity of Man," in *Histories of Archaeology: A Reader in the History of Archaeology*, eds. Tim Murray and Christopher Evans (Oxford: Oxford University Press, 2008), 42

[7] Tom Griffiths, *Hunters and Collectors: The Antiquarian Imagination in Australia,* (Melbourne: Cambridge University Press, 1996), 58

professionalism that rescued Australia from its status as an archaeological 'backwater.'[8] The longevity of this narrative—indeed, its very existence—is owed almost entirely to the influential scholarship of John Mulvaney, the 'Father of Australian archaeology.' Born in Victoria and trained at Cambridge, Mulvaney forged his career in the 1950s and 1960s as Australia's first 'professional' archaeologist, a position that allowed him to shape both the discipline and its history around himself. From his earliest publications, Mulvaney defined the 'prevailing view' of his predecessors as one that saw Aboriginal Australians arriving 'late' on the continent with a homogenous culture that had undergone little change since.[9] He then spent the majority of his career correcting this view, utilising developments in radiocarbon dating and the changing landscape of Australian universities to deliver the long-awaited proof of Australia's staggering human antiquity.[10] There is no doubting

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[8] For references to 'skulduggery' see Tom Griffiths, "Victorian Skulduggery," in *Hunters and Collectors: The Antiquarian Imagination in Australia,* (Melbourne: Cambridge University Press, 1996), 28-54; and Billy Griffiths, *Deep Time Dreaming: Uncovering Ancient Australia*, (Carlton: Black Inc., 2018), 8. For examples of disciplinary histories that maintain the divide between 'amateur' and 'professional,' see Tim Murray and J. Peter White, "Cambridge in the Bush? Archaeology in Australia and New Guinea," *World Archaeology* 13 (1981): 255–263; D.J. Mulvaney, "Past Regained, Future Lost: The Kow Swamp Pleistocene Burials," *Antiquity* 65 (1991): 12–21. For a similar history with explicit reference to Australia as an 'archaeological backwater' see Sarah Colley, *Uncovering Australia: Archaeology, Indigenous people and the public* (Crows Nest: Allen & Unwin, 2002), 6.

[9] This argument was made early and explicitly in Derek John Mulvaney, "The Stone Age of Australia," *Proceedings of the Prehistoric Society* 27 (1961), 60, but is repeated throughout much of his scholarship.

[10] See DJ Mulvaney, "The Australian Aborigines 1606–1929: Opinion and Fieldwork, parts 1 and 2. *Historical Studies – Australia and New Zealand* 8 (1958): 131–151, 297–314; DJ Mulvaney, "Anthropology in Victoria 100 Years ago," *Proceedings of the Royal Society of Victoria* 73 (1959): 47–50; DJ Mulvaney, "Archaeological Excavations at Fromm's Landing, on the Lower Murray River," *Proceedings of the Royal Society of Victoria* 72 (1960): 53–85; DJ Mulvaney, "Recent Archaeological Excavations in Australia," *Journal of the Polynesian Society* 69:2 (1960): 151–153; DJ Mulvaney, "The Stone Age of Australia," *Proceedings of the Prehistoric Society* 27 (1961): 56–107; DJ Mulvaney, "Advancing Frontiers in Australian Archaeology," *Oceania* 33:2 (1962): 135–138; DJ Mulvaney, "Australian Archaeology 1929-1964: Problems and Policies," *Australian Journal of Science* 27:2 (1964): 39–44; DJ Mulvaney, "Prehistory of the Basalt Plains," P*roceedings of the Royal Society of Victoria* 77 (1964): 427–432; DJ Mulvaney, "Fact, Fancy and Aboriginal Australian Ethnic Origins," *Mankind* 6 (1966): 299–305; DJ Mulvaney, *The Prehistory of Australia,* (New York: Praeger, 1969); DJ Mulvaney, "Aboriginal Social Evolution: A Retrospective View," in DJ Mulvaney and Jack Golson (eds.), *Aboriginal Man and Environment in Australia*, (Canberra: Australian National University Press, 1971): 368–380; DJ Mulvaney, "Prehistory from Antipodean Perspectives," *Proceedings of the Prehistoric Society* 37 (1971): 228–252; DJ Mulvaney, "Classification and Typology in Australia: The First 340 Years," in Richard V.S. Wright (ed.), *Stone Tools as Cultural Markers: Change, Evolution and Complexity,* (Canberra: Australian Institute of Aboriginal Studies, 1977): 263–268; DJ Mulvaney, "Archaeological Retrospect 9," *Antiquity* 60 (1986): 96–107; DJ Mulvaney, "Past Regained, Future Lost: The Kow Swamp Pleistocene Burials," *Antiquity* 65 (1991): 12–21; DJ Mulvaney, "Australian Anthropology: Foundations and Funding," *Aboriginal History* 17:2 (1993): 105–128; DJ Mulvaney, "Sesqui-Centenary to Bicentenary: Reflections of a Museologist," *Records of the Australian*

Mulvaney's immense contribution to the development of Australian archaeology; yet the historical narrative embedded in his work, with its periodisation of amateur versus professional, and ignorance versus enlightenment, has left a legacy in Australian history that has remained largely unchallenged.

This dissertation contests the claim it took almost one hundred years to apply an understanding of human antiquity to Australia's Aboriginal population. Lyell's lecture, and the scientific knowledge it contained, was immediately transposed to Australian shores. As this dissertation shows, human antiquity became the subject of a lively public discussion in the Australian colonies in the 1860s, and it continued to capture professional and public attention for the next one hundred years. At various points, Australia's human antiquity was even proven to the contemporary standards of professional science, allowing Australian intellectuals to garner academic clout both locally and abroad. It was the status of Australia's *Aboriginal* antiquity, however, that was fluid; transitioning from proven, to not proven, to proven only by specific tribal groups or disembodied objects of material culture.

While this may seem an antithetical statement, it speaks to the key finding of this dissertation: over the century between the 1859 British consensus on human antiquity, and the 'radiocarbon revolution' of the 1960s, Aboriginal antiquity and human antiquity became two separate intellectual concepts in Australia. In those one hundred years, Australia's public and professional acknowledgement of Aboriginal antiquity frequently turned on a dime of racial politics and shifting methodological goalposts. By warping their disciplinary standards, scientists could claim a deep *human* past for Australia while simultaneously leaving a question mark above the existence and longevity of Aboriginal peoples; all during the foundational decades of the nation's professional scientific disciplines. Current histories that claim to explore human antiquity in Australia not only elide the different levels of recognition given to Australia's two concepts of antiquity, but also ignore the alarming instances in which Aboriginal antiquity was indeed recognised but

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Museum, Supplement 17 (1993): 17–24; John Mulvaney and Johan Kamminga, *Prehistory of Australia*, (St Leonards: Allen & Unwin, 1999); John Mulvaney, *Digging up a Past*, (Sydney: UNSW Press, 2011).

simultaneously disconnected from living Aboriginal peoples. Current narratives perpetuate the notion there was no scientific 'discovery' of human antiquity in Australia because it lacked the appropriate evidence and interpretation, rather than acknowledging the more insidious process of contradictory cognition and intellectual dispossession that professional scientists were all too embroiled in.

Redressing contemporary narratives and refocusing a historical gaze on the concept of human antiquity is crucial for a settler nation that is, at present, overtly conscious of its deep past. The majority of non-Indigenous Australians are now aware that Australia's diverse Aboriginal cultures are among the oldest continuing cultures on earth, with the figure of 40,000-years of Indigenous occupation featuring prominently in public discourse since the 1980s.[11] Meanwhile, contemporary academic research continues to push this antiquity further and further back in time. In July 2017, a team of archaeologists dated a 'treasure trove' of human artefacts in Kakadu National Park to 65,000 years old, and in March 2019, geologists working in Warrnambool, Victoria, argued for a human habitation of up to 120,000 years.[12] The value many settler Australians give to the cultural sites of Aboriginal and Torres Strait Islander peoples was on full display earlier this year, when mining multinational Rio Tinto Group detonated a series of sacred cave structures in Juukan Gorge, Western Australia. The destruction of the sites, whose artefacts evinced 46,000 years of continual occupation and provided a 4,000-year genetic link to the Puutu

[11] Recognition of this time-depth has been woven into the structures of Australia's cultural landscape; one conspicuous example are the widespread protocols around acknowledgement and 'Welcome to Country.' This does not suggest, however, that all Australians are equally committed to, or receptive of, the recognition of Aboriginal history and culture in Australia. See Mark McKenna, "Tokenism or belated recognition? Welcome to Country and the emergence of Indigenous protocol in Australia, 1991-2014," *Journal of Australian Studies* 38:4 (2014): 476-489.

[12] See Jim M. Bowler, David M. Price, John E. Sherwood and Stephen P. Carey, "The Moyjil site, south-west Victoria, Australia: fire and environment in a 120,000-year coastal midden — nature or people?" *Proceedings of the Royal Society of Victoria* 130 (2018), 71-93; T. Wright, "The Coast Diaries: Warrnambool, where human history may be rewritten," *The Age*, December 30, 2019; G. McCubbing, "Years of research solidifies into re-think of history of Australia and the world," *The Standard*, March 28, 2019; P. Daley, "'A big jump': People might have lived in Australia twice as long as we thought," *The Guardian*, March 11, 2019; Chris Clarkson, Zenobia Jacobs, and Richard Fullagar, et. al., "Human occupation of northern Australia by 65,000 years ago," *Nature* 547:7663 (2017), 306-210; G. Weule and F. James, "Indigenous rock shelter in Top End pushes Australia's human history back to 65,000 years," *ABC Science*, July 20, 2017; H. Davidson and C. Wahlquist, "Australian dig finds evidence of Aboriginal habitation up to 80,000 years ago," *The Guardian*, July 20, 2017.

Kunti Kurrama and Pinikura traditional owners of the region, sparked widespread condemnation in Australia and overseas.[13]

The concept of a deep human past has also captivated Australian academia, with some of the nation's leading historians using it to place traditional, colonial histories within more cohesive narratives of the human species, the Earth, and even the universe.[14] While such scholarship is connected to broader, international trends in interdisciplinary and scalar history,[15] Australia's extensive human and geological antiquity offers unique parables for deep history. Indeed, historian Tom Griffiths argues that such frameworks are uniquely grown out of the experience of living on the Australian continent, while the late Greg Dening saw Australia as an ideal historical context given that all of its people live in and with the deep time of their past.[16] Recent and forthcoming scholarship from historians such as Ann McGrath, Alison Bashford, Billy Griffiths, Laura Rademaker, Ben Silverstein, and Jarrod Hore are deeply invested in reframing Australian history and historiography by engaging with geological time, global cosmologies, and most importantly, Indigenous

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[13] M. Stanley and K. Gudgeon, "Pilbara mining blast confirmed to have destroyed 46,000yo sites of 'staggering' significance," *ABC News*, May 26, 2020; S. Hepburn, "Rio Tinto just blasted away an ancient Aboriginal site. Here's why that was allowed," *The Conversation*, May 27, 2020; J. Koolmatrie, "Destruction of Juukan Gorge: we need to know the history of artefacts, but it is more important to keep them in place," *The Conversation*, June 2, 2020; R. Turner, "Juukan Gorge won't be the last priceless record of human history to be legally destroyed by mining," *ABC News*, June 11, 2020; M. Langton, "We need a thorough investigation into the destruction of the Juukan Gorge caves. A mere apology will not cut it," *The Guardian*, July 28, 2020; C. Kelly, "From explosion to implosion: How Rio Tinto blew up the Juukan Gorge—and itself," *The New Daily*, September 12, 2020; M. Langton, "The destruction of the Juukan Gorge caves," *The Saturday Paper*, September 19-25, 2020; H. Sinclair and K. Michelmore, "Juukan Gorge destruction caused by 'stupid actions', says former Rio Tinto executive," *ABC News*, October 1, 2020; L. Allam, "'Devastated' Indigenous owners say Rio Tinto misled them ahead of Juukan Gorge blast," *The Guardian*, October 12, 2020.

[14] See for example Tom Griffiths, "Travelling in Deep Time: La Longue Durée in Australian History," *Australian Humanities Review* 18 (2000): 1; Grace Karskens, *The Colony*, (Crows Nest: Allen & Unwin, 2009); and Bill Gammage, *The Biggest Estate on Earth: how Aborigines Made Australia*, (Crows Nest: Allen & Unwin, 2011).

[15] See for example Fred Spier, *The Structure of Big History from the Big Bang until today*, (Amsterdam: Amsterdam University Press, 1996); David Christian, *Maps of Time: An Introduction to Big History*, (Berkeley: University of California Press, 2005); Daniel Lord Smail, *On deep history and the brain*, (Berkeley: University of California Press, 2008); Andrew Shyrock and Daniel Lord Smail, *Deep History: The Architecture of Past and Present*, (Berkeley: University of California Press, 2011); Jo Guldi and David Armitage, *The History Manifesto*, (Cambridge: Cambridge University Press, 2014); Paul Turnbull, "The Aims of Big History," *History Compass* 13:7 (2015): 349-358.

[16] See Tom Griffiths, "Environmental History, Australian Style," *Australian Historical Studies* 46:2 (2015): 153-173; and Greg Dening, "Living In and With Deep Time: Public Lecture XII David Nichol Smith Conference, July 19, 2004," *Journal of Historical Sociology* 18:4 (2005): 269-281.

modes of historical practice.[17] Ann McGrath has been particularly influential in calling attention to the voices and perspectives of Indigenous Australians themselves, reminding us that deep history in Australia goes beyond scientific epistemology to be first and foremost an embodied, lived history of Aboriginal and Torres Strait Islander's enduring connection to Country.[18] For McGrath, as for Dening, any historical relationship with Australia's deep human past must include 'some entry into other people's metaphors about themselves,'[19] as well as a recognition of how the past is 'carried and held' in the 'living memory' of Indigenous peoples.[20]

A crucial truth reinforced by this approach is that Indigenous Australians have never required their antiquity be quantified: linear narratives based on absolute measurements of time is an obsession unique to settler Australian epistemology and its European antecedents. Billy Griffiths makes a detailed and personal assessment of the relationship between these two perspectives in *Deep Time Dreaming* (2018). Focusing specifically on the development of Australian archaeology, Griffiths traces the discipline's gradual scientific deepening of Aboriginal antiquity amid its own transformation at the hands of Aboriginal communities and their powerful reassertion of cultural identity in the second half of the twentieth century. The result of this complicated and ongoing relationship is a settler nation whose expression of a shared human past remains conflicted over the legacy of Aboriginal history, both ancient and recent. Griffiths argues, therefore, that the expression

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[17] See Ann McGrath's ongoing ARC Laureate Project with Australian National University, *Rediscovery the Deep Human Past: Global Networks, Future Opportunities*; see Alison Bashford's ongoing *New Earth Histories Research Program* at the University of New South Wales. See also Ann McGrath and Mary Anne Jebb, *Long History, Deep Time: Deepening Histories of Place*, (Canberra: Australian University Press, 2015); Alison Bashford, "Terraqueous Histories," *The Historical Journal* 60:1 (2017): 1–20; Alison Bashford, "Deep Genetics: Universal History and the Species," *History and Theory* 57:2 (2018): 313-322; Billy Griffiths, *Deep Time Dreaming: Uncovering Ancient Australia*, (Carlton: Black Inc., 2018); Jarrod Hore, "Capturing *Terra Incognita*: Alfred Burton, 'Maoridom' and Wilderness in the King Country," *Australian Historical Studies* 50:2 (2019): 188-211; Jarrod Hore, "Visions of Nature: Territoriality and Landscape Photography in Three Settler Sites, 1848-1900," (PhD Thesis, Macquarie University, 2018).

[18] McGrath reflects this sentiment in much of her scholarship, but particularly in Ann McGrath, "Deep Histories in Time, or Crossing the Great Divide?" in *Long History, Deep Time: Deepening Histories of Place*, eds. Ann McGrath and Mary Anne Jebb, (Canberra: Australian University Press, 2015), 1-31.

[19] Dening, "Living In and With Deep Time: Public Lecture XII David Nichol Smith Conference, July 19, 2004," 269

[20] McGrath, "Deep Histories in Time, or Crossing the Great Divide?" 1

of Australia's deep history demands the respectful acknowledgement of all that has happened—and still is happening—in Australia's confluence of cultures and histories.[21]

In many respects, contemporary historical engagements with human and geological antiquity are a continuation of the kind of probing scholarship Australian historians have produced since the 1970s and 1980s: through the rise of Indigenous history, environmental history, the interrogation of nationalist myths and symbols, and especially through the explosive reclamation of Australia's violent British invasion and frontier conflict.[22] Yet deep history's current upswell in Australian academia and public discussion has discursive echoes of the supposedly 'radical' reappraisal of Aboriginal culture that occurred in the 1970s. In his extraordinary 1996 article 'Deep Nation: Australia's acquisition of an Indigenous past,' archaeologist Denis Byrne argues the recognition Aboriginal Australians received in the 1970s was instead part of the ongoing processes of 'active colonisation.' Byrne claims Australian antiquarians and professional scientists had a 'shared propensity' to produce Aboriginal artefacts as a 'particular kind of 'cultural capital' in settler and national society.'[23] In the nineteenth century, they ignored and displaced living Aboriginal Australians while simultaneously emphasising their archaeological sites and material remains as embodiments of 'genuine' Aboriginal culture.[24] Aboriginality and Aboriginal culture thus became confined settler possessions, disconnected from Aboriginal peoples, with a significance that could only be articulated through the private collections of antiquarians and the writings of the scientists who examined them. In the mid-twentieth century, this disembodied Aboriginal culture was reformulated into the notion of a shared national heritage, enshrined in government legislation, that appeared to signal a profound

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[21] Griffiths, *Deep Time Dreaming: Uncovering Ancient Australia*, 296

[22] See Henry Reynolds, *The Other Side of the Frontier: Aboriginal resistance to the European invasion of Australia,* (Townsville: James Cook University Press, 1981); Henry Reynolds, *Frontier: Aborigines, settlers and land*, (Sydney: Allen & Unwin, 1987); Lyndall Ryan, *The Aboriginal Tasmanians*, (St Lucia: University of Queensland Press, 1981); Heather Goodall, "Cryin' Out For Land Rights," in *Staining the Wattle (The People's History of Australia)*, ed. Verity Borgmann and Jenny Lee, (Sydney: Penguin Books Australia, 1988): 245-268; Bruce Elder, *Blood on the wattle: massacres and maltreatments of Australian Aborigines since 1788,* (Frenchs Forest: Child & Associates, 1988); Patricia Grimshaw, Marilyn Lake, Ann McGrath, and Marian Quartly, *Creating a nation,* (Ringwood: McPhee Gribble, 1994).

[23] Denis Byrne, "Deep nation: Australia's acquisition of an indigenous past," *Aboriginal History* 20 (1996): 82-107

[24] Byrne, 87-88

recognition of previously ignored Aboriginal history, culture and peoples. Byrne argues, however, it was another episode in settler Australia's continued colonisation and appropriation of Aboriginal culture: Aboriginal sites and artefacts may have ceased to be seen as the property of the nation, but their new status as part of a shared inheritance still worked to obscure Aboriginal identity within one articulated almost entirely by and for settler Australians.[25]

Byrne positions professional archaeologists as key players in the heritage boom of the 1960s and 1970s, and thus in the climax of settler Australia's nationalist appropriation of Aboriginal culture. Indeed, the discipline of archaeology—and settler Australia more broadly—has been forced to engage with this accusation at the continued insistence of Aboriginal rights claiming regarding land, legislation and cultural sites.[26] Yet Byrne does not explicitly address the concept of human antiquity in his analysis. The depth in 'Deep Nation' is a historical depth, and one that is incorporated into the appellation of 'Aboriginal culture.' As a crucial ingredient in any new nation's 'proto-national cement,'[27] the issue for Australia, Byrne argues, was how such depth could be 'finessed' in a context where the pre-1788 past was so blatantly Aboriginal.[28]

This dissertation demonstrates the necessity of historicising this time-depth as the scientific concept of human antiquity; as a British understanding of human ancientness that, from its establishment, exercised its own form of cultural capital in settler Australia, until it was ultimately incorporated into the substratum of professional archaeology. In-

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[25] Byrne, 98

[26] See Sarah Colley, *Uncovering Australia: Archaeology, Indigenous people and the public* (Crows Nest: Allen & Unwin, 2002); Anne Ross, Jonathan Prangnell & Brian Coghill, "Archaeology, Cultural Landscapes, and Indigenous Knowledge in Australian Cultural Heritage Management Legislation and Practice," *Heritage Management* 3:1 (2010): 73-96; Denis Byrne, "Western Hegemony in Archaeological Heritage Management," *History and Anthropology* 5 (1991): 269–276; DJ Mulvaney, "What Future for our Past? Archaeology and Society in the Eighties," *Australian Archaeology* 13 (1981): 16–27; Ian McNiven and Lynette Russell, *Appropriated Pasts: Indigenous Peoples and the Colonial Culture of Archaeology,* (Oxford: AltaMira, 2005); Ian McNiven and Lynette Russell, "Towards a postcolonial archaeology of Indigenous Australia," in *Handbook of Archaeological Theories*, ed. R. A. Bentley, H.D.G Maschner and C. Chippindale, (Lanham: AltaMira Press, 2008): 423-443.

[27] For a discussion of nationalism's 'proto-national cement' see Eric. J. Hobsbawm, *Nations and nationalism since 1780: programme, myth, reality*, 2nd Edition, (Cambridge: Cambridge University Press, 1992), especially 73, 46-79.

[28] Byrne, 95

keeping with Byrne's criticism of 'active colonisation,' this dissertation seeks to provide a deeper history for Australia's contemporary deep histories; to contextualise the current interest in human antiquity and confront the role it plays in national and cultural narratives. To do so demands a focus on settler and European epistemology, rather than the embodied and experiential deep history of Aboriginal and Torres Strait Islander peoples. While it speaks to these Australian histories, this dissertation follows in the footsteps of the intellectual histories of Pratik Chakrabarti and Efram Sera-Shriar. A historian of science and medicine, Chakrabarti has long been interested in the intersections of western science and the objects of their inquiry; subaltern populations and landscapes.[29] In his recent work, Chakrabarti focuses on the politics of the deep past, which he argues can only be uncovered by examining the ecology of scientific disciplines that emerged in the nineteenth century to study the deep past. Within this ecology, Chakrabarti identifies a distinctly 'northern' European epistemology of deep history, and he explores how this unfolded in the colonial landscapes of India and South Africa.[30]

Chakrabarti's ultimate conclusion is that 'deep pasts were appropriated to the colonial present.'[31] In his study of Gondwana—a term that refers at once to the forested region in central India, the Gond peoples who inhabited it, and the prehistoric southern supercontinent that captured colonial imagination—Chakrabarti argues that 'Gondwana' became a repository for an essential primitivism that was inscribed on both the landscape and its indigenous inhabitants. The naturalised primitivity that came to circumscribe Gondwana was formed at geological, anthropological, cultural and historical sites through a consilience of Britain's emergent nineteenth-century sciences of the deep past.[32] The creation and subsequent inscription of this primitivism, Chakrabarti argues, was essential

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[29] Chakrabarti gained his PhD in 2000 for his examination of the shared, conflict-ridden history of western science and modern India. See Pratik Chakrabarti, "Western science and modern India: institutions, individuals and discourses," (PhD thesis, Jawaharlal Nehru University, 2000).
[30] Pratik Chakrabarti, "Gondwana and the Politics of Deep Past," *Past and Present* 242 (2019): 120-153; Pratik Chakrabarti, "Is Deep History White?" Lecture delivered online via Zoom, Tuesday 14 July 2020, hosted by Alison Bashford, New Earth Histories Research Program, University of New South Wales; Pratik Chakrabarti, *Inscriptions of Nature: Geology and the Naturalization of Antiquity*, (John Hopkins University Press, forthcoming 2020).
[31] Chakrabarti, "Gondwana and the Politics of Deep Past," 121
[32] Chakrabarti, "Gondwana and the Politics of Deep Past," 122

to Britain's concurrent colonising project, in which the conquest of landscapes also entailed the conquest of their deep past.[33]

Recent work by Efram Sera-Shriar has also examined the ways in which British sciences, as part of an imperial network, sought to understand and inscribe human history in the nineteenth century. Extending his own expertise on Victorian anthropology, Sera-Shriar's edited collection *Historicizing Humans: Deep Time, Evolution, and Race in Nineteenth-Century British Sciences* (2018) highlights the underlying questions and shared assumptions that emerged across the disciplines of the deep past as they constructed human histories for scientific, religious, and sociopolitical purposes.[34] The collection interrogates the politics of the deep past through a series of intellectual case studies that examine particular methods, scholars and texts in an interconnected British empire. Like Chakrabarti, Sera-Shriar stresses the need to examine these research fields collectively and comparatively: no single field adequately represents nineteenth-century human history theories because most researchers approached the topic through the perspectives of multiple disciplines, the boundaries of which were still being negotiated.[35] Such an approach is crucial to understanding how various theories competed for scientific dominance throughout the British empire, and how shared scientific assumptions played out in specific imperial settings.

As a whole, the volume demonstrates that the British scientific quest to understand human origins was inextricably interconnected with empire and race.[36] It argues, however, that evolutionism was more than what some histories of science purport to be simply 'an ideological alibi for discrimination and imperial rule.'[37] The volume's revision of this

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[33] Chakrabarti, "Gondwana and the Politics of Deep Past," 120
[34] Efram Sera-Shriar, *Historicizing Humans: Deep Time, Evolution, and Race in Nineteenth-Century British Sciences,* (Pittsburgh: University of Pittsburgh Press, 2018).
[35] Efram Sera-Shriar, "From the Beginning: Human History Theories in Nineteenth-Century British Sciences," in *Historicizing Humans: Deep Time, Evolution, and Race in Nineteenth-Century British Sciences*, ed. Efram Sera-Shriar, (Pittsburgh: University of Pittsburgh Press, 2018), 6-7.
[36] Theodore Koditschek, "Historiographical Reflections on the Historicization of Humans in Nineteenth-Century British Sciences," in *Historicizing Humans: Deep Time, Evolution, and Race in Nineteenth-Century British Sciences*, ed. Efram Sera-Shriar, (Pittsburgh: University of Pittsburgh Press, 2018), 218-229
[37] Koditschek, "Historiographical Reflections on the Historicization of Humans in Nineteenth-Century British Sciences," 229

simplistic portrayal follows on from the works of intellectual giants like John Burrows, George Stocking Jnr., Roger Bannister, Martin Rudwick, Peter Bowler, Donald Grayson, Stephen Jay Gould and Nancy Stepan; or what contributor Theodore Koditschek calls the 'Historiography of Historicizing Human Origins 1.0.'[38] *Historicizing Humans* position itself at the forefront of the 'Historiography of Historicizing Human Origins 2.0,' which uses its multidisciplinary and competitive, empire-attune approach, to deepen our understanding of human history theories by showing the subtleties and nuances that existed within them.[39]

There is a pressing need to conduct such history in and about settler Australia. While Sera-Shriar presents case studies from across the pluralistic British Empire, and Chakrabarti foregrounds the politics of deep cultural landscaping, this dissertation sits somewhere in between, spotlighting the scientific concept of human antiquity to examine in-depth its function and interpretation in settler Australia, and its legacy in scientific and historical narratives. In many ways it is a natural product of what Sera-Shriar calls 'the logic of subspecialization,' which generates finer-grained pictures of an ever more closely observed scene.[40]

Archaeology and preferential periodisation

In 2018, Billy Griffiths used the date of John Mulvaney's first archaeological dig to mark the beginning of a new intellectual epoch: 'The modern era of archaeological investigation in Australia began on Friday 13 January 1956.'[41] Such a firm beginning, reminiscent of seventeenth century Archbishop and chronologist James Ussher's famously precise date for Creation, assigns prospective ownership of the discoveries and knowledge produced by modern archaeology entirely to Mulvaney at Fromm's Landing.[42] Firm

[38] Koditschek, "Historiographical Reflections on the Historicization of Humans in Nineteenth-Century British Sciences," 220
[39] Koditschek, "Historiographical Reflections on the Historicization of Humans in Nineteenth-Century British Sciences," 220
[40] Sera-Shriar, "From the Beginning: Human History Theories in Nineteenth-Century British Sciences," 8
[41] Griffiths, *Deep Time Dreaming*, 25
[42] See Prologue. Archbishop James Ussher's date for Creation was 'upon the entrance of the night preceding the twenty third day of *Octob*' in the year 4004 BC. See James Ussher, *The annals of the world,* (London:

periodisation is not uncommon in the history of science and often represents the typical scientific paradigm shift that Thomas Kuhn first identified in 1962. Kuhn argued that scientific paradigms gain their status within disciplines when they are seen as more successful than their competitors in solving some (but not all) of the problems practitioners have come to recognise as acute.[43] Part of introducing new paradigms requires the reconstruction of prior assumptions and the re-evaluation of facts, amid the promise of future success, followed by the actualisation of that success through the process of 'normal science.'[44] The practice of normal science, built on a paradigm and dedicated to solving puzzles, will eventually meet with serious anomalies, leading to a crisis, which in turn is resolved by the new paradigm: such is Kuhn's now widely accepted structure of scientific revolutions.

Literary scholar Aleida Assmann identifies a similar pattern in what she calls the 'modern time regime.'[45] Where time in Western modernity had previously taken the shape of an arrow, running irreversibly from the past into the future, Assmann highlights five interconnected aspects of the more complex modern time regime: the breaking up of time; the fiction of a new beginning; creative destruction; the invention of the historical; and the acceleration of change.[46] In this regime, time proceeds by continually producing a radical rift (or hiatus) between the 'space of experience' (the past) and the 'horizon of expectation' (the future), in turn emphasising innovation as the driver of change and progress.[47] Of crucial importance for this dissertation is the 'fiction of a new beginning.' Extending Edward Said's distinction between mythical 'origins' and the more secular 'beginning,' Assmann argues that while 'origins' are placed outside of human time, modern beginnings

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1658), 1. Griffiths' frequently describes Fromm's Landing as either the 'dawn of Australian archaeology,' or more carefully, the 'dawn of a new era for Australian Aboriginal archaeology.' See Billy Griffiths, "'The Dawn' of Australian Archaeology: John Mulvaney at Fromm's Landing," *Journal of Pacific Archaeology*, 8:1 (2017): 100-111.

[43] Kuhn, *The Structure of Scientific Revolutions: Fourth Edition*, 24

[44] See especially Thomas Kuhn, 'Chapter Three: The Nature of Normal Science,' in Thomas S. Kuhn, *The Structure of Scientific Revolutions: Fourth Edition*, (Chicago: The University of Chicago Press, 2012): 23-34.

[45] See Aleida Assmann, "Transformations of the Modern Time Regime," in *Breaking up Time: Negotiating the Borders between Present, Past and Future*, ed. Chris Lorenz and Berber Bevernage, (Vandenhoeck & Ruprecht: Gottingen, 2013), 39-56

[46] Assmann, 42

[47] Assmann, 43-44

are rational, enabling human constructs that are used to authorise our knowledge and experience: 'The source of inspiration is no longer to be sought in previous authorities, periods and traditions, but in the creative spirit of the human author himself.'[48]

The scientists responsible for the consensus on human antiquity had no difficulties creating the fiction of a new beginning in 1859. Indeed, in the excitement that followed Lyell's address, there was a strong tendency to regard any earlier discoveries as 'so obscure as to have gone unnoticed by those who might have interpreted them correctly.'[49] John Mulvaney, and the subsequent generation of professional archaeologists, did the same for the 'discovery' of Australia's human antiquity in the 1950s and 1960s; positioning Mulvaney as the authority on knowing Australia's human past, both through its erroneous presentation in previous traditions, and through its more accurate form in his present and future scholarship. Indeed, Byrne even describes Mulvaney's early scholarship as a 'ritualistic cleaning of the slate' before 'modern' archaeology began.[50] These 'beginnings' are not only ahistorical, they also leave little room for the confluence and interdisciplinarity that was, in fact, the hallmark of the human antiquity story in Europe and Australia.

The invention of radiocarbon dating holds a prominent place in the history of archaeology, particularly in the scholarship of acclaimed archaeologist Glyn Daniel, who places its intellectual impact on par with the 1859 consensus on human antiquity.[51] While internationally a historiographical emphasis on radiocarbon dating could not alter the consensus already agreed upon in 1859, it has a different effect in the Australian context. The radiocarbon revolution coincided with the institutionalisation of archaeology in Australia and the elevation of John Mulvaney as its first academic professional. Australia's first disciplinary histories self-referentially reinforced this moment as both the birth of

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[48] Assmann, 45. See also Edward W. Said, "Preface to 1985 edition," *Beginnings: Intention and Method,* (New York: Columbia University Press, 1985), xix

[49] See Gruber, 22; and see Prologue for more detail on the establishment of human antiquity in Europe.

[50] Byrne, 92

[51] Daniel highlighted the significance of radiocarbon dating in much of his scholarship, including *The Idea of Prehistory* (1962), *Man Discovers His Past* (1966), *A Hundred and Fifty Years of Archaeology* (1975), and *A Short History of Archaeology* (1981). The specific comparison between its twentieth century invention and the nineteenth century consensus on human antiquity was made in *The Origins and Growth of Archaeology,* (Harmondsworth: Penguin Books, 1967), 266

Australian archaeology and the nation's understanding of its human antiquity. Just as international historiography used its periodisation to accentuate the unreliability of relative dating methods before the radiocarbon revolution, so too could Australia's emerging archaeological professionals utilise the mid-twentieth century climacteric as a way to devalue or dismiss previous attempts at defining Australia's human antiquity, especially those that lay outside the newly drawn disciplinary boundaries of archaeology.

After studying archaeology at Cambridge, Mulvaney returned to Australia in 1953 and began his first excavation in 1956 at Fromm's Landing, South Australia. In the years that followed, he published several articles that established his academic reputation, and a new beginning for Australian archaeology: a 1957 article critiquing previous fieldwork on human prehistory in Victoria; an enormous historical review of perceptions of Aboriginal peoples from 1606 to 1929, published in two parts in 1958; and a detailed 1961 article on the 'Stone Age' of Australia.[52] The articles are variations on a theme, and all position earlier investigations into Australia's deep human past as either disorganised, unpublished, warped by evolutionism, or ignored by prevailing scholastic sentiment. While not entirely incorrect, this depiction and its legacy in historical narratives require close attention.

Across all three articles, Mulvaney outlines the two biggest issues for previous attempts at understanding Australia's deep human past as supply and interpretation. The material remains of human antiquity in Australia were apparently rarely uncovered; when they were, it was either through the sporadic collecting habits of stone-tool obsessives eager to fill their display cabinets, or by scientists inappropriately trained in their interpretation. The emphasis on professional training is unsurprising for a graduate who had so recently trained at Cambridge under Glyn Daniel, and returned home to find Australia's academic avenues for archaeology wanting. Mulvaney does acknowledge several figures whose research into Australian prehistory had been conducted with more insight, organisation and finesse: such as the 1929 Devon Downs excavation by South Australian

[52] See D. J. Mulvaney, "Research into the prehistory of Victoria: A criticism and a report on a field survey," *Australian Historical Studies* 8:29 (1957): 32-43; D. J. Mulvaney, "The Australian Aborigines 1606–1929: Opinion and Fieldwork, Part 1," *Australian Historical Studies* 8:30 (1958): 131–151; D. J. Mulvaney, "The Australian Aborigines 1606–1929: Opinion and Fieldwork, Part 2," *Australian Historical Studies* 8:31 (1958): 297–314; D. J. Mulvaney, "The Stone Age of Australia," *Proceedings of the Prehistoric Society* 27 (1961): 56-107.

archaeologists Norman Tindale and Herbert Hale, and the surveys of Mulvaney's contemporaries Frederick McCarthy (1905-1997) and Edmund D. Gill (1908-1986) in the 1940s and 1950s.[53] Mulvaney has a clear respect for these men, and does not downplay their interpretations. He laments the lack of recognition given to Tindale and Hale in their own context, especially from academic heavyweights at Melbourne University, and argues the duo's 'classic demonstration' of archaeological technique made them the 'founding fathers of aboriginal prehistory.'[54]

Yet such scholarship, Mulvaney argues, was part of a neglected minority. In late eighteenth and early nineteenth century Australia, the actual collection of material objects or their accurate description 'rarely impressed observers as a worthy scientific venture.'[55] Even after archaeology's international coming of age in the 1860s, the work of excavators like Tindale and Hale were, for Mulvaney, overshadowed by anthropologists and their depictions of Aboriginal peoples as intellectually and culturally primitive. Writing directly against this belief, so pervasive in his own context, Mulvaney was scathing of erroneous interpretations of a static Aboriginal culture and of Aboriginal Australians as the lowest rung on the ladder of progress. Such biological evolutionism was personified in Australia by Walter Baldwin Spencer, whose thirty-two year tenure at the University of Melbourne (1887 to 1919) afforded him enormous influence in Victoria's intellectual milieu.[56] Mulvaney is especially critical of how Spencer's misguided belief in cultural stasis warped his study of Aboriginal stone artefacts and thus vitiated archaeological field work in Victoria for decades. Spencer and his disciples consistently asserted that implement type was not an index of culture or its development, but merely a reflection of local geology and available raw materials. This skewing of seriation to represent cultural equilibrium, rather than change over time, was compounded by Spencer's lack of attention to stratigraphy: if stone artefacts could communicate nothing more than the material from which they were made,

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[53] The contributions of Tindale, Hale, and Gill will be explored in Chapter Six of this thesis.
[54] See Mulvaney, "Research into the prehistory of Victoria," 35 and Mulvaney, "The Stone Age of Australia," 65
[55] Mulvaney, "The Australian Aborigines 1606–1929: Opinion and Fieldwork, Part 1," 148
[56] The anthropological texts and intellectual legacy of Walter Baldwin Spencer will be examined in Chapters Three and Six of this dissertation.

there was no need for anthropologists to go beyond a surface collection. For Mulvaney, such a view 'made archaeological excavation pointless.'[57]

Spencer's misuse of seriation and subsequent portrayal of a static Aboriginal culture undoubtedly influenced the scholarship of his intellectual circle, as well as the form of anthropology later institutionalised in Australia in the 1920s. As Chapter Three of this dissertation will reveal, however, there was more than Spencer's 'rigid evolutionary determinism'[58] at play when it came to Australian anthropology's relationship with Aboriginal antiquity. Mulvaney's critique of Spencer, and of evolutionary anthropology more broadly, does not separate the concept of human antiquity from that of cultural primitivity, as the two were indeed ambiguously entangled in Spencer's writings. Yet for anthropologists outside of Spencer's circle, especially those publishing in the years before his entrenchment at Melbourne University, an apparent lack of cultural development did not obfuscate or nullify antiquity. Many influential anthropologists in Britain *and* colonial Australia used evolutionary hierarchies' inscription of Aboriginal primitivity to argue for their vast antiquity.[59]

Mulvaney mentions several of these scholars in his epic two-part history of opinions and fieldwork on Aboriginal Australians, only for them to be likewise invalidated through his desire to dismantle the discriminatory paradigms of evolutionary anthropology. For example, Charles Staniland Wake, a British anthropologist whose argument for Aboriginal antiquity convinced his colleagues in the 1870s, receives greater interrogation from Mulvaney for his claims of Aboriginal mental inferiority.[60] Mulvaney treats the interpretations of prominent German anthropologist Hermann Klaatsch by the same token, labelling Klaatsch's 1905 claim that Australia was the ancient birthplace of the entire species as the product of 'uncritical enthusiasm for evolutionary theory.'[61] Whether hidden within the concept of cultural primitivity, or as an explicit and distinct scientific subject,

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[57] Mulvaney, "Research into the prehistory of Victoria," 35
[58] Mulvaney, "Research into the prehistory of Victoria," 35
[59] See Chapters Two and Three
[60] See Mulvaney, "The Australian Aborigines 1606–1929: Opinion and Fieldwork, Part 2," 304-305. Wake's scholarship will be discussed in-depth in Chapter Two.
[61] Mulvaney, "The Australian Aborigines 1606–1929: Opinion and Fieldwork, Part 2," 304. Klaatsch's scholarship will be discussed in-depth in Chapter Four.

claims for an extensive Aboriginal antiquity were tainted for Mulvaney when they were embedded in evolutionary frameworks.

Discrediting past interpretations as illogical or pseudo-scientific, however accurately, does little to explore the function and authority of those ideas in their own contexts. As Pratik Chakrabarti so deftly argues, the issue for histories of science is not whether scientific facts are accurate, but whether the scientific narrative of the past should define the historical one.[62] By dismissing problematic interpretations of Aboriginal Australians, and carving divisions between practitioners based on more contemporary disciplinary standards, Mulvaney could make sweeping narrative claims about the intellectual and public understanding of Australia's human antiquity. Despite both his 1957 and 1958 articles demonstrating a lengthy and nuanced history of interest in Aboriginal antiquity, by 1961, Mulvaney distilled it to a single paragraph:

> A factor which inhibited archaeological excavation was the opinion, widely held around the turn of the century, that the aborigines were recent arrivals in Australia. This was the conclusion of responsible geologists, Brough Smyth (1878), Etheridge (1890) and Gregory (1904), who subjected the relevant evidence to critical examination. They were correct to reject many current wild claims, which included Tertiary and Arboreal Men, and given the data available to him, Gregory was justified in concluding that the evidence established that the aboriginal occupation of Victoria was a few hundred years in duration. *Many contemporaries accepted this expert opinion and no one appears to have sought further evidence of antiquity.*[63]

Mulvaney's definition of 'widely held' opinion, of 'responsible geologists' and their 'critical examination' of the evidence for human antiquity, are characterisations this dissertation will interrogate deeply. It will contest, in particular, the argument that many contemporaries accepted the opinions of practitioners like Robert Brough Smyth, Robert Etheridge Jr. and John Walter Gregory, to the extent that 'no one' sought further evidence of Aboriginal antiquity either in Victoria or across Australia more broadly. Mulvaney's neat paragraph allows little room for the diversity of professional *and* public opinion that

[62] Chakrabarti, "Gondwana and the Politics of Deep Past," 124
[63] Emphasis added. Mulvaney, "The Stone Age of Australia," 60

surrounded, and at times ratified, the concept of human antiquity in Australia; nor does it acknowledge the different levels of recognition that were given to *human* antiquity, as opposed to *Aboriginal* or even *Victorian Aboriginal* antiquity.

Historical Dimensions of Human Antiquity in Australia

In July 1962, a year after this distilled history was published, Mulvaney received the first radiocarbon dates for samples taken during his recent fieldwork in the Carnarvon Range in central Queensland. What he first thought was a transmission error was in fact a date of 12,600 years for Aboriginal antiquity.[64] When the site report was published in 1965, additional samples pushed the date back to 16,000 years, and by 1971, it had reached as high as 19,000 years ago.[65] As radiocarbon dates became more available to archaeologists, the argument that human antiquity had not been understood or adequately known in Australia became even more defensible. Mulvaney was aware of the dangers awaiting the new generation of prehistorians who, 'possessed by a wealth of modern evidence,' might interpret the deep past 'too rigidly in the light of [their] knowledge.'[66] Throughout his career, he remained attuned to the counterbalancing influences of an archaeological methodology that continued to refine itself and its relationship with Aboriginal Australians. For historian Tom Griffiths, Mulvaney was not so much a scientist as he was a humanist caught between two self-styled sciences; the science of colonial collectors, which 'overlooked the humanity' of Aboriginal Australians, and the science of the 'new archaeologists', which 'distanced itself from the history of culture. Both minimised the human drama that Mulvaney wanted to engage with.'[67]

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[64] On 27 July 1962, Mulvaney initially received by radio the date of 12,300 years. Once back in Melbourne, certain the figure had been miscommunicated, Mulvaney contacted the lab, who amended the date to the even older figure of 12,600 years. See letter from John Callow to John Mulvaney, 20 July 1962, and letter from John Mulvaney to John Callow, 5 December 1962, in Papers of John Mulvaney, MS 9615/8.4/8, Box 62, National Library of Australia.

[65] Billy Griffiths, "Explorers in an Ancient Land: John Mulvaney at Fromm's Landing," *Deep Time Dreaming: Uncovering Ancient Australia*, (Carlton: Black Inc., 2018), 32

[66] Mulvaney, "The Stone Age of Australia," 58

[67] Tom Griffiths, "In Search of Australian Antiquity," in *Prehistory to Politics: John Mulvaney, the Humanities and the Public Intellectual*, ed. Tim Bonyhady and Tom Griffiths, (Carlton South: Melbourne University Press, 1997), 56

John Mulvaney has been appraised, and validated, as an archaeologist, but rarely has he been so as a historian. His historical narrative regarding Australian archaeology and its understanding of human antiquity remains a steady aspect of archaeological and historical scholarship, with few deviations. The work of David Horton is a notable exception.[68] Horton argues that most people believe Australian archaeology began in 1969, when archaeologists working in the Willandra Lakes, New South Wales, realised a bone uncovered the previous year was in fact a fragment of an ancient human skull.[69] For Horton, the discoveries at Willandra Lakes did not mark Australian archaeology's beginning but the end of its beginning, which he places 270 years earlier with English explorer William Dampier's examination of Aboriginal campsites in Western Australia.[70] While Dampier's writings feature in Mulvaney's 1958 history as 'anthropological observations,'[71] Horton is more deliberate in his inclusion of early explorers in archaeological practice.[72] Like Mulvaney, Horton points out that theories were more common than 'facts' before the twentieth century: in many cases, finding an answer to one question simply meant finding new questions. Yet Horton also argues that scholars reviewing previous attempts to understand Australia's deep human past must avoid 'simply applauding correct answers' and recognise that 'good work' was not restricted to the 'modern era.'[73]

A similar, albeit more aggressive, argument was made recently by Matthew Spriggs in his article, "Everything You've Been Told About The History of Australian Archaeology is Wrong!" Spriggs offers one of the only published critiques of Mulvaney as a historian, attacking the conventional contrast between 'modern' archaeology and an earlier undisciplined phase of indiscriminate amateurs, as a myth strategically invented by

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[68] See also David Horton, "Early thought on early man in Australia," *Artefact* 6 (1981): 53-69.
[69] David Horton, *Recovering The Tracks: The Story of Australian Archaeology*, (Canberra: Aboriginal Studies Press, 1991), xiii
[70] Horton, *Recovering The Tracks*, xiii
[71] Mulvaney, "The Australian Aborigines 1606–1929: Opinion and Fieldwork, Part 1," 135
[72] Captain James Cook, Vice Admiral John Hunter, Governor Arthur Phillip, naval surgeon George Bass, French naturalist Nicolas Baudin, surveyor John Oxley, and Surveyor General Thomas Mitchell, are all recognised alongside Dampier as early practitioners of archaeology in Australia, well before the consensus on human antiquity in 1859. See Horton, *Recovering The Tracks*, 3-52
[73] Horton, *Recovering The Tracks*, xiv-xv

Mulvaney and 'unthinkingly repeated' by others as the standard paradigm of the discipline's history in Australia.[74] He argues that the distinction drawn between 'professional' and 'amateur' is not only unhelpful, but indeed meaningless, as it introduces anachronistic judgements and privileges universities over museums as sites of 'professional practice.'[75] Spriggs makes a compelling argument about twentieth century archaeology's distortion of its own history as part of a necessary attempt to capture resources and legitimacy at a time when Australian universities were rapidly expanding. In the process, twentieth century archaeologists have all but forgotten the 'real history' of their discipline, and with it, the excavators beyond just Hale and Tindale who had utilised sophisticated archaeological techniques.[76]

While highlighting similar issues with archaeology's periodisation, Horton and Spriggs offer different interpretations of the discipline's relationship with the concept of human antiquity. For Horton, earlier arguments on human antiquity in Australia appear much as they did to Mulvaney; as attempts to answer difficult questions, with limited evidence, that achieved varying levels of success. With a sort of humorous frustration, Horton notes the frequency with which interpretive themes emerged and then disappeared, only to re-emerge years later in much the same form.[77] For Spriggs, many of the arguments being made for a long history of human settlement in Australia before the availability of radiocarbon dating were 'ingenious,' and he is careful to highlight the ones that used internationally recognised archaeological techniques.[78] Australian archaeology has engaged in a serious self-reflection over the past thirty years, with many archaeologists interrogating the discipline's relationship with—and occasional exploitation of—Aboriginal communities and heritage, nationalism and government policy, and broader issues surrounding knowledge-making practices. Spriggs' criticism is perhaps the first

[74] Matthew Spriggs, "Everything You've Been Told About the History of Australian Archaeology is Wrong!" *Bulletin of the History of Archaeology* 30:1 (2020), 1. See also Stephanie Moser, "Archaeology and its Disciplinary Culture: The Professionalisation of Australian Prehistoric Archaeology," (PhD thesis, University of Sydney, 1995).
[75] Spriggs, 2
[76] Spriggs, 9
[77] Horton, *Recovering The Tracks*, xiv-xv
[78] Spriggs, 2

revision to specifically highlight the function of human antiquity in archaeology's foundational narrative, and to consequently call for a review of past interpretations. His own review is still limited, however, to those engagements with antiquity that fall within his expanded definition of 'modern' archaeology.

Less than a handful of scholars have brought more direct attention to the concept of human antiquity in Australia. Chief among them is Tom Griffiths, whose *Hunters and Collectors: The Antiquarian Imagination in Australia* (1996) is a landmark of Australian cultural history. Driven by an interest in the processes of 'history-making,' *Hunters and Collectors* unpacks the mentality of antiquarian stone tool collectors whose interest in Aboriginal culture emerged amid the new understandings of cultural and biological evolution of the late nineteenth and early twentieth century. For Griffiths, antiquarian collectors practiced a type of hunting, scouring their chosen 'collecting grounds' for the 'spoils' and 'trophies' they could lovingly arrange in their display cabinets.[79] Focusing specifically on Victoria, Griffiths covers similar ground to Mulvaney, richly illustrating this culture of collection and tracing its connection to the political and environmental debates of his own context in the 1990s.[80]

The transformative power of geological and human antiquity is at the forefront of Griffiths' history and has a particular significance for settler Australia. In the two hundred years following the British invasion of Australia, Griffiths notes, the known age of the Earth increased from about 6,000 years to 4.6 billion: 'Australia was a part of both these New Worlds, one of nature and one of the past. It was a recently 'discovered' continent and an apparently ancient one at that.'[81] In an effort to understand the ways Australians helped fill the abyss of time that had opened up with the establishment of geological and human antiquity, Griffiths seeks to recover antiquarian voices and highlight their historical

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[79] Griffiths, *Hunters and Collectors: The Antiquarian Imagination in Australia*, 19, 85, 133, 155.
[80] Griffiths acknowledges that his work is influenced by the contemporary debates surrounding the perception and use of the Australian past: '…about the rights of indigenous peoples to land and history, the repatriation of artefacts by museums, the politics of conservation and environmental management, changing European sensibilities towards Australia and its original inhabitants, and the emergence of new popular, academic and bureaucratic forms of history-making.' See Griffiths, *Hunters and Collectors*, 1
[81] Griffiths, *Hunters and Collectors,* 9

sensibilities, which he argues were 'particularly attuned to the material evidence of the past, and possessing a powerful sense of place.'[82] By examining antiquarian's 'history-making' practices, Griffiths argues, objects within their collections cease to be just another colonial curio and instead become pieces of 'evidence fully integrated in a western vision of natural and cultural development.'[83]

This argument sits at odds with Griffiths' other core narrative claim that the 'scientific discovery of human antiquity in Australia' only occurred in the last few decades, and was reliant on the 'twin revolutions of professional archaeology and radiocarbon dating.'[84] This tension undermines the power of Griffiths' antiquarian voices even as he seeks to highlight them: their collected objects were 'piece[s] of evidence fully integrated' into western scientific visions, yet they were not 'evidence' enough to constitute a 'scientific discovery' of Australia's human antiquity. In the end, Griffiths narrates a history of human antiquity in Australia that, similar to Mulvaney's, has remained a steady refrain throughout his scholarship.[85] He describes the discovery of Aboriginal antiquity as both 'reluctant and intuitive' in the period before radiocarbon dating, and argues that 'early intimations of antiquity' existed within 'patterns of local enquiry' that echoed the establishment of human antiquity in Europe.[86] While interesting and at times even accurate, interpretations of a vast antiquity for Aboriginal Australians remained 'intimations' for Griffiths largely due to a lack of evidence and cohesive interpretation: scholars were unable to make confident arguments, or they were too confident and thus overlooked. Just like Mulvaney, Griffiths positions Robert Brough Smyth, Robert Etheridge Jr. and John Walter Gregory as the three authorities who dampened expectations of Aboriginal antiquity in the early twentieth

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[82] Griffiths, *Hunters and Collectors,* 1

[83] 'The collector's object ceases to be just another curio and becomes, instead, a piece of evidence fully integrated in a western vision of natural and cultural development.' Griffiths, *Hunters and Collectors,* 22

[84] Griffiths, *Hunters and Collectors,* 58

[85] See also Tom Griffiths, "In Search of Australian Antiquity," in *Prehistory to Politics: John Mulvaney, the Humanities and the Public Intellectual*, eds. by Tim Bonyhady and Tom Griffiths (Carlton South: Melbourne University Press, 1997): 42-62; Tom Griffiths, "Deep Time and Australian History," *History Today* 51:11 (2001): 20-25; T. Griffiths, 'A landmark work of Australian history,' *Inside Story*, May 6, 2013; Tom Griffiths, "Entering the Stone Circle: John Mulvaney," in *The Art of Time Travel: Historians and Their Craft,* (Carlton: Black Inc., 2016): 61-73.

[86] Griffiths, *Hunters and Collectors,* 56

century, while the misinterpretations of Walter Baldwin Spencer and his coterie (which Griffiths shrewdly dubs the 'Stone Circle') are once again revealed to have defined and confined Aboriginal culture.[87] Although examples from other states and from outside the 'Stone Circle' are included, it's the Victorian experience and experts that are used by both Mulvaney and Griffiths to represent the cohesive, authoritative history of Australia's understanding of its human antiquity.

The most recent history to address concepts of Aboriginal antiquity is that of Rebe Taylor, whose doctoral thesis was supervised by Griffiths at the Australian National University.[88] Her monograph, *Into the Heart of Tasmania: A Search For Human Antiquity* (2017), complements Griffiths' *Hunters and Collectors* by following the 1908 journey of English geologist and naturalist Ernest Westlake as he travelled to Tasmania in search of Aboriginal stone artefacts. Trawling through Westlake's papers and correspondence, Taylor gives a vivid and deeply personal insight into Westlake's collecting practices and his perceptions of Tasmanian Aborigines. Westlake would eventually accumulate over 13,000 artefacts, creating the largest single collection of Tasmanian stone implements ever formed.[89] Yet Taylor reveals that Westlake's interest in these artefacts extended only as far as they could be used to confirm his previous research on stone implements from the Auvergne region of France. Despite occurring almost 50 years after the European consensus on human antiquity, Taylor argues that for Westlake, what was at stake in 1908 was determining 'the true depth of European human antiquity.'[90]

Taylor skilfully demonstrates how Westlake's interpretations became entwined with contemporary notions of cultural and racial superiority. In assuming that Aboriginal Tasmanians were of an extinct primitive race, Westlake shared the 'blindness of his generation, of his scientific discipline, and of his Empire.'[91] Aboriginal Tasmanians have long endured the objectification of the scientific gaze, but they evoked particular curiosity

[87] Griffiths, *Hunters and Collectors,* 14, 55, 63, 77, 85, 90.
[88] Rebe Taylor, *Into the Heart of Tasmania: a search for human antiquity* (Carlton: Melbourne University Press, 2017), 209
[89] Taylor, *Into the Heart of Tasmania*, 3
[90] Taylor, 7
[91] Taylor, 4

in the decades surrounding their supposed extinction in the 1870s. Discussion around the Tasmanian Aborigines and their 'place' in Australian history continued to spark debate throughout the twentieth century, including ample critique of the narrative of extinction.[92] As with other scholarship, however, less attention has been given to the function or understanding of human antiquity, and more to representations of primitivity and questions of genocide.[93] Taylor has made perhaps the most conscious exploration of notions of human antiquity in Australia since *Hunters and Collectors*, and yet her work remains (with good reason) focused on the political implications of ignoring Tasmanian Aboriginal survival and the overall exclusion of their history. Taylor's monograph, then, is not so much a history of human antiquity but a reclamation of that antiquity, present yet overlooked in Westlake's writings.

Archaeologist Tim Murray is one of the only scholars to bring a critical lens to the concept of human antiquity and its function within the paradigms of Australian archaeology. Apart from his general histories and critiques of the discipline, Murray has published numerous works that interrogate the knowledge-making practices of archaeologists and what he describes as processes of 'normalization.' Murray has consistently argued that the major conceptual consequence of the European consensus on human antiquity was the distinct and threatening prospect that evidence of human action in the deep past would be unintelligible in terms of the social theory of the time. Such radical paradigmatic revolutions created a 'crisis of intelligibility,' as scientists were caught between an explosion of different images of prehistory and their need to find a process

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[92] Most notably in the work of archaeologist Rhys Jones, who published extensively on Tasmanian Aborigines throughout his career. Taylor's final two chapters, 'Below the surface' and 'On our land,' highlights Jones' Tasmanian research and, in particular, the controversy surrounding his involvement in the 1978 film *The Last Tasmanians*, which prompted a revision of Australia's history while simultaneously continuing to 'deny' Tasmanian Aboriginal survival and history. See also Rebe Taylor, "Archaeology and Aboriginal Protest: The Influence of Rhys Jones's Tasmanian Work on Australian Historiography," *Australian Historical Studies* 45:3 (2014): 331-349.

[93] Russell McGregor, *Imagined Destinies: Aboriginal Australians and the doomed race theory, 1880-1939,* (Carlton: Melbourne University Press, 1997); Henry Reynolds, "Genocide in Tasmania?," in *Genocide and Settler Society,* ed. A. D. Moses, (New York: Berghahn Books, 2004): 128–150; Warwick Anderson, *The cultivation of whiteness: science, health and racial destiny in Australia,* (Carlton: Melbourne University Press, 2005); Rebe Taylor, "Genocide, Extinction and Aboriginal Self-determination in Tasmanian Historiography," *History Compass* 11:6 (2013): 405-418.

through which they could defensibly interpret them.[94] In response, Murray claims, practitioners engaged in the process of 'normalization,' in which potentially disturbing archaeological data is defused through reinterpretation or reformulation. This process has many forms: redescribing abnormal evidence in more conventional terms, thus defining the threat out of existence; setting up interpretive instruments or frameworks that are so abstracted from the evidence that the two cannot effectively connect; or by simply pretending the aberrant evidence does not exist.[95]

While Murray has explored this theme in several of his works, his study of the normalization of Tasmanian Aborigines in the nineteenth century is invaluable. Murray is not the first to argue that Tasmanian Aborigines were utilised by nineteenth century scientists to make sense of the newly expanded human past, nor is he the first to point out the ways in which such representations denied Aboriginal peoples a sense of history. Through intellectual history, however, Murray demonstrates how the Tasmanians were used as an ideal 'human face for the Palaeolithic' by scientists whose careers were forged in the crisis of intelligibility that followed the establishment of human antiquity in 1859.[96] In an effort to understand the seemingly unintelligible periods of the Palaeolithic past, prehistorians humanised prehistory in the same terms as the historical past and the ethnographic present. Intelligibility was achieved by literally *creating* a prehistoric past, which was broken up into a series of ethnographic presents and linked by small-scale processes such as diffusion and migration to explain change.[97] Thus by using Tasmanian Aborigines as the interpretable 'face' of the Palaeolithic period, scientists not only denied a history to contemporary Indigenous peoples but perpetuated an understanding of the

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[94] Tim Murray, "Archaeology, ideology and the threat of the past: Sir Henry Rider Haggard and the acquisition of time," in his *From Antiquarian to Archaeologist: The History and Philology of Archaeology,* (Barnsley: Pen and Sword Books, 2014), 70-71; and "On 'normalizing' the Palaeolithic: an orthodoxy questioned," in his *From Antiquarian to Archaeologist: The History and Philology of Archaeology,* (Barnsley: Pen and Sword Books, 2014), 128; Tim Murray, "Tasmanian and the constitution of 'the dawn of humanity'," *Antiquity* 66 (1992): 730-743.
[95] Murray, "On 'normalizing' the Palaeolithic: an orthodoxy questioned," 128
[96] The primary examples are archaeologist John Lubbock and anthropologist Edward B. Tylor. Lubbock and Tylor's normalized representations of Tasmanian Aborigines will be discussed in Chapters Two and Three.
[97] Murray, "Archaeology, ideology and the threat of the past: Sir Henry Rider Haggard and the acquisition of time," 69

Palaeolithic as synchronous with the present. This synchronicity, Murray argues, extinguished the vast time-scale that had allowed for the acceptance of a high human antiquity in the first place.[98]

In his article, Murray looks specifically at the popular texts of archaeologist John Lubbock and anthropologist Edward B. Tylor.[99] His analysis demonstrates how the intellectual historian can engage with disciplinary boundaries to understand their effects on scientific epistemology. For example, Murray groups Lubbock and Tylor together as 'prehistorians' with the same desire to understand human action in the deep past. By doing so, Murray can better illustrate the interdisciplinarity of normalization. Yet one of his core aims is to also highlight the specific function of anthropological analogy *within* the paradigms of prehistoric archaeology.[100] By doing this, Murray reveals that the general strategies employed by Lubbock and Tylor remained largely unchanged in archaeological practice long into the twentieth century.[101] Through this methodology, Murray offers some implicit suggestion as to why historians and archaeologists continue to argue there was little understanding of Australia's human antiquity until the mid-twentieth century; a narrative which Murray himself has maintained.[102] The implication is that the normalization utilised by nineteenth century 'prehistorians' eliminated the concept of Aboriginal antiquity across a variety of disciplines, until it could be 'proven' by the objective and ubiquitous method of radiocarbon dating. Such a suggestion works to both overemphasise and undercut the crucial role of anthropology in the history of human

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[98] Murray, "Tasmania and the constitution of 'the dawn of humanity,'" 733-734

[99] Lubbock's *Pre-Historic Times* (1865) and Tylor's *Researches Into The Early History Of Mankind* (1965)

[100] Emphasis added. Murray specifically argues that despite the renowned and far-reaching scholarship of Donald K. Grayson (*The Establishment of Human Antiquity* 1983) and George W. Stocking (*Race, Culture and Evolution: Essays in the history of anthropology* 1968), we still lack a vantage point on the operation of normalisation in prehistoric archaeology. See Murray, "Tasmania and the constitution of 'the dawn of humanity,'" 734

[101] See Murray, "Tasmania and the constitution of 'the dawn of humanity,'" 734

[102] In the same year that Murray published his insightful critique of the normalization of Tasmanian Aborigines, he argued elsewhere that until John Mulvaney established Aboriginal antiquity with radiocarbon dating 'no one had any real idea of the antiquity of human beings in Australia.' See Tim Murray, "Aboriginal (pre)history and Australian archaeology: The discourse of Australian prehistoric archaeology," *Journal of Australian Studies* 16:35 (1992), 17

antiquity in Australia, as well as the very existence of a longer intellectual history for the concept itself.

An Intellectual History of Human Antiquity in Australia

This dissertation shares Murray's approach to disciplinary boundaries, seeking to demonstrate how epistemological standards and moments of normalization affected the concept of human antiquity in the past and in historical narratives. Murray's episode of normalization, however, must be set within a longer intellectual history for its greater significance to be recognised. Although inspired by a necessary critique of archaeology's foundational narrative, this dissertation goes beyond a revision of historiography to uncover how—and by whom—the notion of human antiquity was defined in Australia from 1860 to 1960. It is, in a broad sense, a history of science; concerned with the writings of professional and amateur scientists, and the dissemination and discussion of scientific ideas in the public sphere. In the mid-nineteenth century, human antiquity was just one of several scientific ideas that captivated individuals at every level of society, and across international and disciplinary boundaries, as developments across geology, biology, and zoology transformed understandings of the earth, and of the creation, evolution, and faunal affinity of humans. A history of human antiquity, therefore, cannot be articulated as the history (or critique) of one single scientific discipline or methodology, nor of a strictly professional definition of, or engagement with, a static theory. By taking the idea itself as its guiding force, this dissertation traces the complex ways the concept of human antiquity was picked up by different scientific disciplines, different 'experts,' and interpreted for different academic, cultural and political purposes.

In direct contrast to John Mulvaney's claims of intellectual isolation and public disinterest, the first two chapters of this dissertation reveal an intense and sustained engagement with the concept of human antiquity in the decades after its establishment in 1859. Chapter One focuses on Australia's broad public engagement in the 1860s and 1870s; Chapter Two, on the concept's concurrent conceptualisation in professional science. When read together, it is clear there was no lag, no tyranny of distance, in Australia's uptake of

scientific knowledge forged in Europe. Chapter One argues that human antiquity became a popular form of cultural capital that Australia's media and local intellectuals tapped into and repurposed for a settler audience eager to remain connected to their British 'homeland.' Through newspapers and public lectures, Australian communities interrogated human antiquity's empirical foundations, implications, and the scientific personalities promoting it. Public lectures in particular became a mediating intellectual authority that sat between Australia's seemingly separate public and professional spheres, and articulated a distinctly scientific understanding of human antiquity in the 1860s and 1870s.

Chapter One must be read in conjunction with Chapter Two, which reveals the outlets deliberately cultivated to produce Australia's 'professional' science did not engage with the concept of human antiquity in the 1860s and 1870s. Chapter Two argues that while Australia's nascent professional community was connected and conscious in the 1860s and 1870s, the desire to replicate British scientific epistemologies conflicted with the materialistic, pragmatic demands of a settler-colonial project. In this context, their eagerness to emulate their British colleagues led not to an engagement with human antiquity, but to a prioritisation of scientific subjects whose outputs related more directly to the material advancement of the colonies. Chapter Two also outlines the disastrous consequence of these settler-colonial priorities: Australian scientists missed out on engaging with the logic of Aboriginal antiquity when it was at its most conspicuous within the new science of British anthropology. This chapter argues that within the paradigms of anthropology, there existed a conceptual link between human primitivity and human antiquity that allowed anthropologists to read the primitivity of Aboriginal Australians as a marker of their antiquity.

Chapters One and Two provide a foundational history of human antiquity for the years leading up to the 1880s, when Australian scientists not only engaged with human antiquity but applied the concept to the Australian space and made their own arguments for an extensive Aboriginal antiquity. These scholars, however, also set in motion a substantial paradigm shift that would, in the space of one academic generation, erase the logic of Aboriginal antiquity from its foundational science of anthropology. Chapter Three

traces this dramatic erasure, and argues that anthropology's paradigm shift from developmental evolution to structural functionalism in fact necessitated the elimination of Aboriginal antiquity; first severing it from its logically paired notion of human primitivity, and then removing it from anthropology's disciplinary purview altogether. Chapter Three is the lynchpin of this dissertation. While historians acknowledge functionalist anthropology's rationale of Aboriginal timelessness, this chapter actually unpacks how it was uniquely created. By connecting key anthropologists who established the discipline in an intellectual history, Chapter Three reveals a gradual process of 'normalization' endemic to Australian anthropology and crucial to its survival as a formalised science: anthropology's (mis)representation of Aboriginal antiquity was not just a result of general trends in prehistory or racial science, but from the specifics of how *this* science developed in *this* place and at *this* particular time in history.

Chapters Four, Five and Six all explore the intellectual legacies of anthropology's erasure of Aboriginal antiquity, and how it combined with other aspects of racial science and evolutionism to affect the now separate concepts of human and Aboriginal antiquity in Australia. In the early twentieth century, both professional scientists and the broader Australian public remained engrossed in investigating and understanding Australia's *human* antiquity, but recognising and articulating the *aboriginality* of that antiquity was a process that became increasingly fraught and fluid. Chapter Four is a close case study of the Warrnambool slab, a piece of limestone whose supposedly ancient human footprints were interpreted by various scientists in an effort to determine Aboriginal antiquity in Victoria. This chapter argues the Warrnambool case study demonstrates the emergence of a fluid concept of Aboriginal antiquity, ambiguously applied to Aboriginal Australians at the turn of the century. As anthropology gradually erased the logic of an Aboriginal antiquity, scientists in other disciplines found it increasingly difficult to articulate Australia's human antiquity *as* Aboriginal. To overcome these articulation issues, scientists embraced a vernacular of racialisations, which they manipulated in order to prove their chosen claims about human antiquity in Australia. Thus, scientists could describe a *human*

antiquity for Australia without overturning the solidifying paradigm of Aboriginal timelessness.

Australia's Aboriginal antiquity would become even more ambiguous after the discovery of the Piltdown Skull in 1912, which increased the significance of fossilised crania as markers of antiquity. In the Piltdown era, the cultural capital of human antiquity was almost as high as when it had first been established, but the difficulties Australian scientists had with articulating antiquity remained. Chapter Five examines a series of Australian skull discoveries unearthed in Piltdown's wake, and traces how Australian scientists sought to align them with the international fossil record to claim an Australian space in a global story of human evolution. It argues that instead of manipulating typologies to assign antiquity to various human 'races,' Australian scientists ignored the complicated category of Aboriginality altogether, and instead framed Australia's antiquity as broadly and exclusively human. This was not just a semantic slight, but a type of intellectual dispossession in which Australian scientists used Aboriginal bodies to prove an internationally significant human antiquity that they simultaneously disconnected from Aboriginal people. To do this, scientists embraced the evolutionary notion of innate human difference, which blurred the lines between Aboriginality and humanity, and ultimately allowed scientists to position Aboriginal Australians outside of human antiquity.

The categories of Aboriginality and humanity would eventually be brought back together in the decades before the 'radiocarbon revolution' and professionalisation of Australian archaeology in the 1960s; yet not as a result of advanced dating techniques. Instead, Chapter Six argues that in the 1930s, 1940s and 1950s, a series of broader intellectual, social and political transitions induced scientists to recognise the Aboriginality of the antiquity that lay before them. This period is often portrayed as being caught in the grips of the Victorian 'Stone Circle,' the group of stone tool collectors whose belief in timeless Aboriginality supposedly silenced Australia's collective understanding of Aboriginal antiquity until its liberation at the hands of radiocarbon dating. In contrast, Chapter Six reveals there were several moments in which Australian scientists, for the first time in years, clearly articulated an Aboriginal antiquity that connected to contemporary

Aboriginal peoples. These moments did not cause a total and immediate demolition of the rationale of Aboriginal timelessness, but they reflected, and were part of, a gradual coming together of the concepts of Aboriginality and humanity, in which scientists found it less implausible to describe Australian's human antiquity as Aboriginal. Ultimately, this chapter—indeed this dissertation—argues the 'radiocarbon revolution' has become a locution with a simplistic narrative too often substituted for a much more complex process of intellectual, social and political change.

Prologue

Establishing human antiquity in Europe

Antiquity is a term with a variety of definitions, among which are 'the ancient past,' or more simply, a concept of 'great age.' For most people however, particularly those from Europe, antiquity often refers to a specific period of the past, beginning with Classical Antiquity (starting around the eight and seventh century BC), continuing through the emergence of Christianity, Ancient Greece, and the rise and fall of the Roman Empire, and ending in the declining period of Late Antiquity before the Early Middle Ages (roughly starting in the sixth to tenth centuries). The word is also associated with 'antiquities': physical artefacts, or antiques, from a distant past once again centred around Classical civilisations. Part of what this dissertation seeks to do is to move away from these references and reframe 'antiquity' as Charles Lyell and his contemporaries intended: as a conceptualisation of time. Not as artefacts *of* the past, or a particular period *in* the past, but a scientific locution used to describe and refer *to* a broad and decidedly ancient past. Thus, to understand human antiquity's conceptualisation in Australia, this Prologue provides a brief but necessary overview of the concept's initial establishment and definition in Europe.

Like all watersheds, Lyell's announcement in 1859 was built on decades of scholarship that had already begun to challenge traditional chronologies of human history. This is not to say, however, that the eventual establishment of a consensus followed any sort of teleology, nor does it demonstrate an inevitable displacement of religious orthodoxy at the hands of scientific 'truth.' As historian Donald K. Grayson remarks, 'It could have happened sooner, it could have happened later, it could have not happened at all, and it certainly could have happened very differently.[1] It was a consensus that relied heavily upon having the 'right' evidence, discovered by the 'right' methodology, and articulated by the 'right' scientific professional at precisely the 'right' time. Yet what appears, from one angle, to be an ideologically motivated denial of evidence that could disrupt conventional

[1] Donald K. Grayson, *The Establishment of Human Antiquity*, (New York: Academic Press Inc., 1983), 8

understandings or challenge academic authority also, from another, reveals the difficult and dynamic process of developing scientific knowledge across disciplines, levels of expertise, and national boundaries.

Prior to 1859, the common Western understanding of both human and earth history was one that tied the two together with the Mosaic chronology calculated from the Bible. Scripture was interpreted as fact, with a literal reading of Genesis placing the creation of the earth some 6,000-8,000 years ago. While multiple calculations of a date for Creation circulated during the late 1600s and early 1700s, Archbishop James Ussher is recognised by historians as the foremost seventeenth century chronologist.[2] In his frequently cited *The Annals of the World* (1658), Ussher estimated that Creation had occurred 'upon the entrance of the night preceding the twenty third day of *Octob*' in the year 4004 BC.[3] The first humans appeared on a fully modern Earth soon after.

Although the Biblical chronology was dominant, it was not without critique. Different theories on the earth's history emerged throughout the seventeenth century as new methods of reading historical artefacts developed. While some of these methods are now recognised within the paradigms of specific disciplines like geology, archaeology and palaeontology, before the late eighteenth and early nineteenth centuries, such methods and understandings were incorporated under the broad proto-disciplinary umbrella of natural history. The acceptance of fossils as the remains of long-dead organic creatures was one such 'earthly phenomena' that suggested, for some, a world much older than Genesis allowed. For English naturalist John Ray (1627-1705), organic fossils could 'shock the Scripture-History of ye novity of the World.'[4] English theologian Thomas Burnet (1635-1715) caused a stir with both his *Sacred Theory of the Earth* (1684; 1690) and *The Ancient Doctrine*

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[2] See Grayson, 27-28; Colin V. Murray-Wallace, "Understanding 'deep' time—Advances since Archbishop Ussher?" *Archaeology in Oceania* 31:3 (1996), 173-177; Tim Murray, "Archbishop Ussher and archaeological time," in his *From Antiquarian to Archaeologist: The History and Philology of Archaeology,* (Barnsley: Pen and Sword Books, 2014), 157-173

[3] James Ussher, *The annals of the world. Deduced from the origin of time, and continued to the beginning of the Emperour Vespasian's reign, and the totall destruction and abolition of the temple and common-wealth of the Jews*, (London: 1658), 1

[4] Letter from John Ray to Edward Lhwyd, October 8, 1695, MS *English History* c.11, f.51, transcribed in *Further Correspondence of John Ray*, ed. Robert W. T. Gunther, (London: Dulau & Co., 1928), 260

Concerning the Origin of Things (1692), in which his speculations over water levels on the earth's surface, and interrogation of the description of events in Genesis, led him to believe that the Bible's chronology for Creation was intentionally allegorical.[5] English astronomer Edmund Halley (1656-1742) also craved an assessment of the age of the earth that lay outside of Scripture. He envisioned a solution through measuring the salt levels of the earth's oceans and their rate of increase, from which one could then presumably determine the age of the ocean and thus the earth itself.[6]

The most skilful critique of a Biblically literal history of the earth came not from England but from France, in the work of Georges Buffon (1707-1788). Buffon was seen, in his own time and beyond, as the major natural historian of the French Enlightenment, and even of the entire eighteenth century.[7] Although Buffon's 36-volume *Natural History* (appearing between 1749 and 1789) did not explicitly denounce the Biblical account of Creation, its Newtonian approach left no room for the continued intervention of a Creator, and bespoke Scripture as 'little more than a historical document.'[8] Buffon was not the only European, nor the only Frenchman, to reject the biblical chronology for Earth's history. He was, however, the first natural historian of such respected and high status to popularise such a theory.

By the end of the eighteenth century, most natural historians in Europe agreed that the earth was ancient and the Creation timeline in Genesis was allegorical. The questioning of this timeline for the earth, however, did not extend to challenge the history of humanity. Even if the earth proved older than Scripture implied, its authority over the recency of mankind could not be doubted, and human antiquity remained fixed at roughly 6,000 years. A major contribution to the belief in human recency was the lack of any scientific method to satisfactorily challenge it. The disciplines of geology and palaeontology had

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[5] It was an opinion that ostracised Burnet from the religious community and saw him removed from his theological office. Grayson, 30

[6] Halley outlined this theory in his "Short Account of the Saltness of the Ocean," *Philosophical Transactions of the Royal Society of London*, 29 (1714 - 1716): 296-300, but lacked the ability to put it to the test.

[7] Buffon influenced generations of natural historians both in France, namely Jean-Baptiste Lamarck and Georges Cuvier, as well as abroad. See Ernst Mayr, *The Growth of Biological Thought: Diversity, Evolution, and Inheritance*, (Cambridge: Harvard University Press, 1982), 330

[8] Grayson, 32

made significant methodological advancements over the previous centuries: the recognition that chipped stone flints were actually the work of humans, the acceptance of fossils as the remains of long-dead lifeforms, and the developed understanding of the deposition of strata and sequencing had all lead to the belief in a deeper earth history.[9] Yet without appropriate time markers, there was no way that these levels of strata could be dated accurately, nor human relics or remains positioned within them to give a sense of chronology.

This changed somewhat with the work of French naturalist and zoologist Georges Cuvier (1769-1832). Cuvier wrote convincingly on both the extinction of mammals and the classification of Earth's superficial gravel and clay deposits. The idea of extinction was yet another earthly phenomena that had to be reconciled with Scripture—why would the Creator wipe out entire species of His creation?—and Cuvier's reconstructions of extinct mammal skeletons proved that extinction was indeed possible in a catastrophic world designed by the Creator.[10] Cuvier coupled this proof with the use of fossils to correlate chronologies with distinct layers of earthly deposits, later termed diluvium.[11] By the time Cuvier's *Researches on the Fossil bones of Quadrupeds* was published in 1812, extinct mammals and superficial gravels and clays could be treated as time markers against which human antiquity could be assessed. Cuvier himself steadfastly maintained the prevailing

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[9] British geologist and historian Martin J. S. Rudwick has written extensively on the development of British earth sciences, with particular attention to geology and palaeontology in the eighteenth and nineteenth centuries. See Martin J. S. Rudwick, *The Meaning of Fossils: Episodes in the History of Palaeontology*, (London: Macdonald and co., 1972); *The New Science of Geology: Studies in the Earth Sciences in the Age of Revolution*, (Burlington: Ashgate, 2004); and *Worlds Before Adam: The Reconstruction of Geohistory in the Age of Reform* (Chicago: The University of Chicago Press, 2008).

[10] Cuvier's idea of extinction differed from others at the time: he maintained a catastrophic viewpoint that saw entire species become extinct from sudden and dramatic changes in the earth, while others, such as Charles Darwin and Charles Lyell, believed in a more gradual interpretation of geological change and thus extinction: mammalian extinction for them was a slower, more collective process. See Martin J. S. Rudwick, *Georges Cuvier, fossil bones, and geological catastrophes: new translations and interpretations of the primary texts*, (Chicago: University of Chicago Press, 1997); Anthony Hallam, "Lyell's views on organic progression, evolution and extinction," in *Lyell: the past is the key to the present,* ed. Derek J. Blundell and Andrew C. Scott, (London: Geological Society Special Publications, 1998): 133-136; and Frank N. Egerton, "History of Ecological Sciences, Part 34: A Changing Economy of Nature," *Bulletin of the Ecological Society of America* 91:1 (2010): 21-41.

[11] The term diluvium was widely used for these superficial deposits after the publication of prominent English geologist William Buckland's *Reliquiae Diluvianae* (1823).

theory of human recency, yet his research on fossils-turned-time-markers provided the scientific framework that would eventually lead to its undoing. All that was now required to prove human antiquity was the discovery of artefacts representing human activity or occupation either within datable strata or together with extinct mammal remains.

As the nineteenth century progressed, such discoveries became a frequent reality. An acceptance of them, however, took more than half a century. The forces behind this reluctance were as much cultural as they were disciplinary. British scientists were particularly concerned with maintaining aspects of biblical narratives for human history in the early nineteenth century. James Parkinson (1755-1824), better remembered for his publications on 'the shaking palsy,' and eminent geologist William Buckland (1784-1856) both argued for mammal extinction theories that were linked to the Noachian Deluge and a recent history for humanity.[12] The evolving discipline of British geology existed, at this time, in a delicate synthesis with Scripture and a concept of man's ontological progress. As his career progressed in the 1830s, Charles Lyell (1797-1875) joined the ranks of powerful British geologists who remained unconvinced by the emerging evidence of a vast human antiquity. Even when the idea of a global, Scripture-based Deluge was finally abandoned in the late 1820s,[13] the respected opinions of Buckland and Lyell continued to cast a shadow over many of the discoveries that suggested the association of human artefacts and extinct mammals.

Aiding Lyell and Buckland in their ability to maintain human recency was the fact that much of the new evidence for human antiquity came from cave excavations whose methodology and reliability were vulnerable to critique. Human remains that were discovered in caves together with those of extinct mammals could easily be explained away

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[12] Buckland's most famous pronouncement of diluvial geology was in his 1819 lecture *Vindiciae Geologicae; or the Connexion of Geology with Religion Explained*, delivered on May 15, 1819, as his inaugural lecture as the first Professor of Geology at the University of Oxford. The lecture was later published by Oxford University Press in 1820.

[13] Symbolised by the presidential addresses of Professor Adam Sedgwick, considered one of the founders of British geology, delivered to the Geological Society of London in 1830 and 1831. See Adam Sedgwick, "Presidential Address to the Geological Society, delivered February 19, 1830," *The Philosophical Magazine* 7 (1830): 289-315; and Adam Sedgwick, "Address to the Geological Society, delivered on the Evening of the 18th of February 1831," *Proceedings of the Geological Society of London* 1 (1826-1833): 281-316.

as the remnants of modern humans, or the result of waterways that had deposited artefacts from further upstream. Such methodological difficulties were frequently utilised for the dismissal of evidence. For example, in his review of cave excavations from across Europe, *Reliquie Diluvianae* (1823), Buckland deemed discoveries of human bones with those of extinct fauna as coincidentally mixed.[14] While such critiques reflected legitimate concerns with the reliability of evidence, there is no doubt that intellectual status played an enormous role in its acceptance. Between 1825 and 1829, local priest John MacEnery uncovered chipped stone implements and the remains of extinct fauna—of whose contemporaneity he was convinced—in Kent's Cavern, Torquay. After exchanging a series of letters on the finds with Buckland, the famed geologist persuaded MacEnery that he was mistaken in both his observations and his inferences.[15] As Grayson notes, no change in the British belief in human recency was going to come from cave data unless that cave possessed outstandingly well-stratified deposits, and had been excavated by someone outstandingly well qualified to argue a case for it: 'Since those who were sufficiently well qualified to make the case did not believe there was a case to be made, the chances of combining the right cave with the right person were slim.'[16]

It also didn't help that the majority of the evidence of human antiquity was emerging from excavations conducted outside of England. In continental Europe—particularly in Germany, Belgium and France, where the majority of artefacts were being uncovered—the suggestion of a human antiquity that challenged Scripture caused less cultural concern. Anxieties did exist, but not to the same extent as England, where a vast human antiquity

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[14] See William Buckland, *Reliquiae Diluvianae; or Observations on the Organic Remains Contained in Caves, Fissures, and Diluvial Gravel, and on Other Geological Phenomena, Attesting the Action of an Universal Deluge*, (London: John Murray, 1823), 169

[15] See H. H. Howarth, "The Earliest Traces of Man," *Geological Magazine* 8 (1901): 337-344, and "The Origin and Progress of the Modern Theory of the Antiquity of Man," *Geological Magazine* 8 (1902), 16-27; A. R. Hunt, "On Kent's Cavern with Reference to Buckland and His Detractors," *Geological Magazine* 9 (1902): 114-118; J. A. Watson, "Dean Buckland and MacEnery," *Geological Magazine* 9 (1902): 85-86. See John MacEnery, *Cavern Research, Discoveries of Organic Remains and of British and Roman Reliques in the Caves of Kent's Hole, Anstis Cave, Chudleigh and Berry Head*, ed. Edward Vivian, (London: Simkin, Marshall, 1859) for MacEnery's published research; and John MacEnery, Six letters addressed to William Buckland, 1825-1828, Manuscript in the library of the Karst Research Institute, Postojna, for his correspondence, also quoted in *Encyclopedia of Caves and Karst Science*, ed. John Gunn, (New York: Fitzroy Dearborn, 2004).

[16] Grayson, 83

was initially seen as an 'irreconcilable blow' to the 'special' status of the human species.[17] Instead, establishing human antiquity in continental Europe became predominantly an empirical issue. As was the case in England, however, the status of the individuals involved had a powerful influence over the acceptance of excavations and their findings. Marcel de Serres (1780-1862), Paul Tournal (1805-1872) and Jules de Christol (1802-1861) all actively excavated sites and published their results from the 1820s onwards. Tournal would later be recognised as the first scientific writer to utilise the concept and term of 'prehistory,' which divided earth history into two distinct periods of the historic and the *'periode ante-historique'*.[18] At the time, however, all three part-time geologists were not members of the prestigious *Académie des Sciences*, and their thorough research made little impact on their contemporaries. Georges Cuvier remained the steady authority in France, even in the face of the growing list of discoveries that contradicted his belief in human recency and instead strongly associated human remains with ancient gravels and extinct mammals.

As Lyell suggested in his watershed British Association address, it was the 1858 discovery and excavation of Brixham Cave, near Torquay in southwestern England, that became the crucial turning point in reaching a British-led consensus on human antiquity in Europe. Initially discovered by quarry workers, geologist William Pengelly (1812-1894) and palaeontologist Hugh Falconer (1808-1865) soon agreed to collaborate on the cave's excavation. Falconer appealed to the Geological Society of London to engage financial support for the project, and the Society responded by establishing a committee of acclaimed British scientists to oversee the work. This included Lyell, geologists Joseph Prestwich (1812-1896) and R. A. C. Godwin-Austen (1808-1884), and anatomist and palaeontologist Sir Richard Owen (1804-1892), a formidable figure in the British scientific community.[19] Approximately 1500 bones, including those of extinct mammals, were

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[17] Grayson, 98

[18] See Paul Tournal, "Considérations générales sur le phénomène des caverns à ossemens," *Annales de Chimie et de Physique* 52 (1833): 161-181

[19] For more on Owen see Roy M. MacLeod, "Evolutionism and Richard Owen, 1830-1868: An Episode in Darwin's Century," Isis 56:3 (1965): 259-280; Deborah Cadbury, *The Terrible Lizard: The First Dinosaur Hunters and the Birth of a New Science,* (New York: Henry Holt and Company, 2001); Nicolaas Rupke, *Richard Owen: Biology Without Darwin, a Revised Edition*, (Chicago: University of Chicago Press, 2009); and

recovered in the first six weeks of excavation at Brixham Cave, and only a short time later, excavators unearthed a variety of stone flints whose shape, style, and stratigraphic association strongly suggested the site's high human antiquity.

The Brixham Cave excavation instilled a professional authority to the quest for human antiquity that had not been felt since Cuvier established his geological time markers in 1812. With almost no exceptions, the scholars who had previously argued in favour of human antiquity had not been influential scientists whose word alone could convince: but here, at Brixham Cave, were the results of a carefully conducted excavation made by a committee of individuals whose qualifications 'could not be reasonably doubted.'[20] Better still, the discovery had taken place on British soil, eliminating any reluctance that might have been felt by some in accepting scholarship that would otherwise have come from across the Channel. Suddenly, previously overlooked works on human antiquity began to be re-examined.

The most notable revival was on the work of French archaeologist Jacques Boucher de Perthes (1788-1868). Similarly to de Serres, Tournal and Christol before him, Boucher de Perthes had published the results of almost a decade of excavation in his *Antiquités celtiques et antediluviennes* (1847), suggesting, among other things, that the earliest members of the human species may have walked the earth thousands of centuries ago.[21] Despite his sound and logical research, Boucher de Perthes embedded his evidence in a then-outdated antiquarian spirit of cave exploration and diluvial geology that did little to impress his scientific peers. Undeterred, Boucher de Perthes continued to argue tenaciously for a vast human antiquity, writing letters to geologists and antiquarians across Europe and sending copies of his *Antiquités celtiques et antediluviennes* to anyone with the slightest interest.[22] As historian Jacob Gruber argues, it was not, therefore, that the

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Christopher Ernest Cosans, *Owen's Ape & Darwin's Bulldog: Beyond Darwinism and Creationism,* (Bloomington: Indiana University Press, 2009).

[20] Grayson, 182. See also A. Bowdoin Van Riper, "Solving a Geological Problem," *Men Among the Mammoths: Victorian Science and the Discovery of Human Prehistory,* (Chicago: Chicago University Press, 1993): 74-116.

[21] Translated as *Celtic and Antediluvian Antiquities*. Jacques Boucher de Perthes, *Antiquités celtiques et antediluviennes,* (Paris: Treuttel et Wurtz, 1847).

[22] Jacob Gruber has examined correspondence from the Society of Antiquaries of London detailing Boucher de Perthes' dispersal of his work to them and to the Norfolk & Norwich Archaeological Society. See Jacob

evidence in Boucher de Perthes' extensive work was not well-known or had been poorly distributed prior to 1859; rather, that it was too well known and its advocate too enthusiastic.[23]

After Brixham Cave, Boucher de Perthes was reframed by the British as a veritable authority. In late 1858, Falconer visited the Frenchman to examine his collection of artefacts. Thoroughly impressed, Falconer encouraged Prestwich to make a visit, and he too was quickly convinced of the validity of Boucher de Perthes' research. In May 1859, Prestwich presented a paper to that effect at the Royal Society of London, Britain's oldest and most respected intellectual society. In September of the same year, the irrefutable Lyell confirmed the new opinion on human antiquity in his presentation to the British Association, in which he described Boucher de Perthes' collection as 'truly wonderful.'[24] In 1860, Boucher de Perthes 'held his victory celebration' by publishing a new monograph, *Antediluvian Man and His Works*, the majority of which was dedicated to discussing the support others now provided for his initial discoveries.[25]

For the top scientific minds in Britain, the right combination of evidence, professional status, and methodological precision had finally been reached. It could no longer be plausibly argued that human beings were recent occupants of the Earth. While no exact date for man's appearance in Europe could be given, geologists estimated an antiquity from the geological phenomena they observed. To the human flint implements from Abbeville and Amiens in France, Lyell broadly assigned an antiquity of the 'post-Pliocene period.'[26] Lyell somewhat narrowed this epic period by inferring that the implements were made by a tribe of 'savages' who had no knowledge of the use of iron. With changes in surrounding layers of sediment representing significant oscillations in

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W. Gruber, "Brixham Cave and the Antiquity of Man," in *Histories of Archaeology: A Reader in the History of Archaeology*, ed. Tim Murray and Christopher Evans (Oxford: Oxford University Press, 2008): 13-45

[23] Gruber, 24

[24] Charles Lyell, "Introductory Address by the President: On the Occurrence of Works of Human Art in Post-Pliocene Deposits," *Report of the 29th Meeting of the British Association for the Advancement of Science (1859)*, (London: Taylor and Francis, Red Lion Court, 1860), 94

[25] Grayson, 194

[26] Lyell, "Introductory Address by the President: On the Occurrence of Works of Human Art in Post-Pliocene Deposits," 94

land level from 'slow movements of upheaval and subsidence,' Lyell argued the antiquity of the artefacts encompassed 'a vast lapse of ages' that came before the Roman invasion of Gaul in 58 BC.[27]

[27] Lyell, "Introductory Address by the President: On the Occurrence of Works of Human Art in Post-Pliocene Deposits," 95

Chapter One

'Time, time, and yet more time': Human antiquity and the Australian public, 1859-1879

Sir Charles Lyell's 1859 address at the 29th meeting of the British Association for the Advancement of Science effectively ended the decades of scientific infighting over 'the antiquity of man.' In the first half of the nineteenth century, human remains and artefacts had been discovered across continental Europe that raised suspicions over the length of humanity's existence on Earth. Many of these discoveries had been dismissed as unconvincing, until the British excavation at Brixham Cave forced Lyell and his colleagues to concede the evidence now suggested a human antiquity well beyond the Bible's estimated 6,000 years.[1] Only four years earlier, Lyell himself had claimed that scientists had every reason to believe the human race was 'extremely modern.'[2] His dramatic about-face demonstrates the persuasive power of Brixham Cave, and the significance of Lyell's admission as one of Britain's most respected geological authorities.

Settler Australia's relationship with human antiquity began in this moment. Two months after its delivery, Lyell's address featured on the front page of the *Launceston Examiner*, a prominent newspaper in the British Colony of Tasmania. By early 1860, newspapers in the colonies of New South Wales and Victoria were also reporting the staggering new claim of human antiquity.[3] In all of the articles, Lyell's address was presented as unequivocal 'proof' of the vast 'antiquity of the human race.'[4] Three years later, when Lyell published his *Geological Evidences of the Antiquity of Man* (1863), Australia's

[1] Charles Lyell, "Introductory Address by the President: On the Occurrence of Works of Human Art in Post-Pliocene Deposits," *Report of the 29th Meeting of the British Association for the Advancement of Science (1859)*, (Fleet Street, London: Taylor and Francis, Red Lion Court, 1860), 93-95.
[2] Charles Lyell, *Principles of Geology; or the Modern Changes of the Earth and Its Inhabitants*, Ninth Edition, (London: J. Murray, 1855), 148
[3] F.G.S, 'Works of Art in the Drift,' *Empire*, February 15, 1860, 3
[4] *Launceston Examiner*, "Antiquity of Man," November 26, 1859, 1

public discussion exploded, and human antiquity became a sustained feature of public interest for the rest of the nineteenth century.

This chapter charts Australia's public engagement with the concept of human antiquity in the twenty years after its intellectual establishment. It argues that human antiquity became a popular form of cultural capital that Australia's media and local intellectuals tapped into and repurposed for a settler audience eager to remain connected to their British 'homeland.' In the early 1860s, Australians consumed the knowledge of human antiquity almost verbatim from Britain, as newspapers reproduced research summaries, book reviews, conference proceedings and meeting minutes among a spread of updates on British cultural life. This initial consumption soon developed into more rousing debate. Through newspapers and public lectures, Australian communities interrogated human antiquity's empirical foundations, implications, and the scientific personalities promoting it. Much of the intellectual battle, however, had already been fought and won in Europe. Australia's reception of human antiquity was therefore a comparatively short-lived and straightforward affair.[5] For the majority of settler Australians, the concept of human antiquity represented an exciting and transformative chapter in the scientific history of humanity, and with so many respected British authorities supporting the theory, its opponents found themselves in an increasing minority. By the 1870s, it was generally agreed the human species was indeed much older than the Bible allowed. Several of Australia's prominent religious leaders vocalised their support and worked to dismantle conceptual obstacles between faith and science. By the end of the decade, the 'question' of human antiquity was labelled a 'moot' one, leaving commentators free to speculate on the potential to understand Australia's own human antiquity.

The first section of this chapter details the as yet unexplored history of human antiquity's arrival in Australia and it's early, avid dissemination. Sections two and three, however, foreground two key aspects of Australia's public engagement with human antiquity. Section two focuses on the role of the public lecture, which, by the late 1860s,

[5] For an analysis of the British public reception of human antiquity, see A. Bowdoin Van Riper, "The Public Debate over Human Antiquity, 1859-75," in his *Men Among the Mammoths: Victorian Science and the Discovery of Human Prehistory*, (Chicago: Chicago University Press, 1993): 144-183.

had become the most prominent form of public discussion on human antiquity. This section argues that public lectures were a unique and mediating intellectual authority that sat between Australia's seemingly separate public and professional spheres. Public lectures were a popular nineteenth century format for the dissemination of scientific ideas, but unlike their British counterparts, Australia's public lectures were not delivered by professional scientists. As Chapter Two will reveal, professional scientists in Australia did not engage deeply with the concept of human antiquity until the 1880s. Instead, Australians received the interpretations of a different set of experts: local intellectuals, religious leaders, and politicians who used the public lecture to achieve academic legitimacy as scientific spokesmen for human antiquity.

The third section of this chapter argues that Australia's public discussion on human antiquity also stood apart from the concurrent debates surrounding Charles Darwin's controversial theory of evolution by natural selection. The two theories had a close intellectual and temporal alignment, so much so that human antiquity is often portrayed by historians as a product of Darwin's theory. This section reveals that Australia's public reception and interpretation of human antiquity remained focused on that concept alone. This was due, in part, to the different levels of threat issued by a concept of human ancientness compared to a theory of species transmutation that more explicitly eroded humanity's 'special place' in creation. Yet it was also a result of how Lyell himself had framed the theories in the texts responsible for Australia's knowledge of human antiquity. Ambivalent about natural selection, Lyell created a clear intellectual separation between human antiquity and natural selection, which was maintained in Australia's public discussion and aided its acceptance.

Ultimately, this chapter argues that a widespread and distinctly scientific understanding of human antiquity existed in Australia in the 1860s and 1870s. Though it was informed and ratified by the paradigms of British geology, Australia's public intellectuals played a unique, mediatory role in the concept's dissemination in the colonies. Understanding the intellectual authority that surrounded human antiquity in this period, including its differentiation from Darwinian evolution, is a crucial starting point for this

dissertation. It demonstrates an Australian public with an earnest interest in science, and with an understanding of human antiquity as an all-encompassing theory which might soon be applied to Australia.

'An immense impulse': Human antiquity arrives in Australia

The concept of a vast, species-wide human antiquity was transposed from Britain and into the Australian public sphere in a matter of months. First came the *Launceston Examiner*'s front page report in November 1859, and in February 1860, the Sydney-based newspaper *Empire* published a detailed summary of Lyell's British Association address.[6] The article, a 'letter to the Editor' reprinted from the London *Times*, was written by someone who had sat in Lyell's audience. Signed by 'F.G.S,'[7] the letter was laden with admiration for Lyell, whose intellectual status had an unequivocal influence on the audience's reception of human antiquity. Lyell's 'deliberate examination' of human antiquity was, for F.G.S., the 'most important fact in connection with it.'[8] 'It is impossible for me even to give you an abstract of the address,' he wrote, 'it was as much characterised by candour and philosophical courage as it was by skilful and logical research and deductions.'[9] F.G.S thought it equally impossible to question Lyell's conclusions, and he concluded his letter with resounding support for what was now known as 'the antiquity of man':

> I am as unwilling as 'Senex' [another *Times* correspondent] can be to have our common notions of the age of the world and of its principal inhabitants, or our common systems of chronology, impeached; but I cannot shut my eyes to facts and explain away the most certain physical deductions because they quarrel with preconceived opinions.[10]

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[6] *Launceston Examiner*, "Antiquity of Man," November 26, 1859, 1
[7] Assumed to refer to the abbreviation for Fellow of the Geological Society.
[8] He even highlighted that Lyell, upon request, had delayed his address so that Prince Albert, husband and consort to Queen Victoria, could attend. F.G.S, 'Works of Art in the Drift,' *Empire*, February 15, 1860, 3
[9] F.G.S, 'Works of Art in the Drift,' *Empire*, February 15, 1860, 3
[10] F.G.S, 'Works of Art in the Drift,' *Empire*, February 15, 1860, 3

This letter was the first of many British reports and correspondence that featured in Australia's print media in the early 1860s. Hugh Falconer, the palaeontologist who helped excavate Brixham Cave, claimed that 'an immense impulse' had been felt 'all over Europe' to search for and study 'the material proofs of the antiquity of the human race.'[11] 'The public mind,' Falconer argued, was now desperately craving information on a subject that only a few years earlier had been 'condemned by the general verdict of men of science, and hardly mentioned except in a whisper.'[12] Australia matched this enthusiasm and demonstrated their own impulse for human antiquity by consuming information through their colonial press. Local and national newspapers published academic book reviews, descriptions of discoveries and excavations, and detailed summaries of the meetings of Britain's intellectual societies. One such article, in *The Perth Gazette and Independent Journal of Politics and News,* reported with excitement that the 1863 meeting of the London Ethnological Society had been 'the most numerous in attendance and the most important of any that has taken place this session.' The article described in detail all of the most 'noteworthy' topics from the meeting: the unity of the human race, the Aryan theory of language, the transmutation of man from the apes, and the antiquity of man.[13]

While newspapers did publish material from other scientific communities in Europe, the Australian press was unsurprisingly dominated by reports from the British metropole. Updates from the 'homeland' were published in sections like 'London Review,' 'Our London Newsletter,' 'British Extracts,' and 'From our London Correspondent,' with scientific developments appearing alongside sport, politics and anecdotes from Britain's society pages.[14] Famous British scientists garnered serious media attention in Australia,

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[11] H. Falconer, "Works of art by primeval man in Europe," *Empire*, May 19, 1864, 3
[12] H. Falconer, "Works of art by primeval man in Europe," *Empire*, May 19, 1864, 3
[13] See *The Perth Gazette and Independent Journal of Politics and News,* "Contemporary Science: London Review," July 10, 1863, 3.
[14] See *The South Australian Advertiser,* 'Our London Newsletter,' November 15, 1861, 2-3; *The Perth Gazette* and *Independent Journal of Politics and News*, "Contemporary Science," July 10, 1863, 3; *The Perth Gazette* and *Independent Journal of Politics and News*, "The Abbeville Jaw (London Review)," July 31, 1863, 3; *The Armidale Express and New England General Advertiser*, "British Extracts: The Antiquity of Man," August 15, 1863, 4; *The Australasian*, "Scientific: Sir John Lubbock on Primeval Antiquities," September 29, 1866, 4; *Empire,* "Sir John Lubbock on Primeval Antiquities,", October 9, 1866, 2; *Empire*, "Dr Duns on the Antiquity of Man," March 4, 1867, 3.

especially when Charles Lyell's *Geological Evidences of the Antiquity of Man* (1863) pushed human antiquity even further into the spotlight. Lyell's book surveyed evidence from Denmark, Switzerland, Belgium, France, England, Wales, Scotland, Egypt and even North America, and argued for a human occupation of Europe that went back to the 'early post-Pliocene period.' While this was only a minor clarification of the antiquity Lyell had offered in his British Association address, it was no less impactful. Lyell stressed that although an 'early post-Pliocene' antiquity for humans was 'recent' when compared to the age of the Earth's flora and fauna, it was remote enough to 'cause the historical period to appear quite insignificant in duration."[15]

Lyell's book sparked a fresh wave of public discussion in Australia. Shortly after its publication, A. French, President of the Mechanics' Institute in Hamilton, Victoria, wrote in his local paper that Lyell's was 'the most remarkable book of this or any other age."[16] French believed its revelations would not only astonish the world, but would 'cause a revolution in the ideas of the old and the education of the young."[17] As an educator, French was eager to see the 'religiously taught' theory of the 'recent advent of man' quashed by the new research.[18] Another reviewer, from Armidale, New South Wales, gave an equally passionate assessment of Lyell's book. 'Why all this coil about the Antiquity of Man,' the anonymous reviewer asked, 'if, in reality, he can only be traced back into the uppermost layers of a deposit so insignificant, geologically speaking, that thirty years ago it would have been put down as 'diluvium'?"[19] The answer, the reviewer stated, was Lyell's proof that these layers reflected a 'vast lapse of time…a long succession of life.'[20] The reviewer was poetic in his description of Lyell's evidence—'And yet to what a lapse of time does it testify!'—and finished the article with a vivid image of human antiquity's conceptual impact:

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[15] Charles Lyell, *The Geological Evidences of the Antiquity of Man, with remarks on theories of the Origin of Species by Variation* (London: John Murray, 1863), 289
[16] A. French, "The antiquity of man," *Hamilton Spectator and Grange District Advertiser*, June 26, 1863, 4
[17] French, "The antiquity of man," 4
[18] 'It is to be hoped the rising generation will have no such ideas instilled into them to support a favourite theory.' French, "The antiquity of man," 4
[19] *The Armidale Express and New England General Advertiser*, "British Extracts: The Antiquity of Man," July 18, 1863, 4
[20] *The Armidale Express and New England General Advertiser*, "British Extracts: The Antiquity of Man," July 18, 1863, 4

> 'Time, time, and yet more time,' is the cry of the student of antiquity, whether he works from the geological, the archiological [sic], or the philological side; and the searcher after primeval Man is as one using an inverted telescope which lengthens as he sees, and throws the object of his investigation even farther and farther off.[21]

The excitement surrounding Lyell's book prompted other British scientists to share their research, and these too were disseminated to the Australian public. For example, John Algernon Clarke (1827-1887) had been publishing for years on topics of agriculture, husbandry and in particular the Fens coastal plain in eastern England.[22] In 1863, a lengthy letter he had written to the London *Times* was reprinted in *The Armidale Express and New England General Advertiser* in New South Wales. Clarke's letter sought to draw 'the attention of geologists' to the Fens, a region he argued was 'embedded [with] relics of man primaeval.'[23] These relics, Clarke believed, could be 'more instructive' than those found in two of the most famous European sites so far connected with human antiquity: the Danish peat bogs and the French gravels of the Somme valley.[24]

Even when circulating the work of other scientists, Australia's reliance on British media sources perpetuated an engagement with human antiquity that was highly favourable toward British interpretations. In October 1863, for example, Sydney's *Empire* highlighted the work of French geologist Jules Desnoyers (1800-1887), who had allegedly discovered 'unmistakable evidence' of human coexistence with the extinct *Elephas meridionalis*, commonly known as the southern mammoth.[25] This was no small accomplishment, as Lyell had recently stated in his best-selling monograph that no human bones or weapons relating to the era of the *Elephas meridionalis* had yet come to light.[26] If

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[21] *The Armidale Express and New England General Advertiser*, "British Extracts: The Antiquity of Man," July 18, 1863, 4

[22] See John Algernon Clarke, *Fen Sketches: being a description of the alluvial district known as the Great Level of the Fens, with a brief history of its progressive improvements in drainage and agriculture* (London: Hall, Virtue & Co., 1852)

[23] John Algernon Clarke, "British Extracts: The Antiquity of Man," *The Armidale Express and New England General Advertiser,* August 15, 1863, 4

[24] John Algernon Clarke, "British Extracts: The Antiquity of Man," *The Armidale Express and New England General Advertiser,* August 15, 1863, 4

[25] *Empire*, "Man in the Pliocene," October 2, 1863, 3

[26] Lyell, *Geological Evidences of the Antiquity of Man*, 228

any such remains were found, Lyell reasoned, they would carry back human antiquity to a period of time 'more than twice as great' as that which currently separated contemporary Europe from 'the most ancient of the tool-bearing gravels yet discovered.'[27] Desnoyers certainly believed his discoveries belonged to a 'far more distant period of geologic time,' and proved humans had inhabited France before the extinction of the southern mammoth's older relative, the woolly mammoth.[28] Desnoyers' work was backed by Édouard Lartet, a geologist and palaeontologist revered by the British scientific community as the French equivalent of Lyell. Yet the review, originally published in London's *Reader*, concluded that all of Desnoyers' evidence would 'of course, be thoroughly sifted,' and urged audiences to 'wait for the opinions of *our* men of science,' who, 'grown wise by experience,' could give a real indication of the materials' value.[29] Despite showing esteem for both Desnoyers and Lartet,[30] it was the British geological community that maintained intellectual ownership over the concept of human antiquity, the authority of which was reproduced and reinforced in the Australian colonies.

Newspapers were the crucial mechanism that spread this distinctly British conceptualisation of human antiquity in Australia in the 1860s. While determining an exact measure of reader engagement is difficult, Australia's consumption of newspapers was, on the whole, exceptionally high. In 1883, journalist Richard E. N. Twopeny claimed Australia was 'the land of newspapers.'[31] He described settler Australians as inquisitive by nature and eager to understand the world around them: 'Nearly everybody can read, and nearly everybody has leisure to do so.'[32] For both rural and urban communities, newspapers were the most readily available form of literature, and according to Twopeny, the proportion of

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[27] Lyell, *Geological Evidences of the Antiquity of Man*, 228
[28] '...before the great first glacial period...anterior to the *Elephas primigenius*.' *Empire*, 'Man in the Pliocene,' October 2, 1863, 3
[29] Emphasis added. *Empire*, 'Man in the Pliocene,' October 2, 1863, 3
[30] 'But whether or no St. Prest shall henceforth for a time at least, bear the palm as the birthplace of man's history, and whether or no a brilliant addition to our knowledge of man's antiquity shall be duly recorded as acquired to science, we may congratulate ourselves that a question of such vast interest is occupying the attention of such careful observers and philosophical inquirers as MM. Desnoyers and Lartet.' *Empire*, 'Man in the Pliocene,' October 2, 1863, 3
[31] R. E. N. Twopeny, *Town Life in Australia*, (London: Elliot Stock, 1883)
[32] R. E. N. Twopeny, *Town Life in Australia*, (London: Elliot Stock, 1883)

the Australian population who were able to purchase and subscribe to newspapers was ten times that of England.[33] Indeed, newspaper consumption was often higher than other forms of literature. In 1866, Sydney-born journalist George Burnett Barton lamented that Australia's poorly stocked libraries languished in the shadow of its thriving newspaper press.[34] New South Wales alone recorded extraordinary figures of public engagement: its leading daily paper, *The Sydney Morning Herald*, boasted a circulation of 8,450 copies a day, as well as 11,500 subscribers for their 12-page weekly edition, which was published every Saturday and distributed throughout the country.[35] Barton was not the only one to recognise Australia's penchant for newspapers. Dr Alfred Barry, Bishop of Sydney (1884 to 1889) and a dedicated advocate for higher education, stated in a public lecture that he 'did not like to be told that the young Australians read nothing but newspapers,' and used novels only 'as an occasional diversion.'[36] By 1882, it was estimated there was one newspaper per 6,722 Australians compared to one per 18,000 in Britain.[37] As historian John Arnold argues, 'newspapers were *the* source of local, metropolitan, interstate and world news.'[38]

In a country with wide readership and a steady availability of newspapers, the knowledge of human antiquity would thus have reached even the most remote settler communities in Australia. At the very least, readers could be alerted to the publication of new books and given summaries of the discussions being conducted in European learned societies. For others, however, newspapers provided a platform to go beyond just consumption. As the 1860s continued, Australians began to actively analyse and debate the logic of human antiquity. Letters to the Editor were common, and were often used to engage in direct debate with correspondents from around the colonies. A particularly heated exchange took place in regional Victoria through the *Ovens and Murray Advertiser,*

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[33] R. E. N. Twopeny, *Town Life in Australia*, (London: Elliot Stock, 1883)
[34] See G. B. Barton, *Literature in New South Wales*, (Sydney: Thomas Richards, Govt. Printer, 1866)
[35] Barton, *Literature in New South Wales*, 27-28
[36] *The Sydney Morning Herald*, "Lectures: National Greatness," July 4, 1885, 9
[37] See John Arbuckle Reid, *The newspaper reader: leading Australian journals on events of the day,* (Carlton: Whitelaw and Son, 1881).
[38] Emphasis in original. John Arnold, "Newspapers and Daily Reading," in *A History of the Book in Australia 1891-1945: A National Culture in a Colonised Market*, ed. Martyn Lyons and John Arnold, (St Lucia: University of Queensland Press, 2001,) 255

when two correspondents, 'A Christian' and 'Education,' disagreed on the merits of denominational education. 'Education' wrote candidly of what they saw as the 'narrowing of the human intellect' at the hands of 'the priesthoods of past ages,' which was resulting in a lack of attention to scientific topics like 'the antiquity of man.'[39] 'Education' argued recent articles from the British Geological Society, published in the *Ovens and Murray Advertiser*, had proven 'tolerably clearly that the first traces of man evidently belong to the early Palaeolithic period' which was 'some hundred and fifty thousand years from our day.'[40]

While these correspondents were well-versed in the academic arguments for human antiquity, others wrote to their local newspapers to enquire after more information. In one of the rare examples of an interest in human antiquity's application in the Australian context, an 1863 correspondent to the popular Melbourne newspaper *The Argus* sought details regarding 'the bodies of several aborigines' allegedly found 'in a petrified state' on the banks of a creek 'near Castlemaine or Sandhurst.'[41] Hammer, as the correspondent was signed, had 'some indistinct recollection' of having seen a notice of the discovery in a Melbourne journal some months ago, and then again in a London newspaper. Hammer had recently heard, from a person they met 'promiscuously,' that 'the paragraph was no *canard*, but that the bodies really were discovered.'[42] Hammer pleaded for those better informed to make their knowledge known:

> If these statements are correct, how is it that such interesting geological specimens have not made their way to the metropolis? In these days, when the antiquity of man is exciting no little attention, a fact so important to one side or other of the question at issue would be especially valuable.[43]

Others enquired after where to purchase copies of the latest scientific works, such as this correspondent who, in 1874, was hunting down a copy of Scottish geologist James Geike's

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[39] *Ovens and Murray Advertiser,* "'Education' in reply to 'Christian'," November 4, 1879, 3
[40] *Ovens and Murray Advertiser,* "'Education' in reply to 'Christian'," November 4, 1879, 3
[41] Hammer, "Petrified Aborigines," *The Argus*, June 30, 1863, 7
[42] Emphasis in original. Hammer, "Petrified Aborigines," *The Argus*, June 30, 1863, 7
[43] Hammer, "Petrified Aborigines," *The Argus*, June 30, 1863, 7

seminal text on sedimentology, stratigraphy and glaciation in the deep past: 'Can I get in Sydney '*The Great Ice Age and its Relation to the Antiquity of Man*,' and the price?'[44] The *Australian Town and Country Journal*, a Sydney broadsheet, wrote back: 'It can be had at Mr. Moore's, 560, George-street; price, 30s.'[45]

Even this small sample of articles reveals the interest the Australian public had in both the initial research defining human antiquity and the subsequent scholarship it evoked. In the early 1860s, the Australian public understood human antiquity as it was defined in the British sources they consumed; a locution for the vast lapse of time that incorporated the entire human species. This concept would become more distinctly articulated in the late 1860s and into the 1870s, as Australian audiences grew familiar with the methodology behind antiquity's scientific establishment and the geological terminology used to express it. Newspapers remained at the core of Australia's public discussion on human antiquity, but as the 1860s progressed, another method of scientific dissemination claimed a unique space in the public network.

Mediating authority: The public lecture and its public intellectual

As early as 1863, it was reported that Sir Richard Davies Hanson, former Premier of South Australia (1857-1860) turned Chief Justice of the South Australian Supreme Court (1861-1876), would deliver an open-to-the-public lecture in the National Schoolhouse on the 'Geological Evidences of the Antiquity of Man.'[46] Speaking at the request of the Committee of the Robe Institute, Justice Hanson lectured on information he had gained from 'the perusal of several works by well-known authors in geological science,' including Charles Lyell.[47] The lecture attracted a crowd, with 'seats and ventilation being at a premium' and standing room 'fully occupied.' The audience, which included other prominent South Australians like Judges' Associate W. S. Douglas and Crown Solicitor Mr.

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[44] James Murdoch Geikie (1839-1915) was one of Scotland's most revered geologists. He served on the British Geological Survey from 1862 to 1882, and retired only to take up the Murchison Chair of Geology at Edinburgh University, which he occupied until 1914. His monograph *The Great Ice Age and its Relation to the Antiquity of Man* (1874) established him as an early authority on glacial geology.
[45] *Australian Town and Country Journal*, "Answers to Correspondents," November 7, 1874, 11
[46] *Border Watch*, "Local Intelligence," May 1, 1863, 3
[47] *South Australian Register,* 'Guichen Bay [From our own Correspondent],' May 8, 1863, 2

W. Boothby, listened 'with marked attention.'[48] According to the *South Australian Register*, the facts of Hanson's lecture were 'sufficiently startling to arrest the notice of the most indifferent,' and at the conclusion of his speech, the audience gave 'unmistakable evidence of the pleasure they had experienced.'[49] Hanson's lecture must have been somewhat successful, as he delivered it again in August at the Temperance Hall in North Adelaide. This second lecture was also intended to act as a fundraiser, the success of which organisers did not doubt: 'As the subject of the lecture is of great interest, and His Honor is known to be a talented and able lecturer, there will, we should think, be a full attendance.'[50] Indeed, Hanson would deliver yet another lecture on the 'Geological Antiquity of Man' three years later, to a 'very crowded audience, who flocked in from all sides when it became known His Honor would lecture.'[51]

Hanson's lectures reflected the lengthy British tradition of educational public lectures, which had been used specifically for scientific education since the early eighteenth century. Initially designed to be utilitarian, they covered subjects like astronomy, mathematics, natural philosophy and chemistry, and were largely delivered by local or itinerant speakers.[52] By the early nineteenth century, utility gave way to a more specialised notion of 'instruction,' as independent lecturers were absorbed into the country's Literary and Philosophical Societies, and Mechanics' Institutes.[53] By the 1850s and 1860s, formal and highly publicised lectures had become the principal mode of public tutelage on a range of scientific subjects. As with other aspects of British intellectual life, the desire to educate a working-class public was one that was eagerly replicated in nineteenth century Australia.[54]

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[48] *South Australian Register,* 'Guichen Bay [From our own Correspondent],' May 8, 1863, 2
[49] *South Australian Register,* 'Guichen Bay [From our own Correspondent],' May 8, 1863, 2
[50] *South Australian Register*, 'Antiquity of Man,' August 27, 1863, 2
[51] *The South Australian Advertiser*, 'Port Elliot [Correspondent],' February 26, 1866, 3
[52] See Ian Inkster, "The Public Lecture As An Instrument of Science Education for Adults—The Case of Great Britain, 1750-1850," *Paedagogica Historica* 20:1 (1980): 80-107. Donald M. Scott has conducted a similar study on the public lecture in nineteenth-century America. See Donald M. Scott, "The Popular Lecture and the Creation of a Public in Mid-Nineteenth-Century America," *The Journal of American History* 66:4 (1980): 791-809.
[53] Inkster, 92-94
[54] For more on Mechanics' Institutes in Britain, and how they were utilised by the middle-classes as a means of exercising a level of social control over the 'mechanical' or working classes, see Steven Shapin and Barry Barnes, "Science, nature and control: interpreting mechanics institutes," *Social Studies of Science* 7 (1977): 31-74.

The formation of Mechanics' Institutes peaked in Britain in the 1820s and 1830s, and the Australian colonies were not far behind. The benefits of public lectures and 'practical mechanics' institutes were highlighted in Australia as early as 1826, and only a few years later, in 1833, the Sydney School of Arts and Mechanics' Institute was founded.[55] The Sydney School was soon followed by similar setups in Newcastle, Goulburn and Singleton in New South Wales, Hobart and Launceston in Van Diemen's Land, and Melbourne in Victoria.[56] By the time the consensus on human antiquity was announced in 1859, public lectures and mechanics' institutes had become stable features of Australia's burgeoning intellectual scene.

Justice Hanson's lectures were emblematic of these education movements: a respected member of colonial society, delivering an open-to-the-public lecture that was sponsored by a community institute with an aim to promote useful scientific knowledge for social improvement. From the mid-1860s onwards, public lectures became Australia's most prominent form of public discussion on the concept of human antiquity. Held in churches, schoolhouses, town halls, Mechanics' Institutes, Young Men's associations and hotel meeting rooms, they were a knowledge sharing device transposed from British models into the Australian colonial space. As this section will argue, however, Australia's public lectures on human antiquity played a unique role in the public's engagement with the concept. Rather than being delivered by professional scientists, Australia's public lectures became a means through which local intellectuals could tap into the cultural capital of human antiquity. As a result, they acted as a mediatory intellectual authority between the public and the more official spaces and personas of 'professional' science.

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[55] 'Lectures and Mechanics,' it was argued, would 'prove a blessing in Australia' by inculcating a public affection for science and literature. See *The Sydney Gazette and New South Wales Advertiser*, "Australasian Politics," August 16, 1826, 2; *The Sydney Gazette and New South Wales Advertiser*, "Debating Societies," April 14, 1829, 3; *The Sydney Gazette and New South Wales Advertiser*, "Mr Dawson and the Company," May 25, 1830, 2; *The Sydney Gazette and New South Wales Advertiser*, "Advance Australia," July 17, 1830, 2; *The Hobart Town Courier*, "Parliament of the United Kingdom," August 7, 1830, 4

[56] Despite their rapid establishment in the 1830s and 1840s, it wasn't until the gold rushes of the 1850s that colonial governments and the wider Australian public took a more developed interest in science. See Chapter Two. See also Ann Moyal, *A Bright & Savage Land*, (Ringwood: Penguins Books Australia, 1993), 83-84; and R. W. Home, *Australian Science in the making*, (Cambridge: Cambridge University Press, 1988), 58-60.

Historian William C. Lubenow has shown how, in the nineteenth century, the knowledge created within Britain's learned societies and intellectual clubs was closely aligned with the individual personalities of its members, to the extent that a new identity was created; that of the 'expert intellectual,' whose authority was gained through charisma.[57] In Britain, many of these charismatic experts were also professionally trained scientists; men like Thomas Henry Huxley, John Lubbock and John Tyndall.[58] While the Australian colonies were on par with Britain in terms of establishing Mechanics' Institutes, they were several decades behind in cultivating a more 'professional' scientific practice through the formalised outlets of universities and learned societies. These professional spaces will be explored in greater depth in Chapter Two, but there was only a small community of professionally trained scientists active in the Australian colonies 1860s and 1870s, and they did not engage directly with the concept of human antiquity. As historian Ian Inkster remarks, it is precisely in periods of rampant social and intellectual change that formalised institutions often fail to 'reflect' new social values, needs, and groupings; and thus, in such areas where science had not been securely institutionalised, the educative function and power of public lectures was at its greatest.[59]

Unlike Britain, then, it was not Australia's professional scientists who utilised the public lecture to become 'experts' in human antiquity, but a middle tier of local intellectuals who were largely unaffiliated with the colonies' formalised outlets of professional science. Men like Sir Richard Davies Hanson conducted their own reading of key scientific texts dispensed from Britain, and then communicated dense research through charismatic and thus authoritative presentations to a general audience. It is important to recognise this function of public lectures in Australia; as an acknowledged device used to

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[57] See William C. Lubenow, *'Only Connect' Learned Societies in Nineteenth-Century Britain*, (Woodbridge: The Boydell Press, 2015), 143, 145, 205.
[58] See J. Vernon Jensen, "Thomas Henry Huxley's Baptism into Oratory," *Notes and Records of the Royal Society of London* 30:2 (1976): 181-207; J. Vernon Jensen, "Return to the Wilberforce--Huxley Debate," *The British Journal for the History of Science* 21:2 (1988): 161- 179; Ian Hesketh, *Of apes and ancestors: evolution, Christianity, and the Oxford debate*, (Toronto: University of Toronto Press, 2009); Ian Hesketh, "Technologies of the Scientific Self: John Tyndall and His Journal," *Isis* 110:3 (2019): 460-482; Janet Owen, *Darwin's Apprentice: An Archaeological Biography of John Lubbock,* (Barnsley: Pen and Sword Books, 2013).
[59] Inkster, 82, 86.

disseminate the concept of human antiquity, and as a level of intellectual authority that constitutes a distinctly scientific understanding of human antiquity.

The Australian public recognised public lectures as an authoritative, scientific engagement with the concept of human antiquity, whose content and form ought to be critiqued accordingly. Many of the critiques were similar to those that had surfaced in Europe in the early decades of the nineteenth century, when scientists fought to establish evidentiary foundations and battled inflexible religious sensibilities. In Australia, almost all of the public lectures that argued against a high antiquity for the human species were delivered by religious leaders, but an equal amount of criticism came from those who were solely suspicious of scientific methodology. More often than not, the two concerns informed each other, with lecturers and their audience members pointing to the implausibility and fallibility of science against the 'truth' of the Bible.

It was on these points that Justice Hanson's lectures on human antiquity were attacked. After the initial lecture in May 1863, the *South Australian Register* received a letter from William Salter (1804-1871), deacon of the Angaston Congregational Church and owner of the W. Salter & Son vineyard in Adelaide's Barossa Valley.[60] Whether Salter had actually attended Hanson's lecture or had just read a report of it in the newspapers is unclear. He had no problem, however, in carefully criticising each section and dismissing every piece of evidence Hanson discussed: spears and arrow flints discovered in Denmark hardly proved antiquity, as such tools were still used today by most of the world's 'savage tribes'; a skull discovered in New Orleans reported to be 35,000 years old could not possibly have survived that long in mud, and therefore must be younger; and the bones discovered in Brixham Cave could just as easily be those of 'unfortunate individuals' who had met a more recent fate.[61] Salter argued it was 'useless' for geologists to attempt to calculate the antiquity of man unless they could be assured of the 'exact conditions of the earth's surface during the last 6,000 years, or some certain data on which to base such calculations.'[62]

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[60] William Salter and his family were pastoral pioneers of South Australia. See Rodney Cockburn, *Pastoral Pioneers of South Australia: Vol II* (Blackwood: Lynton Publications, 1974).
[61] William Salter, 'Remote Antiquity of Man,' *South Australian Register*, May 21, 1863, 2
[62] Salter, 'Remote Antiquity of Man,' 2. A rebuttal to Salter appeared two days later, eager to inform *Register* readers that large sections of the deacon's letter were extracts 'chiefly taken in an unconnected form from

Salter's insistence on the need for 'certain' data gives a sense of how unconvincing antiquity's scientific evidence was for some members of society, even to those with a level of education.[63] His particular critiques of geological deduction strongly mimicked those made by European intellectuals in the early nineteenth century. How *could* a skull survive 35,000 years in soft mud, without showing obvious signs of fossilisation: 'could not five or six thousand years suffice for all this?'[64] Salter's attack on the geological 'evidence' was also affirmed by his religious affiliations. He ended his letter by asking readers to ponder this statement when contemplating Biblical truth, and indeed, the veracity of any evidence:

> It was easy for Moses to be satisfied of the truth which he delivered in that Book, because it came down to him through few hands, for from Adam to Noah there was one man, viz. Methuselah, who lived so long as to see them both. In like manner Shern conversed with Noah and Abraham, Isaac with Abraham and Joseph, from whom the records of this book might easily have been conveyed to Moses by Amram who was contemporary with Joseph.[65]

For Salter, words inscribed by one man and passed down through a handful of others were more reliable than the shifting sands and petrified bones that could have passed through the hands of many.

Salter was not the only newspaper correspondent to hold such suspicions, with the perceived unreliability of the 'new science of man' and its conflict with religious chronologies commonly paired themes in Australia's public discussion. Under the subheading 'Science and Sermons,' sections of the Melbourne newspaper *The Argus* were filled with letters discussing the divergence and conflict between science and religion. What began as a single letter to the editor signed 'Habitans in Cedar,' on 24 November 1868, quickly evolved into a fiery debate between multiple members of the clergy, lasting well into December and earning itself the title 'The Science and Sermons Controversy.'[66]

Sir C. Lyell's 'Evidences of the Antiquity of Man'. See Mercator, 'The Antiquity of Man [To The Editor],' *South Australian Register*, May 23, 1863

[63] Salter had trained as a chemist in England where he was born.

[64] Salter, 'Remote Antiquity of Man,' 2

[65] William Salter, 'Remote Antiquity of Man,' *South Australian Register*, May 21, 1863, 2

[66] *The Argus*, 'The Science and Sermons Controversy,' December 23, 1868, 6

The original letter issued an implicit challenge to Australian church leaders by suggesting they had engaged in a 'persistent, silent evasion' of the assertions of science, and had 'shirk[ed] all reference' to them in their sermons.[67] Despite having no alleged intention of creating debate, 'Habitans in Cedar' received lengthy responses from at least five defensive reverends and a handful of interested members of the public, from both Victoria and New South Wales.[68]

Austrian-born surgeon Charles William Rohner (1832-1890) also found himself embroiled in a lengthy debate with one of his neighbours, artist and teacher Charles George Darvall (1831-1924), in Chiltern, in regional Victoria.[69] After Rohner delivered two public lectures on 'Spiritism and The Higher Magic,' Darvall accused the doctor of 'opening a crusade' to 'demolish all religious beliefs, smother the Bible, and tear down all that is built upon it.'[70] Rohner's stinging reply, in which he labelled Darvall a 'big baby' championing a 'spurious Christianity,' sparked a heated exchange that played out in their local *Ovens and Murray Advertiser*.[71] A religious man himself, Rohner was critical of the Biblical interpretations being made in light of new scientific theories, particularly the suggestion that the Bible's six days of creation were allegorical. While this might imply a dismissal of science, Rohner actually unleashed his ire on theologians, or as he described them, the 'vast

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[67] 'Habitans in Cedar' had originally written regarding papers given at the British Association for the Advancement of Science by Dr Joseph Dalton Hooker, a notable British botanist and close personal friend of Charles Darwin, and Dr John Tyndall, an Irish physicist and outspoken supporter of Darwinism. 'Habitans in Cedar,' 'Science and Sermons,' *The Argus*, November 24, 1868, 7

[68] Including Rev. John H. Gregory, incumbent of All Saints' Church, St Kilda; Rev. E. Digby Smith, from Sydney, Rev. H. Higginson; Presbyterian minister Rev. Peter S. Menzies, from Melbourne; Rev. Robert Potter incumbent of St Mary's Church of England in Hotham, Victoria; and H. R. Rae. *The Argus*, 'The Science and Sermons Controversy,' December 23, 1868, 6

[69] Rohner and Darvall were both residents of Chiltern, Victoria, and had previously served as Justices of the Peace for the Chiltern Police Court before exchanging blows in their local newspaper. See *Ovens and Murray Advertiser,* "Chiltern Police Court," February 9, 1871, 3.

[70] C. G. Darvall, "Original Correspondence: Dr. Rohner On The Bible," *Ovens and Murray Advertiser*, September 16, 1872, 3

[71] After Darvall's initial letter on September 16, each subsequent letter was published under the headline "Darvall v. Rohner." See C. G. Darvall, "Original Correspondence: Dr. Rohner On The Bible," *Ovens and Murray Advertiser*, September 16, 1872, 3; C. W. Rohner, "Original Correspondence: Darvall v. Rohner," *Ovens and Murray Advertiser*, September 19, 1872, 3; C. G. Darvall, "Darvall v. Rohner," *Ovens and Murray Advertiser*, September 21, 1872, 3; C. W. Rohner, "Original Correspondence: Darvall v. Rohner," *Ovens and Murray Advertiser*, September 24, 1872, 3.

host of conceited dabblers in the difficult branch of biblical hermeneutics.'[72] Rohner held 'astronomers and geologists' in great esteem, and positioned them as operating outside 'any construction that may be put upon their labors by a drivelling set of bread-and-butter parson and Bible-mongers.'[73] Rohner believed theologians not only misinterpreted the Bible to the point of blasphemy, but also ignored the developments of science: it was a 'waste of words' to tell men like Darvall that astronomers had discovered 'new worlds of which the God of Moses never dreamt,' and that geologists kept 'adding every year more strata to the antiquity of man, giving as result figures which would bewilder the most unbridled imagination of the earliest antediluvians.'[74]

Those seeking to critique the new scientific understanding of human antiquity were not limited to being audience members or newspaper correspondents, with many using public lectures to deliver their own critique and cultivate their intellectual status. Within three months of the publication of Lyell's *Geological Evidences of the Antiquity of Man*, Reverend James Jefferis (1833-1917) lectured at the South Australian Institute on what he called the 'Conflicts of the Modern Mind.'[75] Born in Bristol, England, Jefferis was a well-educated and well respected man. He had arrived in Adelaide from England in 1859 to become the pastor of the newly formed Congregational Church in North Adelaide.[76] In his lecture, Jefferis claimed 'the world had never seen such a period for the development of new thoughts as the present.'[77] He spoke generally on political and social developments across the world, but drew attention to Britain's 'state of great mental excitement' and the scientific concepts currently causing 'conflicts of the modern mind.'[78] Although local

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[72] C. W. Rohner, "Original Correspondence: Darvall v. Rohner," *Ovens and Murray Advertiser*, September 19, 1872, 3
[73] C. W. Rohner, "Original Correspondence: Darvall v. Rohner," *Ovens and Murray Advertiser*, September 19, 1872, 3
[74] C. W. Rohner, "Original Correspondence: Darvall v. Rohner," *Ovens and Murray Advertiser*, September 19, 1872, 3. Darvall was more measured in his later responses to Rohner, stating 'in controversy we are seldom either honest or true in the sense of seeing or uttering the whole truth,' and that he did not 'ignore the results of scientific research, and have no wish to do so.' See C. G. Darvall, "Darvall v. Rohner," *Ovens and Murray Advertiser*, September 21, 1872, 3
[75] *South Australian Register*, 'Adjournment,' May 23, 1863, 2
[76] Walter Phillips, "Jefferis, James (1833–1917)," *Australian Dictionary of Biography* 4 (Melbourne: Melbourne University Press, 1972).
[77] *South Australian Register*, 'Adjournment,' May 23, 1863, 2
[78] *South Australian Register*, 'Adjournment,' May 23, 1863, 2

newspapers did not publish a comprehensive recap of the lecture, they did report that Jefferis argued firmly against the scientific theories propounded 'by Sir Charles Lyell on the antiquity of man.'[79] As Jefferis' profile grew in the Australian colonies, the reports on his lecturing became more detailed.

Some were more scathing in their criticism. The Reverend Dr William Lambie Nelson (1808-1887), Presbyterian Minister of Toowoomba and a one-time, short-lived member of the Queensland Legislative Assembly, delivered a powerful lecture in July 1869 at a School of Arts on 'the present state of the argument on the antiquity of man,' and its 'opposition to sacred teaching.'[80] Nelson's reputation as an imposing local intellectual was reflected in the press, which described him as 'able,' 'learned,' and so well known to the assembled audience that he needed no introduction.[81] In his lecture, Nelson expressed a general disdain for 'the scientific world.' The '*facts* which determine the age of the human race,' he believed, were an attempt to 'sap the foundations of Divine revelation.'[82] Of particular concern for Nelson was how disparately scientific thinkers had 'fixed the age of man,' with some calculating 12,000 years, others as far back as 60,000 years, while those 'less modest,' like the 'celebrated geologist Lyell,' had claimed 100,000 years.[83]

Nelson used his lecture to lambast the methodologies of professional science. He counted six branches of science that had been 'appealed to' for knowledge on the antiquity of man—'Language, Ethnology, Geology, Archaeology, Socialogy [sic], and Egyptology'—each of which drew its conclusions and calculations from different types of evidence: the number of languages known to exist, the forms of human skulls of ancient date, the position of fossils, the relics of 'non-historic races,' population statistics, and the

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[79] *South Australian Register*, 'Adjournment,' May 23, 1863, 2
[80] *The Darling Down Gazette and General Advertiser*, 'From the courier,' July 21, 1869, 3
[81] *The Toowoomba Chronicle and Queensland Advertiser,* "The Rev. Dr. Nelson's lecture on the antiquity of man," July 24, 1869, 2
[82] Emphasis in original. "'Science,' he said, 'Supposed itself to have discovered *facts* which determine the age of the human race, or the antiquity of man, to be far more remote than the Mosaic account of the Creation, and the received chronology of the Pentateuch, or first five books of Moses, fix it to be." *The Toowoomba Chronicle and Queensland Advertiser,* "The Rev. Dr. Nelson's lecture on the antiquity of man," July 24, 1869, 2
[83] *The Toowoomba Chronicle and Queensland Advertiser,* "The Rev. Dr. Nelson's lecture on the antiquity of man," July 24, 1869, 2

monuments of Egypt, respectively.[84] Rather than corroborating human antiquity, these 'conflicting theories' and methodologies were, for Nelson, like 'turns of the kaleidoscope, each revolution has presented a new figure, until the age of mankind is as varied as the numbers in the calendar.' While critical of all of these seemingly flaky estimations of human antiquity, Nelson reserved particular contempt for Charles Lyell's 'presumptuous deductions,' denouncing them as 'thoroughly atheistical in their tendency,' opposed to Divine revelation, and leaving the Australian public 'as far off as ever from the truth of the real antiquity of man.'[85]

Nelson positioned himself between scientists like Lyell and the Australian public. He was one of the few public lecturers who pushed his description of human antiquity beyond a vague generalisation to a more specific estimation of years, going in-depth on his explanations of scientific methodology and the specific figures obtained.[86] Yet rather than making the concept more comprehensible or powerful for audiences, Nelson used this framing device to paint a portrait of science's hyperbolic fallibility, and to discredit estimations of a lengthy antiquity for the human species. These criticisms were well received. Local media praised Nelson's speaking abilities; a core component of his profile as a competent intellectual authority. 'It must have been plainly evident to all who heard him,' wrote one reporter, 'that he must have not only had access to a multitude of authors on the subject of his lecture, but from the very masterly manner in which he handled their opinions, he must have studied them.'[87] Nelson's audience, who paid 'great attention,' were

[84] *The Toowoomba Chronicle and Queensland Advertiser,* "The Rev. Dr. Nelson's lecture on the antiquity of man," July 24, 1869, 2
[85] *The Toowoomba Chronicle and Queensland Advertiser,* "The Rev. Dr. Nelson's lecture on the antiquity of man," July 24, 1869, 2
[86] Unfortunately, newspaper reports on Nelson's lecture provide little explanation of the individual scholars responsible for the dates he quotes, despite his in-depth explanations of the concepts. Apart from his tirade against Lyell, Nelson gave few citations to his sources. These details may very likely have appeared in his actual lecture, but they did not appear in the newspaper coverage of it, and therefore, were not communicated to audiences beyond his immediate listeners.
[87] *The Toowoomba Chronicle and Queensland Advertiser,* "The Rev. Dr. Nelson's lecture on the antiquity of man," July 24, 1869, 2

apparently left 'anxiously await[ing] the continuation of his interesting subject' in another lecture the following week.[88]

Despite the vigour of some theological criticism, not all religious figures used public lectures to criticise the concept of human antiquity. After a decade of discussion, many of the colonies' most prominent religious leaders gave it clear and considered support. One such leader was Reverend Dr John Edward Bromby (1809-1889), an English clergyman and schoolmaster who had taken the position of headmaster at Melbourne's newly-founded Church of England Grammar School. In August 1869, Bromby delivered a lecture for the Melbourne Early-Closing Association on 'Prehistoric Man,' in which he outlined 'the proofs which had led him to believe in the far-reaching antiquity of the human race.'[89] Throughout his lecture, Bromby stressed that science and religion were not in conflict, for the object of Scripture was not to teach either science or history, and thus the revelations of either discipline could not reduce its inherent spiritual value. Bromby would likely have offended the acerbic Dr Rohner, arguing there was 'no stronger proof' of the Bible's metaphorical timeline for human history and creation than the first chapters themselves: 'That they were pregnant with vastly deeper meaning than mere history, was discernible at a glance.'[90]

In his lecture, Bromby established his own scientific authority by describing the artefacts and individual scientists responsible for establishing the consensus on human antiquity in 1859. The traces of humanity's 'primaeval existence upon the earth' may have been faint and few in places, but when met with, Bromby argued, they proved 'exceedingly significant.'[91] An experienced schoolteacher, Bromby also used a simple yet compelling tone to pair science and religion agreeably together:

> Men no longer feared lest Galileo's telescope should undermine the basis of religion; and though a simple panic might from time to time return whenever science penetrated deeper into any of the arcana of nature, yet religion held her own, and

[88] *The Toowoomba Chronicle and Queensland Advertiser,* "The Rev. Dr. Nelson's lecture on the antiquity of man," July 24, 1869, 2
[89] *The Age*, "The news of the day," August 10, 1869, 2
[90] *The Argus*, "The Early-Closing Association: the Rev. Dr. Bromby on 'Prehistoric Man,'" August 10, 1869, 6
[91] *The Argus*, "The Early-Closing Association: the Rev. Dr. Bromby on 'Prehistoric Man,'" August 10, 1869, 6

> never numbered in her ranks more men distinguished for sciences and research than she did at the present moment.[92]

Bromby's tone gave him a distinct affability with his audience, and even with those who disagreed with him. At the end of his lecture, the Right Reverend Bishop of Melbourne, Charles Perry (1807-1891) gave his thanks for 'the able and interesting lecture.' Perry stated that while he did not agree with all the inferences Bromby had drawn from his research, he felt certain that religion had nothing to fear from science: 'No man who believed in the Bible should endeavour to restrain the progress of scientific men, as there was nothing to fear from their discoveries.'[93]

Perry had been the one to select Bromby as Grammar School headmaster back in 1855, and his opinion on Bromby's lecture was one he repeated a month later in an address of his own. Titled 'Science and the Bible,' Perry's lecture at Melbourne's Princess Theatre in September 1869 drew a considerable and distinguished crowd. Among the audience were: the wife and daughter of the Governor of Victoria and Third Viscount of Canterbury, John Manners-Sutton; Sir Robert Molesworth, Chief Justice of the Supreme Court of Victoria; politician and former Melbourne Mayor, Sir James Palmer; politician and former Speaker for the Legislative Assembly, Sir Francis Murphy; Dr Cairns, the Dean of Melbourne; Sir Frederick McCoy, one of the founding professors of the University of Melbourne; members of both Houses of Parliament; and 'a number of gentlemen known for their scientific attainments.'[94] Accompanying these notable guests were members of the public who 'flocked'[95] to the theatre and crowded it 'to excess.'[96] In front of such distinguished guests, Perry's lecture was an unequivocal declaration of his own intellectual and religious authority. Just like Bromby, Perry used this authority to settle the apparent dispute between science and religion: 'In my opinion the Bible has nothing to fear from science. There is no quarrel between them.'[97] Perry argued only unwise individuals would

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[92] *The Argus*, "The Early-Closing Association: the Rev. Dr. Bromby on 'Prehistoric Man,'" August 10, 1869, 6
[93] *The Argus*, "The Early-Closing Association: the Rev. Dr. Bromby on 'Prehistoric Man,'" August 10, 1869, 6
[94] *The Argus*, "Science and the Bible," September 21, 1869, 5
[95] *The Australasian*, "The Bishop of Melbourne's Lecture," September 25, 1869, 16
[96] *The Argus*, "Science and the Bible," September 21, 1869, 5
[97] *The Argus*, "Science and the Bible," September 21, 1869, 5

seek to 'set them at variance.' Instead, he saw science and religion as 'inseparable friends,' which they ought to remain:

> A man is not to be regarded as a disbeliever in the Bible because he is a votary of science; nor, on the other hand, is one who upholds the authority of the Bible to be supposed to look on science with suspicion. While I receive with the most perfect confidence all that God has told me through the Bible, I receive with the same confidence whatever He has enabled me to learn from science.[98]

Both Bromby and Perry were greatly admired in Melbourne's Anglican community. As the first Anglican Bishop in Australia, Perry had been revered since his arrival in 1848 for his continued ability to overcome difficulties in the developing Victorian colony.[99] In similar fashion, Bromby was witty, charming, and passionate about education, earning him the respect of his students and peers.[100] Their status paved the way for the positive reception of their lectures. Between the 10th and 26th of August, Bromby's lecture was lauded in *The Argus, The Australasian, The Age,* Melbourne's *Leader, The Goulburn Herald and Chronicle,* and even the *Queensland Times/Ipswich Herald and General Advertiser*.[101] Perry's lecture, with its slightly more distinguished speaker and audience, was advertised and re-capped in *The Ballarat Star, Geelong Advertiser, Wagga Wagga Advertiser and Riverine Reporter,* Melbourne's *Leader*, *Herald*, *The Australasian,* and on three separate occasions in *The Argus.*[102]

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[98] *The Argus*, "Science and the Bible," September 21, 1869, 5

[99] When Perry arrived in 1848, he had jurisdiction over just three clergymen. By the time he resigned in 1876, Perry's episcopate had witnessed the constitution of Victoria as a separate colony in 1851, the explosion in population prompted by the gold rush, the erection of schools and countless debates on education. By the early 1872, Victoria's population had become so large as to warrant the division of the diocese, with another bishop to be appointed at Ballarat. See George Goodman, *The Church in Victoria During the Episcopate of The Right Reverend Charles Perry*, (Melbourne: Melville, Mullen and Slade, 1892).

[100] See Manning Clark, "Bromby, John Edward (1809–1889)," *Australian Dictionary of Biography* 3 (Melbourne: Melbourne University Press, 1969) and *Leader*, "Prominent Victorians: Rev. Dr. Bromby, St Paul's Church, Melbourne," March 26, 1881, 1

[101] For examples see *The Age*, "Man's Antiquity," August 10, 1869, 3; *Mount Alexander Mail*, "Man's Antiquity," August 11, 1869, 2; *Leader*, "Man's Antiquity," August 14, 1869, 11; *The Australasian*, "The Rev. Dr. Bromby on 'Prehistoric Man,'" August 14, 1869, 20; *The Goulburn Herald and Chronicle*, "Victoria," August 18, 1869, 2; *Queensland Times/ Ipswich Herald and General Advertiser*, "Frosty Nights and Warm Days," August 24, 1869, 3.

[102] For examples see *The Herald*, "The Bishop's Lecture," September 22, 1869, 2; *The Ballarat Star*, "News and Notes," September 22, 1869, 2; *Leader*, "Science and the Bible: A Lecture by the Bishop of Melbourne,"

With such heavy publicity, Perry's general support for science and Bromby's unambiguous promotion of human antiquity would have made a substantial impression on the Australian public, Anglican or otherwise. It could be argued that religious leaders' public support for human antiquity represented the level of threat they felt from the concept, and yet, both speakers had reputations as progressive thinkers. While Perry appeared 'narrow-minded' to some, he was considered 'liberal' by others; even frustratingly so for those with whom he clashed on his education committee.[103] Bromby's outspoken support for human antiquity did nothing to diminish his standing in the Anglican community, with a flurry of honourable promotions and appointments following the affable clergyman through the following decade.[104]

At least one Melbournian, however, was not a fan of the outbreak of lecturing that seemed to be taking over the colonies. Under the headline 'Melbourne Mems' in the New South Wales' *Wagga Wagga Advertiser and Riverine Reporter*, a correspondent signed 'Q' openly lamented the prevalence of religious lectures in particular. 'The lecturing nuisance is coming to a crisis,' Q wrote: 'Not content with firing red hot shot into us every Sunday the parsons have taken to hiring halls of various kinds and lecturing.'[105] Q thought the subjects of the lectures were particularly boring, being 'a little old and founded on such matters as the Deluge, the Antiquity of Man, &c, &c.'[106] A point of pique for Q was the speakers were 'very rough upon matters which happened twenty thousand years ago,' but were not quite so severe 'upon the present condition of the globe.' This wouldn't have mattered, Q reiterated, if the speakers had anything of interest to say on the subjects, but their observations were allegedly weary and dull. Of equal offence was that newspapers

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September 25, 1869, 21; *The Australasian,* "Science and the Bible: The Bishop of Melbourne's Lecture," September 25, 1869, 19.

[103] A. De Q. Robin, "Perry, Charles (1807–1891)," *Australian Dictionary of Biography* 5, (Melbourne: Melbourne University Press, 1974)

[104] Bromby was inducted vicar of St John's Church, Toorak, in 1875; appointed senior chaplain of the Victorian Volunteer Force in November 1876; appointed incumbent of St Paul's Church, Melbourne, in 1877; and was elected a canon when the chapter of St Paul's Cathedral was constituted in 1879. See Manning Clark, "Bromby, John Edward (1809–1889)," *Australian Dictionary of Biography* 3 (Melbourne: Melbourne University Press, 1969).

[105] *Wagga Wagga Advertiser and Riverine Reporter*, "Melbourne Mems," September 4, 1869, 2

[106] *Wagga Wagga Advertiser and Riverine Reporter*, "Melbourne Mems," September 4, 1869, 2

were becoming 'saturated with letters from admirers of these people, and religious discussions go on at the rate of a column a day.' Q finished their letter brusquely: 'A good atheist would pay here.'[107]

Another writer in Melbourne's *Weekly Times* was bored of the entire subject of human antiquity, feeling it and other scientific novelties had been prioritised too long by the press. The author, signed 'Phoenix,' penned a half-didactic, half-pleading article on arboriculture and forestry that contained a direct appeal to the media: 'As in every other department of colonial enterprise the power of the Press is the best and only medium for disseminating useful and practical information in such and kindred matters bearing upon the development of resources.'[108] Although such topics were interesting, Phoenix was frustrated at 'the wide-spread interest that is felt amongst all classes of the community' when some 'mythical 'diamond mine' or 'roc's egg' is incubated; or flint hatchets and fragmentary bones bearing upon the supposed 'antiquity of man' are exhumed from the *debris* of untold ages.'[109] 'Why, then,' Phoenix asked, 'should not practical forestry, rainfall, drought, or the reverse be equally as well propounded?'[110]

Unfortunately for 'Q' and 'Phoenix', the next decade provided little to no respite from either religious lecturing or the media's spotlight on the concept of human antiquity. Throughout the 1870s, lectures delivered by religious leaders were rampant, with more and more speakers aligning the findings of science with those of religion. Just like Bromby and Perry, religious lecturers in the 1870s argued, at the least, that science and religion were not in contradiction, and at the most, that human antiquity on Earth was upwards of 60,000 years. Reverend James Jefferis, who had doubted the concept in his 'Conflicts of the Modern Mind' lecture in 1863, was, by 1874, making a specific estimation of human antiquity. In a lecture to the North Adelaide Young Men's Society on 21 September, Jefferis argued that the 6,000 years offered by the Mosaic chronology were 'not sufficient to account for the wonderful varieties which existed in the human races.'[111] Like other public lecturers, Jefferis

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[107] *Wagga Wagga Advertiser and Riverine Reporter*, "Melbourne Mems," September 4, 1869, 2
[108] Phoenix, "Practical Forestry," *Weekly Times*, October 16, 1869, 5
[109] Phoenix, "Practical Forestry," *Weekly Times*, October 16, 1869, 5
[110] Phoenix, "Practical Forestry," *Weekly Times*, October 16, 1869, 5
[111] *Evening Journal*, "Latest News," September 22, 1874, 2

claimed his argument had come from his own review of works in comparative physiology, ethnology, philology, history, archaeology and geology. All these sources, he argued, had led him to affirm that the Bible could not 'definitely declare whether the [human] race had been living upon the globe 6,000 or 60,000 years.'[112]

Jefferis' lecture sparked a huge reaction from the press, which only furthered his overall image as a scientific spokesman. Detailed recaps were published across the colonies, sometimes appearing multiple times in the same newspaper over several days. It received the greatest coverage in Adelaide and Melbourne, capital cities that regularly printed articles of scientific interest.[113] Indeed, much of the early news coverage and public lectures on human antiquity had been led by intellectuals and correspondents in Adelaide and Melbourne, which were fast becoming hubs of colonial science and literature. In the 1880s, Richard E. N. Twopeny argued that Melbourne had attracted 'most of the able and clever men in literature and journalism…for one clever writer whom you find in the other colonies put together, there are two in Melbourne.'[114] It was no wonder, Twopeny argued, that the colony's leading newspaper, *The Argus*, was 'the best daily paper published, out of England.'[115] Jefferis' lecture, however, proved equally impactful in New South Wales, with recaps appearing in a mass of the colony's urban and regional newspapers.[116] Reports of his support for human antiquity even made it all the way to the recently separated colony of Queensland, with announcements appearing in the *Gympie Times and Mary River Mining Gazette* and the *Queensland Times/Ipswich Herald and General Advertiser*.

A large section of the lecture was published verbatim in the *South Australian Chronicle and Weekly Mail.* Here, Jefferis' argument was even more direct: 'Man was not

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[112] *Evening Journal*, "Latest News," September 22, 1874, 2

[113] Jefferis' lecture appeared in Adelaide's *The Express and Telegraph*, *Evening Journal, South Australian Register, South Australian Chronicle and Weekly Mail,* and in regional papers such as *Border Watch*; and also in Melbourne's *The Herald* and regional Victorian papers like the *Mount Alexander Mail, The Ballarat Star*, *Geelong Advertiser, Bendigo Advertiser,* and the *Ovens and Murray Advertiser*.

[114] R. E. N. Twopeny, *Town Life in Australia*, (London: Elliot Stock, 1883)

[115] R. E. N. Twopeny, *Town Life in Australia*, (London: Elliot Stock, 1883)

[116] These included Sydney's *Evening News, Australian Town and Country Journal,* and regional papers such as *The Newcastle Chronicle*, *The Maitland Mercury and Hunter River General Advertiser,* the *Queanbeyan Age, The Sydney Mail and New South Wales Advertiser, The Manaro Mercury, and Cooma and Bombala Advertiser, The Singleton Argus and Upper Hunter General Advocate,* and *The Armidale Express and New England General Advertiser*.

only 6,000 years old, but as likely as not 60,000 years old.'[117] Jefferis, like Reverend William Lambie Nelson before him, was one of the few lecturers that expressed the concept of human antiquity through a numerical estimation of years. Unlike Nelson, however, who had used these estimates to give a sense of scientific fallibility, Jefferis articulated human antiquity's powerful revisionist effect through one simple comparative conjunction. The snappy quote of '6,000 or 60,000' was popular with the press, and in many regional newspapers it was printed as a headline alongside other stories:

> 'At the Maitland races to-day the attendance was very good and the weather was fine.' 'Xanthe won the yacht race.' 'The Rev. Mr. Jefferies, [sic] when lecturing last night on the antiquity of man, affirmed that the Bible does not declare whether the human race have lived 6,000 or 60,000 years.'[118]

While to some extent it appeared Reverend Jefferis had done an about-face on his belief in human antiquity, the reports on his 1863 lecture were nowhere near as detailed as those on his September 1874 lecture. Jefferis also had a reputation, both during his lifetime and later in the historical record, as an educated and open-minded orator who was skilled at connecting Christianity to contemporary issues.[119] Even if his earlier opposition was correctly portrayed, after a decade of fresh research materials to trawl through, Jefferis cemented his new opinion by delivering yet another lecture in full support of the concept of human antiquity.[120] In this October 1874 lecture, he read 'abundant quotations' from the research of 'eminent geologists,' and spoke at length of the 'geological facts' and the 'testimony of the rocks' that for him proved a great antiquity for the human species.[121]

After studying the research of renowned British scientists, local intellectuals like Jefferis used public lectures to craft their own level of expertise and position themselves as scientific spokesmen for human antiquity in Australia. From the level of attention and

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[117] *South Australian Chronicle and Weekly Mail*, "The Antiquity of Man," September 26, 1874, 4
[118] *The Manaro Mercury, and Cooma and Bombala Advertiser*, "West Maitland," September 26, 1874, 2
[119] Walter Phillips, "Jefferis, James (1833–1917)," *Australian Dictionary of Biography* 4 (Melbourne: Melbourne University Press, 1972)
[120] *Evening Journal*, "Latest news," October 19, 1874, 2
[121] *The South Australian Advertiser*, "Topics of the Day," October 21, 1874, 2

support they received from the press, it is clear these charismatic local personalities aided the dissemination and digestion of the concept of human antiquity in the Australian public consciousness. Yet they also represented a distinctly scientific understanding of human antiquity in Australia, whose public discussion was largely devoid of the 'professional' scientists delivering similar lectures in Britain. Despite their lack of professional training, the popular and exciting concept of human antiquity gave Australia's local intellectuals the opportunity to be seen as serious scientific communicators, and earn their intellectual authority through the public lecture's combination of content and form.

A less concerning *Origin*: science and religion united in antiquity

Part of the smoothness of Australia's digestion of human antiquity can also be attributed, however, to the concept's separation from other, more controversial scientific debates that were circulating at the same time, and in the same spaces. Although many public lecturers referenced scientific scholarship to support their conceptualisation of human antiquity, Jefferis was one of the few commentators who referenced other prominent debates ongoing in British science; specifically, those surrounding the evolutionary theories of Charles Darwin. Newspaper summaries stated that Jefferis' 'dwelt at length upon Darwin's development hypothesis,' and the 'much-discussed principle of evolution.'[122] They did not, however, offer any further details, instead focusing solely on Jefferis' discussion of human antiquity. These reports were reflective of Australia's broader public engagement with the concept of human antiquity, which, in the 1860s and 1870s, remained differentiated from the concurrent debate surrounding natural selection. While the two theories had a close intellectual and temporal alignment, this section argues that Australia's public reception and interpretation of human antiquity was contained and focused. Delineating the separate origins and dissemination of these concurrent theories is an integral starting point for this history of human antiquity in Australia.

As the consensus on human antiquity and the publication of Darwin's ground-breaking evolutionary theory *On The Origin of Species* both occurred in 1859, it is easy to

[122] *Evening Journal*, "Latest news," October 19, 1874, 2

assume the events were directly connected. Indeed, there is a general acceptance in scholarship and public memory of an intimate association between the concept of human antiquity and natural selection, to the extent that the former is often thought to have been an inevitable conceptual and chronological consequence of the latter.[123] The two theories, however, came from distinct scholarly traditions and were separately unleashed into the world. On one level, Charles Lyell's pivotal address to the British Association for the Advancement of Science was made in September 1859, while *On The Origin of Species* was published a few months later in November. On another, the two concepts emerged as the products of separate intellectual traditions and disciplines: zoology and geology respectively. Of course, as historian Jacob Gruber notes, these disciplines were separate only to the extent that 'any two movements within the same intellectual milieu can be said to be separate,' but the elisions of history have worked to merge the two separate currents into a single intellectual stream.[124]

Although not causally linked in terms of their inception, the two theories of human antiquity and natural selection did go on to have an intense and intricate influence on each other within the broader context of nineteenth century European science. This relationship will be explored in more depth in Chapter Two. Of relevance to this chapter's analysis of Australia's public engagement with human antiquity is the way in which the separate nature of each theory's formation was maintained in the early years of their reception. The two theories experienced some similarities in the colonial space: like human antiquity, natural selection arrived early in Australia, with copies of *The Origin* appearing for sale in Sydney just four months after its publication. Also like human antiquity, *The Origin* provoked a mixture of wary suspicion and irate condemnation from religious communities, albeit with more intensity and for a slightly longer period.[125] For the most part, however,

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[123] In 1965, historian Jacob W. Gruber argued that the theories of human antiquity and Darwinian evolution had become so closely related as to cause this misconception in their historical and intellectual misconception development. See Gruber, "Brixham Cave and the Antiquity of Man," 16

[124] Gruber, 16

[125] Historians Barry Butcher and Ann [Mozley] Moyal have written definitive accounts of the dissemination of Darwin's ideas into the Australia public and intellectual spheres. Both argue that the controversial theory provoked immediate negative reactions from religious communities. By the end of the nineteenth century, however, Darwinian evolution was firmly entrenched in Australian scientific thought through the country's

the reception experiences of the two theories ran parallel to each other. In the 1860s, reportage on human antiquity in the Australian press remained focused on that concept alone. Darwin's theory was occasionally mentioned in the articles, lectures and newspaper correspondence that discussed human antiquity, but often only as an example of another scientific theory that, depending on one's perspective, was transforming understandings of human history or aiding the denigration of Christianity.

This separate reception can be partly attributed to the different levels of threat felt from a theory of human ancientness, compared to a theory of species transmutation that more explicitly eroded man's 'special place' in creation.[126] Yet it was also a result of how Lyell himself had framed the theories in the two texts directly responsible for Australia's public knowledge of human antiquity: his 1859 address to the British Association, and his 1863 monograph *The Geological Evidences of the Antiquity of Man*. A revolutionary in geology, Lyell was much more conservative when it came to evolution.[127] In his 1859 address, Lyell briefly mentioned that Darwin's forthcoming book might be able to shed light on the 'equally intriguing' but entirely separate scientific question of the origin of species.[128] Four years later, he dedicated an entire chapter of his book to the theory of natural selection, but it held none of the cogency of Darwin's writings, and gave no clear

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major teaching institutions, with many clergymen comfortably assimilating the 'new science of life' into Christian theology. See Barry W. Butcher, "Darwinism and Australia, 1836-1914," (PhD thesis, The University of Melbourne, 1992); Barry W. Butcher, "Darwin down under: science, religion, and evolution in Australia," in *Disseminating Darwinism: The Role of Place, Race, Religion, and Gender*, ed. Ronald L. Numbers and John Stenhouse, (Cambridge: Cambridge University Press, 1999): 39-60; and Ann Mozley, "Evolution and the Climate of Opinion in Australia, 1840-1876," *Victorian Studies* 10:4 (1967): 411-430.

[126] For a thorough discussion of the anxiety and distress felt by the general British public at the idea of being descended from an apish ancestor, see Alvar Ellegård, *Darwin and the General Reader: The reception of Darwin's Theory of Evolution in the British Periodical Press, 1859-1872,* (Chicago: University of Chicago Press, 1990).

[127] Lyell's three volume *Principles of Geology: being an attempt to explain the former changes of the Earth's surface, by reference to causes now in operation* (1830-1833) was widely regarded as a foundational text of nineteenth century geology, and the theory of uniformitarianism is particular. While the multi-volume work did not "create" geology as a science, it did offer radical challenges to the established geological synthesis, forcing scientists to re-examine the discipline's foundations. See Martin J. S. Rudwick, "Uniformity and Progress," in his *The Meaning of Fossils: Episodes in the History of Palaeontology*, (London: Macdonald & Co., 1972), 164-217; and David R. Oldroyd, "Geological Time and the Tempo of Geological Change," in his *Thinking About The Earth: A History of Ideas in Geology*, (London: The Athlone Press, 1996), 131-144.

[128] Lyell, "Introductory Address by the President: On the Occurrence of Works of Human Art in Post-Pliocene Deposits," 95

indication of Lyell's opinion of the theory. Despite demonstrating a great respect for Darwin, Lyell had merely provided a theoretical digest full of equivocations: writing '*if* transmutation is to be accepted'; speaking of other evolutionary theories that had existed 'before the *invention* of this new method'; and making constant references to a higher 'creative power' and 'Author of Nature.'[129] After 400 pages that detailed the specific artefacts and excavations that had definitively proven the antiquity of man, the ambiguous chapter on natural selection paled in comparison. Even Darwin himself noticed its lacklustre tone, remarking in a letter to friend Thomas Henry Huxley that he had been 'fearfully disappointed' with 'Lyell's excessive caution in expressing any judgment on Species or origin of man.'[130]

Lyell's disconnected and disproportionate treatment of natural selection translated into Australia's public discussion on human antiquity, which was so closely linked to his publications. Even when commentators such as Jefferis' aligned their discussion of human antiquity to broader scientific debates, these elements did not garner the same attention from the Australian press. By maintaining the separate nature of the two theories, the Australian public were able to digest the concept of human antiquity on its own, less controversial terms, while enjoying the support it had already received from renowned British authorities. By replicating the debate that had already occurred in the early nineteenth century, now aided by a class of lecturing intellectuals who attained legitimacy through their comprehension and dissemination of scientific research, Australia's public debate over the 'question' of human antiquity was comparatively short-lived.

Jefferis' 1874 lectures were almost a watershed of their own in this regard, signalling the beginning of the end of Australia's debate over the concept of human antiquity. From the mid-1870s onwards, there was a growing acceptance of the idea that humans had existed for immeasurable ages on earth. Many religious leaders also began to integrate the concept into their theology. In 1872, Reverend J. Legge gave a series of lectures in St Kilda,

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[129] Emphasis added. Lyell, *The Geological Evidences of the Antiquity of Man,* 415, 417, 396, 406, 422, 423.
[130] Letter from Charles Darwin to Thomas Henry Huxley, February 26, 1863, Imperial College of Science, Technology and Medicine Archives, Imperial College, London, England, accessed via the Darwin Correspondence Project, "Letter no. 4013," on 30 August 2019, https://www.darwinproject.ac.uk/letter/DCP-LETT-4013.xml

Victoria, that surveyed geological evidence for human antiquity from around the world. Both Legge's July and October lectures were reported to have received 'the utmost attention' and frequent applause from an audience numbering close to 100 people.[131] Throughout 1877 and 1878, Reverend Canon MacCullagh wrote a series of articles for the *Bendigo Advertiser,* tilted 'Science and the Bible,' that covered a multitude of topics both scientific and theological. In his 61st article, 'the Antiquity of the Human Race,' the Reverend stated at the outset that he believed 'we are perfectly free to accept any date which may be proved to be the era of man's first appearance in the world. There is not, indeed there cannot be, any conflict between revelation and science on this subject.'[132] One lecture, given by Reverend William Henderson in Ballarat on 21 December 1873, was even published as a manuscript and later reviewed in the *Leader*.[133]

There were still several religious commentators who did not support a lengthy human antiquity, or at the very least remained hesitant that the available 'evidence' was conclusive. In July 1874, Reverend Dr William Lambie Nelson again delivered his critique on the six schools of science.[134] Reverend J. Nish also delivered a series of lectures throughout regional Victoria in 1873 and 1875 showing that the 'good old book'[135] was under no threat from 'so-called facts on which geologists based the theory regarding the great antiquity of man,' which Nish believed were 'merely assumptions.'[136] 'Even if they were true,' Nish argued, 'they did not of necessity support the theory.'[137] Such arguments,

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[131] See *The Age*, "The news of the day," July 17, 1872, 2; *The Telegraph, St Kilda, Prahran and South Yarra Guardian*, 'The Antiquity of Man,' October 26, 1872, 9

[132] *Bendigo Advertiser*, "Science and the Bible: By the Rev. Canon MacCullagh, No. LXI, The Antiquity of the Human Race," August 24, 1878, 1

[133] Titled 'From Creation to Resurrection,' the lecture did not explicitly address the antiquity of man, but explored more generally the 'fusion' of science and theology. Henderson was portrayed by the reviewer as being among clergymen of 'a different mould' who were actively working towards reconciling conflict between religious and scientific thought. Regarding the concept of human antiquity, Henderson was quoted as being 'quite content' to wait patiently 'until natural science, which has to do with all natural things, shall have spoken its last word to us' on the subject. *Leader*, "Literature," February 21, 1874, 24.

[134] Nelson's 1869 lecture, see "The Rev. Dr. Nelson's lecture on the antiquity of man," *The Toowoomba Chronicle and Queensland Advertiser*, July 24, 1869, 2. Nelson's 1874 lecture, see "Melbourne," *Rockhampton Bulletin* (QLD), July 11, 1874, 2

[135] See 'The Presbyterian Church, Myers Street,' *Bendigo Advertiser*, May 15, 1873, 2 and 'No title,' *The Ballarat Courier*, June 17, 1873, 2

[136] 'News of the Day,' *The Age*, October 8, 1875, 3

[137] 'News of the Day,' *The Age*, October 8, 1875, 3

however, were not as well received as they once had been. One correspondent offered a detailed list of evidence to rebut Nish's criticism of geology, which they argued was only 'partially acquainted wish [sic] the facts."[138] The letter struck a chord with audiences, and was reprinted in the *Bendigo Advertiser* a few days later with the preamble: 'W. L. R., a correspondent of the *Argus*, who evidently knows what he is writing about, sends the following interesting communication to that journal."[139] Indeed, another correspondent to Adelaide's *The Express and Telegraph*, responding to a recent lecture at the Adelaide Philosophical Society by the Honourable Boyle Travers Finniss, claimed that the 'question' of the antiquity of man had 'long been a moot one among savans."[140]

This was certainly the attitude in Britain: many intellectuals were eager to draw a line under the 'debate' between science and religion, and the concept of human antiquity had already been broadly accepted. As historian A. Bowdoin Van Riper notes, the 'timing and flexibility of the new case for human antiquity minimised the distress it caused all but the most conservative Victorians."[141] These attitudes also made their way into the Australian public sphere. In April 1876, *The Sydney Morning Herald* reprinted an article from the London *Spectator* that commented on the 'controversy between science and theology in general,' and on the beliefs of the 'anti-evolution, religiously-affiliated' Victoria Institute in particular.[142] The Victoria Institute, previously known as the Philosophical Society of Great Britain, was founded in 1865 as a direct response to Charles Darwin's *On the Origin of Species*.[143] The *Sydney Morning Herald* article asked members of the Victoria Institute, and indeed anyone arguing against a vast human antiquity, how 6,000 years could account for geological and biological phenomena found around the world: 'It is not one part, but every part of the available evidence, which points to the conclusion that man's age on the earth

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[138] W.L.R., 'The Rev. Mr. Nish and the Antiquity of Man,' *The Argus*, October 12, 1875, 7
[139] W.L.R., 'The Rev. Mr. Nish and the Antiquity of Man,' *Bendigo Advertiser*, October 13, 1875, 2
[140] See *The South Australian Advertiser*, "Adelaide Philosophical Society," August 18, 1875, 7; *The Express and Telegraph*, "The Antiquity of Man," August 25, 1875, 3
[141] Van Riper, *Men Among the Mammoths*, 145
[142] *The Sydney Morning Herald*, "The Antiquity of Man," April 13, 1876, 7
[143] Ronald L. Numbers, *The Creationists: from scientific creationism to intelligent design*, (Cambridge: Harvard University Press, 2006), 162

can hardly be less than twenty thousand years, and may be far more."[144] Although unsatisfied with the Institute's stance, the article positioned them as the last of a dying breed:

> Happily the educated world is growing impatient of this sort of trifling. The Victoria Institute will some day find out, what it does not yet see, that it is vainly fighting against the existence of a Science of Man. The six thousand years' chronology actually prevented any rational theory of races and languages, till at last geology thrust away this stumbling block and left the way clear.[145]

By 1877, the Royal Anthropological Institute of Great Britain and Ireland deemed the 'accumulation of facts' bearing on human antiquity so great that they held a conference with the entire purpose of 'arriving at conclusions likely to be accepted as correct by the great body of observers now in the field.'[146] The 'Scientific Gossip' article that brought news of the conference to the Australian colonies stated 'the question of the antiquity of man is now discussed under more favorable conditions than when the geological evidence was first brought forward in 1859.'[147] By the late 1870s, any stumbling blocks to Australia's acceptance of human antiquity had been removed. Decades of debate in Europe had established human antiquity's empirical foundations, and by maintaining Lyell's separation of natural selection and human antiquity, the Australian public accomplished a relatively smooth acceptance of a species-wide concept of human antiquity.

Conclusion

Settler Australia's relationship with the concept of human antiquity began in 1859, a mere two months after its establishment in the paradigms of British geology. Rather than an isolated colonial outpost, the Australian colonies eagerly maintained their connection to British intellectual and cultural life through their flourishing print media. Information

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[144] *The Sydney Morning Herald*, "The Antiquity of Man," April 13, 1876, 7
[145] *The Sydney Morning Herald*, "The Antiquity of Man," April 13, 1876, 7
[146] *Leader*, 'Science: Scientific Gossip,' August 11, 1877, 5
[147] *Leader*, 'Science: Scientific Gossip,' August 11, 1877, 5

on human antiquity was disseminated directly to an active and literate Australian audience with an appetite for science. Initially, the Australian public satisfied this appetite by simply consuming the knowledge of human antiquity, but this consumption soon evolved into a period of rigorous debate. Many commentators pitted human antiquity against the doctrines and historical narratives of religion, but just as many again felt no threat from a concept of human ancientness, and sought instead to support and promote the intellectual alliance of science and religion.

Much of the high-stakes intellectual battle had already been fought and won in Britain, and in a public debate so closely aligned with the British scientific community, Australia's public acceptance of human antiquity was relatively smooth. This chapter has argued that within this public discussion was a distinctly scientific understanding of human antiquity; mediated not by professional scientists, but by local intellectuals who used public lectures as a way to tap into the cultural capital of human antiquity and cultivate status as charismatic, scientific experts. These lectures were treated by both their speakers and audiences as legitimate expressions of scientific knowledge. This chapter has also argued that Australia's settled reception of human antiquity was influenced by the concept's separation from Charles Darwin's more contentious theory of evolution by natural selection. Although equally as intrigued by the implications of evolution, the Australian public maintained a focused discussion on human antiquity that rarely intersected with the concurrent debates surrounding natural selection. As a result, the 'question' of whether human beings were ancient on earth was, by the end of the 1870s, dismissed as old hat.

This acceptance did not signal the end of Australia's public or professional interest in the concept of human antiquity. The lively public discussion in this period set a precedent for the remainder of the nineteenth century and into the twentieth, and thus warrants detailed attention as a starting point for this dissertation. These early decades take on their greatest significance, however, when viewed alongside the more complicated relationship that Australia's 'professional' scientists had with human antiquity in the same period. The history outlined in this chapter must be read in conjunction with Chapter Two, which reveals the outlets and spaces deliberately cultivated to produce colonial Australia's

‘professional’ science did not engage with the concept of human antiquity in the 1860s and 1870s. Australia’s nascent professional community shared the public’s interest and connection to Britain’s scientific community, but instead of increasing their engagement with the concept of human antiquity, their desire to emulate British science led to a prioritisation of subjects whose outputs related more directly to the material advancement of the colonies. When viewed alongside this professional absence, the unique role of public lectures as a mediatory intellectual authority in Australia is even more evident.

Chapter Two

Antiquity in absentia: Competing priorities in professional science, 1859-1879

On Wednesday 11 November 1863, members of the Philosophical Society of New South Wales were gathered inside the Australian Library and Literary Institute, on the corner of Sydney's Bent Street. On a table before his fellows, Professor John Smith carefully arranged a set of flint implements. The artefacts—oval in shape and sharpened at the edges—had been given to him by French archaeologist Jacques Boucher de Perthes. 'In 1847,' Smith stated, Boucher de Perthes had 'pointed out to the scientific world' that near Abbeville, France, stone implements crafted by humans were 'found coeval with extinct animals' and in strata from 'what Lyell called the post-Pliocene period."[1] Although Boucher de Perthes' research had initially been dismissed, Smith claimed it was 'now held as certain as anything in geology.'[2] It was these artefacts, Smith announced proudly, along with others from continental Europe and parts of the Pacific, that had led the world's most respected scientists to declare a substantial antiquity for the human species.[3]

Smith's audience, and the Philosophical Society more broadly, was made up of some of New South Wales' most prominent personalities. Smith himself was the founding chair of chemistry and experimental physics at Sydney University, and his listeners that day included NSW Governor Sir John Young; politician, journalist and businessman Charles Kemp; Supreme Court Justice Edward Wise; public servant Christopher Rolleston; councillor Joshua Frey Josephson; founding headmaster of Sydney Grammar School, William John Stephens; and the highly esteemed, Cambridge-trained geologist William Branwhite Clarke. Aside, perhaps, from his personal connection with Boucher de Perthes,

[1] *The Sydney Morning Herald*, "Philosophical Society," November 12, 1863, 8
[2] *The Sydney Morning Herald*, "Philosophical Society," November 12, 1863, 8
[3] *Empire*, "Philosophical Society of New South Wales," November 12, 1863, 5

Smith's presentation would not have surprised or shocked his audience. As we saw in Chapter One, news of the scientific consensus on human antiquity had already been circulating in the Australian press since its announcement in 1859. Indeed, Charles Lyell's *Geological Evidences of the Antiquity of Man* (1863), had gone into its third edition in just nine months by the time Smith made use of it, and much like the public intellectuals lecturing across the colonies, Smith interpreted Lyell's research in his presentation.

Smith believed there was 'a gap' between the present period of human history, and a preceding period with 'a race of human beings inferior to the present race.'[4] In light of the consensus on human antiquity, Smith didn't think the existence of a previous, more primitive race 'was at all inconceivable.'[5] Governor Young agreed, and claimed some scholars had calculated some Egyptian temples as built 'fourteen thousand years' ago by members of 'the present human race.'[6] Clarke, Australia's premier geological authority, stated he had no quarrel with adding a few thousand years to the chronology of human history, but could not accept 'the present race of men' was descended from some other race 'not endowed with the same faculties.'[7] Other members observed that ancient fossilised plants had occasionally been found in Australia during roadway excavations, and after deciding to alert the Secretary of Works to these potential discoveries, the 'subject then dropped.'[8]

Smith's presentation was the only instance in which Australia's professional scientific community engaged directly with the concept of human antiquity in the twenty years after its intellectual establishment in 1859. Here was a group of educated men, many of whom were professionally trained, with institutional and personal connections to one of the most stimulating intellectual developments currently unfolding within the empire of British science. Clearly there was a level of professional scientific interest in human antiquity and the larger questions on race and development it provoked; yet the concept would not appear in any of Australia's consciously curated professional research

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[4] *Empire*, "Philosophical Society of New South Wales," November 12, 1863, 5
[5] *The Sydney Morning Herald*, "Philosophical Society," November 12, 1863, 8
[6] *The Sydney Morning Herald*, "Philosophical Society," November 12, 1863, 8
[7] *The Sydney Morning Herald*, "Philosophical Society," November 12, 1863, 8
[8] *Empire*, "Philosophical Society of New South Wales," November 12, 1863, 5

repositories until at least the 1880s. Even Smith's presentation could not be published in a journal or society transactions—outlets that remained non-existent for the Philosophical Society until 1867—and was instead only recorded in two newspaper articles.[9]

This chapter explores human antiquity's conceptualisation in professional science in the 1860s and 1870s and asks why, when the concept was at its most conspicuous, it did not make more of an impact on Australia's professional scientists. The response to this question is two-fold. The first half of this chapter provides an explanation of Australia's professional silence on human antiquity through a detailed examination of colonial learned societies. It argues that while learned societies were part of the same intellectual milieu as Australia's mechanics' institutes and broader practice of public lectures, they understood themselves, and must therefore be historicised, as functioning differently within it. Rather than simply educating the general public, Australia's learned societies sought to improve the material and intellectual status of the colony within a connected British empire. Through disciplinary development and the rigorous transcription of research, Australian learned societies sought to both consolidate settler-colonial power and foster enough academic legitimacy to rank alongside the British institutions that had inspired their inception.

Australia's nascent learned societies were thus connected and conscious in the 1860s and 1870s, but instead of increasing their engagement with the concept of human antiquity, their desire to emulate Britain led to a prioritisation of scientific subjects whose outputs related more directly to the material advancement of the colonies. Even in geology, the discipline that had established the concept of human antiquity, Australia's top professionals spent the years surrounding human antiquity's establishment consumed in a lengthy debate on the age and formation of the continent's coal deposits. This half of the chapter argues, then, that the absence of human antiquity in Australia's professional science was a consequence of a nascent professional community whose desire to emulate

[9] Smith's presentation was recapped by an attendee for *The Sydney Morning Herald* and *Empire*. See *The Sydney Morning Herald*, "Philosophical Society," November 12, 1863, 8 and *Empire*, "Philosophical Society of New South Wales," November 12, 1863, 5.

British epistemologies conflicted with the materialistic, pragmatic demands of a settler-colonial project.

The second half of this chapter demonstrates the power of this settler-colonial context by comparing Australia's professional scientific scene with what it was missing out on: a more sophisticated and specific conceptualisation of human antiquity emerging within British epistemologies. This section will argue that in the same period, professional scientists in Britain began applying an understanding of human antiquity to the Australian space, and actually articulated a distinctly *Aboriginal* antiquity for Australia. They did so through the new science of anthropology, a discipline born from the confluence of ethnology, racial science, the consensus on human antiquity, and Charles Darwin's evolutionary theory of natural selection. Race had already come to be seen as a fixed biological category, but after the dual revelations of human antiquity and Darwinian evolution in 1859, racial categories began to be understood—and ordered—as variations across time. This intellectual development forged a conceptual link between human primitivity and human antiquity that ultimately allowed British anthropologists to read the primitivity of Aboriginal Australians as a marker of their antiquity. This was the crucial conceptual link missing from the professional science of settler-colonial Australia. Never again would Australia's Aboriginal antiquity be as conspicuous within the logics of professional science as it was in British anthropology in the 1860s and 1870s. Australia's professional silence on human antiquity represents, therefore, not only an unfulfilled intellectual opportunity but one that could have laid a drastically different foundation for generations of future professionals.

Part One: Scientific superstructures in settler-colonial space

Prioritising pragmatism

Historians of science have long acknowledged the difficulty of constructing a history of science in Australia.[10] The continent itself was founded on a voyage of scientific

[10] See R. W. Home, *Australian Science in the making*, (Cambridge: Cambridge University Press, 1988); Jan Todd, "Science at the periphery: An interpretation of Australian scientific and technological dependency and development prior to 1914," *Annals of Science* 50:1 (1993): 33-58; Donald Fleming, "Science in Australia,

discovery, and even after settlement, its unique flora and fauna continued to lure a mixture of 'amateur' and 'professional' scientists who readily contributed to its early scientific knowledge.[11] Beyond the retrospective grouping of practitioners, the complex interplay of imperial and local imperatives also makes the neat classification and periodisation of Australia's scientific development a hazardous venture.[12] In the late twentieth century, Australian studies of the history of science grew out of a desire to place its development in the context of its relationship with the European centre; upon which, it's generally agreed, Australia had some kind of dependence.[13] The causes and consequences of this dependence, however, are less congruent. Historian George Basalla champions a diffusionist model, treating science as a specific culture whose spread and transmission to colonial peripheries moved through a phase of dependence to one of independence.[14] Roy MacLeod treats scientific culture as part of political hegemony whose transmission was implemented

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Canada, and the United States: Some Comparative Remarks," *Proceedings Of The 10th International Congress of the History Science, Ithaca, 1962* (Paris, 1964): 179-96; Roy MacLeod, "Changing Perspectives in the Social History of Science," in *Science, Technology and Society: a cross-disciplinary perspective*, ed. Ina Spiegel-Rosing and Derek de Solla Price (London: SAGE Publications, 1977): 149-195.

[11] See Avan Judd Stallard, *Antipodes: In Search of the Southern Continent*, (Clayton: Monash University Publishing, 2016); Tom Frame, *Evolution in the Antipodes: Charles Darwin in Australia*, (Sydney: UNSW Press, 2009) and Frank N. Egerton, "History of Ecological Sciences, Part 37: Charles Darwin's Voyage on the Beagle," *Bulletin of the Ecological Society of America* 91:4 (2010): 398-431.

[12] See especially Jan Todd, "Science at the periphery: An interpretation of Australian scientific and technological dependency and development prior to 1914," *Annals of Science* 50:1 (1993): 33-58, for an examination of Australia's 'dependence' on British scientific models and its separation of science and technology.

[13] A more academic (and oft claimed professional) study of the history of science in Australia has been attributed to the works of Ann [Mozley] Moyal and Michael E. Hoare, beginning in the 1960s. See for example, Ann Mozley, "A Check List of Publications on the History of Australian Science," *The Australian Journal of Science* 25 (1962): 206-14; Ann Mozley, "Supplement to a Check List of Publications on the History of Australian Science," *The Australian Journal of Science* 27 (1964): 8-15; Ann Mozley, *A Guide to the Manuscript Records of Australian Science* (Canberra: Australian Academy of Science in association with Australian National University Press, 1966); and Michael E. Hoare, "Learned Societies in Australia: The Foundation Years in Victoria, 1850-1860," *Records of the Australian Academy of Science* 1:2 (1967): 7-29; Michael E. Hoare, "Doctor John Henderson and the Van Diemen's Land Scientific Society," *Records of the Australian Academy of Science* 1:3 (1968): 7-24; Michael E. Hoare, "Some primary sources for the history of scientific societies in Australia in the Nineteenth Century," *Records of the Australian Academy of Science* 1:4 (1969): 71-6; Michael E. Hoare, "Science and Scientific Associations in Eastern Australia, 1820-1890," (PhD thesis, Australian National University, 1974).

[14] See George Basalla, "The Spread of Western Science," *Science* 156 (1967): 611-622.

through imperial policy, which subordinated the colony and rendered it intellectually, politically, economically and culturally dependent.[15]

This chapter follows the system perspective of Ian Inkster, who views science as part of a wider intellectual system located within a socio-economic system.[16] Inkster outlines three levels of the scientific enterprise: the *scientific superstructure*, made up of individuals, institutions and research programs; a surrounding *cultural-institutional infrastructure*; and then a larger *socio-economic* base of support.[17] Using Inkster's systems approach, this chapter highlights the institutional forms of Australia's scientific cultural dependency, while also acknowledging its variation within the intellectual and economic dimensions of Australia's settler-colonial context. It argues Australia's colonial learned societies were constructed as part of a *scientific superstructure* with a distinct dependency on the *cultural-institutional infrastructure* of British science. They sought to replicate the models and epistemologies of British science, but did so within a broader *socio-economic* system of settler-colonialism that simultaneously strengthened and undermined their overall dependency on British science. This layered, complex dependence is evinced in Australia's professional scientific relationship with the concept of human antiquity in the 1860s and 1870s. Chapter One has already shown how the enormous cultural capital of human antiquity was transposed into the Australian public, and some sites of its scientific superstructure through public lectures. This section of the chapter reveals it is only by peeling back the layers of interdependence in colonial learned societies that we can understand why the cultural capital of human antiquity was not picked up within these more 'professional' sites of Australia's scientific superstructure. Instead of being the action of an isolated, under-resourced intellectual community, the reality was a complex interplay between the three levels of the scientific enterprise.

To do this, it is first necessary to sketch a brief history of learned societies in Australia. In the early decades of settlement, Australia's diverse scientific undertakings

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[15] See Roy MacLeod, "On Visiting the Moving Metropolis: Reflections on the Architecture of Imperial Science," *Historical Records of Australian Science* 5:3 (1982): 1-16

[16] See Ian Inkster, "Scientific Enterprise and the Colonial 'Model': Observations on Australian Experience in Historical Context," *Social Studies of Science* 15 (1985): 677-704.

[17] Inkster, "Scientific Enterprise and the Colonial 'Model,'" 677-678

were instilled with Enlightenment values, with a particular emphasis on the notion of improvement.[18] Visions of improvement were initially focused on the land, but by the 1820s, when its agricultural and economic future seemed more secure, scientific knowledge began to be cultivated for the settlement's moral and intellectual improvement. To achieve this, colonial administrators worked hard to establish appropriate sites for scientific practice. The sixth Governor of New South Wales, Sir Thomas Makdougall Brisbane, for example, dedicated extraordinary financial and physical efforts to fostering the practice and appreciation of astronomy. In 1822, he built the colony's first observatory at Government House, Parramatta, and also founded its first learned society, the Philosophical Society of Australia. In the colony of Van Diemen's Land, army surgeon Dr John Henderson had a similar desire to create an official outlet for science, and in 1829, founded the Van Diemen's Land Scientific Society.

These institutions were different from the Mechanics' Institutes and technical schools, described in Chapter One, that emerged in the same period. While underlined by similar objectives of instruction and improvement, Australia's colonial learned societies focused less on offering scientific education to the public, and more on the collation of scientific knowledge in order to develop British disciplinary structures in Australia.[19] They were spaces that were connected to, yet simultaneously separate from, public formats of scientific dissemination, and it is this separation that offers the first clue to their detachment from the concept of human antiquity in the 1860s and 1870s. Australia's first learned societies struggled to hold their ground in the 1820s and 1830s. Political turmoil and government instability saw the dissolution of Brisbane's Philosophical Society after only one year, and interest in Henderson's Scientific Society vanished with equal alacrity after two. Professional science was somewhat resurrected in Van Diemen's Land by Lieutenant Governor Sir John Franklin, who formed the Tasmanian Society of Natural

[18] See John Gascoigne, *The Enlightenment and the Origins of European Australia*, (Cambridge: Cambridge University Press, 2002), 1-18

[19] For an in-depth study on colonial learned societies see Michael E. Hoare, "'All Things Are Queer and Opposite': Scientific Societies in Tasmania in the 1840's," *Isis* 60:2 (1969): 198-209; Michael E. Hoare, "Learned Societies in Australia: The Foundation Years in Victoria, 1850-60," *Records of the Australian Academy of Science* 1:2 (1967): 7-29; Michael E. Hoare, "Science and Scientific Associations in Eastern Australia, 1820-1890," (PhD dissertation, Australian National University, 1974).

History in 1837. Under his leadership, the institution published three volumes of its *Tasmanian Journal of Natural Science* between 1842 and 1848.[20] Franklin's successor, Sir John Eardley-Wilmot, achieved an even greater feat in 1844 when he founded The Royal Society of Van Diemen's Land for Horticulture, Botany, and the Advancement of Science; the first royally affixed learned society to exist outside of Britain. In Australia's other colonies, the effort of establishing an official scientific practice fell largely to private investors and personal collectors: men like Sydney-based entomologist and public servant Alexander Macleay, who, by 1825, had amassed the finest and most extensive collection of any private individual.[21]

It wasn't until the 1850s that changes in Australia's socio-economic support base sparked a shift in the investment and longevity of its scientific superstructures. Triggered by the discovery of gold in New South Wales and Victoria in 1851, hundreds of thousands of prospecting immigrants began flooding the Australian colonies.[22] The dramatic population increase was accompanied by rapid urban development, and the capital cities of Melbourne, Sydney and Adelaide soon accounted for over one third of their colonies' total residents.[23] Separate colonies were created for Victoria in 1852 and Queensland in 1859, while in 1855, Van Diemen's Land achieved self-governance and was renamed Tasmania. Over the next three decades, economic progress steadily outstripped the population.[24]

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[20] Moyal, *A Bright & Savage Land*, 73

[21] See J. J. Fletcher, "The Society's Heritage from the Macleays," *Proceedings of the Linnean Society of New South Wales* 45:4 (1920): 567-635.

[22] A total of 600,000 people migrated to the Australian colonies between 1851 and 1861, doubling each colonies' population and pushing Australia's total number of non-Aboriginal occupants to 1,152,000. See Wray Vamplew, *Australians: Historical Statistics* (Sydney: Fairfax, Syme & Weldon Associates, 1987), 4

[23] J.W. McCarty, "Australian Capital Cities in the Nineteenth Century," in *Urbanization in Australia: The Nineteenth Century,* ed. C.B. Schedvin and J.W. McCarty, (Sydney University Press, 1974), 21-23. See also Alice Tonkinson and Robert Clancy, "Mapping colonial Sydney: From a gaol via a nodal city to an international centre," *The Globe* 81 (2017): 109-117.

[24] See Stuart Macintyre and Sean Scalmer, "Colonial states and civil society, 1860-90," in *The Cambridge History of Australia: Part I*, ed. Alison Bashford and Stuart Macintyre, (Cambridge: Cambridge University Press, 2011): 189-217; Ian W. McLean, "Australian Economic Growth in Historical Perspective," *Economic Record* 80:250 (2004): 330-345; N.G. Butlin, *Australian Domestic Product, Investment and Foreign Borrowing 1861–1938/39,* (Cambridge: Cambridge University Press, 1962), 460-461.

Motivated by the discovery of gold, and financed by its economic growth, colonial governments invested time and resources into Australia's scientific superstructure. They imported professionally trained scientists, like British geologists Alfred Richard Cecil Selwyn (1824-1902) and Samuel Stutchbury (1798-1859), to map Australia's coalfields and head gold-fossicking expeditions as part of official geological surveys.[25] They also constructed Australia's first universities, whose curriculums had a discernible preference for science: Sydney University (1852) and the University of Melbourne (1855) took as their model not the 'classically dominated' universities of Oxford and Cambridge, but the more recent University of London (1826), which appointed 17 chairs in science, medicine and engineering in its first decade alone. Sydney University appointed chairs in mathematics, chemistry and experimental physics, while the natural sciences of botany, zoology and geology became the domain of palaeontologist Frederick McCoy at the University of Melbourne.[26] Colonial learned societies also used the resources of the 1850s economic boom to gain a stronger foothold in Australia's scientific superstructure. Tasmania had amalgamated its two surviving societies into the Royal Society of Van Diemen's Land in 1849, while the Philosophical Society of Australia was resurrected in 1850 as the Australian Philosophical Society and renamed the Philosophical Society of NSW in 1856. Joining its ranks were the Philosophical Society of Adelaide in 1853, the Philosophical Institute of Victoria in 1854, and the Philosophical Society of Queensland, founded immediately after the colony's separation in 1859.

Over the next thirty years, Australia's learned societies gradually gained the prestigious 'Royal' prefix.[27] From the moment of their revival, however, they sought explicitly to replicate the aims and outputs of their cultural ancestor, the Royal Society of London. Regular meetings, the curation of a museum collection, and the dissemination of knowledge through the publication of transactions were all Royal Society hallmarks

[25] See R. K. Johns, *History and Role of Government Geological Surveys in Australia*, (Adelaide: A. B. James, Government printer, 1976)
[26] Moyal, *A Bright & Savage Land,* 162-163
[27] Victoria was the first in 1859; the Philosophical Society of New South Wales became Royal in 1866; the Philosophical Society of Adelaide became the Royal Society of South Australia in 1880; and the Royal Society of Queensland in 1884. Western Australia would not form its own learned society until well after Federation, when the Royal Society of Western Australia was created in 1914.

diligently recreated by Australia's colonial societies.[28] The Philosophical Institute of Victoria began publishing *Transactions* less than a year after its formation, and its inaugural President, Victorian Surveyor General, Captain Andrew Clarke, drew deliberate links between the Institute's 'simple' beginnings and those of its British forebears: 'From as simple an origin have the noblest institutions of our parent lands had birth, where their founders, however few their numbers, have shown that earnest perseverance which is the sure index of success.'[29] The desire to be affiliated with Britain's scientific superstructure remained long after inauguration. In June 1868, eighteen years after its revival, Government Astronomer and Vice-President of the Royal Society of New South Wales, George Robarts Smalley, used the Royal Society of London to encourage his own fellow members: 'And if so in the old country, will it not be so in a young one? England, the land we all call Home, has obtained her exalted position amongst nations in a great measure through the perfection she has attained in the arts and sciences.'[30]

Australia's colonial learned societies were resolute in their cultivation of professional practice and research repositories that mimicked the cultural infrastructure of British science. The Philosophical Society of Adelaide, for example, would not publish its own society transactions until 1877, but instead published meeting recaps and selected papers in South Australia's most popular newspaper, the *South Australian Register*.[31] They were unable to create 'the nucleus of a national institute' without an appropriate museum space; the Philosophical Society of Queensland, on the other hand, was more fortunate.[32] Despite a settler population of only 6,000, the newly annexed colony utilised a small but

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[28] Founded in 1660, the Royal Society's desire to improve 'natural knowledge' and 'increase the Powers of all Mankind' had shaped the boundaries and practice of modern science. See Thomas Sprat, *The History of the Royal Society of London for the improving of natural knowledge*, (London: T. R. for J. Martyn and J. Allestry, 1667), 10

[29] Captain Andrew Clarke, "Inaugural Address of the President," *Transactions of the Philosophical Society of Victoria* 1 (1855), 1-4

[30] See G. R. Smalley, "Opening Address to the Royal Society, delivered at its first meeting, 3rd June, 1868," *Journal and Proceedings of the Royal Society of New South Wales* 2 (1868), 5-6

[31] *South Australian Register*, "The Adelaide Philosophical Society," January 30, 1854, 3. See also *Adelaide Observer,* "The South Australia Institute," August 2, 1856, 5; *The South Australian Advertiser*, "Adelaide Philosophical Society," April 3, 1861, 3.

[32] *South Australian Register*, "The Adelaide Philosophical Society," January 30, 1854, 3; *Adelaide Observer*, "The Adelaide Philosophical Society," February 4, 1854, 6.

passionate group of scientists to produce regular papers, and maintain a natural history collection for 'the colony at large.'[33] The Philosophical Institute of Victoria had, by far, the most extensive collection, initiated first by a government grant in 1856 and then strengthened through the efforts of the Institute's official zoologist, Wilhelm Blandowski. Large parts of the collection were, unfortunately, snatched by Frederick McCoy, who wrested control from the Institute and deposited specimens at the National Museum of Victoria.[34]

It was therefore an emergent, yet by no means under-resourced institutional community into which the British consensus on human antiquity was delivered in 1859. Even if Australia's professional scientists could have escaped the public discussion on human antiquity, they could not have avoided hearing about it through their own institutional grapevine. By the early 1860s, all of Australia's learned societies had established networks of exchange with each other and with institutions in Europe. The Royal Society of Tasmania, for example, kept monthly records of all the specimens and publications they sent and received: in 1866, a series of fossils were sent to zoologist Karl Möbius, of the Hamburg Museum in Germany; while in 1867, the Society received a collection of skeletal remains from New Zealand, as well as a letter from revered British palaeontologist Sir Richard Owen, who had been asked to review some fossilised plants and bone fragments.[35] They also received regular requests from international scientists eager to obtain samples of Australia's unique flora and fauna; like one 'Mr Edwards, of San Francisco,' who offered to send shells, insects, or 'anything else you may want from this

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[33] Although many of the Society's early Transactions and minute books are missing from record, Elizabeth N. Marks has recovered and reconstructed accounts of its early decades. See Elizabeth N. Marks, "Queensland Philosophical Society and the Royal Society of Queensland from 1859 to 1911," *Proceedings of the Royal Society of Queensland* 71 (1960): 17-42. Quotes from the inaugural meeting of the Philosophical Society of Queensland are from Marks, 18

[34] Earning a reputation as a dogmatic and ruthless collector, McCoy ruled the Museum with an iron fist for forty years until his death in 1899. Historian of science Ann Moyal describes McCoy as 'stubborn, resourceful, frequently devious,' and therefore 'the greatest museum builder in Australia.' See Moyal, *A Bright & Savage Land*, 78-79

[35] See "Monthly Notices," *Papers and Proceedings of the Royal Society of Tasmania* (1865), 25; "Monthly Notices," *Papers and Proceedings of the Royal Society of Tasmania for 1867* (1868), 20; Owen had been sent a collection of fossils from near Risdon, Tasmania. See "Monthly Notices," *Papers and Proceedings of the Royal Society of Tasmania for 1867* (1868), 18

part of the world' in exchange for Tasmanian beetles and butterflies; or 'Mr. Denny' from the Leeds Philosophical and Literary Society, who was seeking 'skeletons of, or parasites from,' Australia's exotic native animals.[36]

These networks of exchange directly contradict the portrait of professional scientists drawn by archaeologist John Mulvaney almost a century later. In his 1961 history of prehistory in Australia, Mulvaney argued that 'in intellectual circles, the isolation of Australia from international thought had repercussions on prehistoric research.'[37] As with many of the historical claims surrounding Australia's understanding of human antiquity, Mulvaney's narrative is oversimplified to the point of inaccuracy. Mulvaney claims the 'isolation of Australia' meant scientists interested in the deep past 'drew few ideas from Europe,' almost as if Australian scientists would have engaged with such ideas had they known about them.[38] Professor John Smith's 1863 presentation of stone implements from France evinces a direct connection with the concept of human antiquity, while a deep dive into the archives of Australia's learned societies reveals a sustained and intentional connection with intellectual communities in Europe more broadly. Indeed, Australia's learned societies used their networks to obtain and disseminate the latest scientific texts and research. The Royal Society of Victoria were particularly proud of this network: in 1867, avid astronomer and then President, Robert Ellery boasted of the 'ninety-one learned societies in Europe and America' with which they 'regularly interchange publications.'[39] They also allegedly received 'constant and eager requests from foreign societies' for copies of their *Transactions*, and in return, were 'rapidly increasing' their library with 'a most valuable, and for this part of the world unique, collection of books.'[40] For Ellery, the wide distribution of the Society's *Transactions* positioned them above Australia's other societies

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[36] See "Monthly Notices," *Papers and Proceedings of the Royal Society of Tasmania for 1867* (1868), 21; Denny's list included 'the Native Tiger, Devil, Bandicoot, Kangaroo and Wallaby, Platypus, Echidna.' See "Monthly Notices," *Papers and Proceedings of the Royal Society of Tasmania for 1867* (1868), 37
[37] Derek John Mulvaney, "The Stone Age of Australia," *Proceedings of the Prehistoric Society* 27 (1961), 59
[38] Mulvaney, "The Stone Age of Australia," 59
[39] R. L. J. Ellery, "Anniversary Address of the President," *Transactions and Proceedings of the Royal Society* 1:8 (1867), viii
[40] Ellery, "Anniversary Address of the President," viii

as 'one of the most valuable and reliable means of making known to the world the intellectual and material progress of the colony of Victoria.'[41]

Australia's learned societies were connected and conscious in the 1860s and 1870s. They had knowledge of the concept of human antiquity, and were capable of engaging with it, but instead chose to prioritise engagements with subjects that held a higher cultural capital in the distinct socio-economic landscape of mid-nineteenth century Australia. Disciplines like astronomy, meteorology, botany, and mineralogy dominated society journals, especially when discussing the practicalities and material advancement of the settler-colony. The Royal Society of Tasmania, for example, published tables of meticulous meteorological observations and population statistics, as well as pensive papers on food supply, the comparative success of native and introduced flora and fauna, and the suitable uses of different types of timber.[42] Another major focus for the Tasmanians was the successful cultivation and breeding of salmon that, from 1850, was discussed in-depth at every monthly meeting for almost twenty years.[43] The Royal Society of New South Wales distributed the widest variety of papers on scientific aspects of colonial life: research on mortality, life expectancy, water filtration, venom antidotes, clock pendulums, and criminology continued to be published well into the 1870s.[44] Botany was a priority for the

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[41] Ellery, "Anniversary Address of the President," xix

[42] See for example James Barnard, "Observations on Statistics of Van Diemen's Land for 1848," *Papers and Proceedings of the Royal Society of Van Diemen's Land* (1849-1851), 102-134; Rev. Dr. Fleming, "Remarks on the Origin of Plants, and the Physical and Geographical Distribution of Species," *Papers and Proceedings of the Royal Society of Van Diemen's Land* (1849-1851), 186; W. T. Denison, "On Experiments for determining the Manures most suitable to the Turnip Crop," *Papers and Proceedings of the Royal Society of Van Diemen's Land* (1852-53), 47-52; William Swainson, "On the Characters of the several Amphibious Volutes allied to the genus Melampus," *Papers and Proceedings of the Royal Society of Van Diemen's Land* (1855-1859), 42-46; Swarbreck Hall, "Analysis of the Observatory Records for August, 1864; In Conjunction with those of Births, Deaths, &c.," *Papers and Proceedings of the Royal Society of Tasmania* (1864-1866), 77-80; "Time Signals," *Papers and Proceedings of the Royal Society of Tasmania* (1864-1866), 45-46; E. Swarbreck Hall, "Summary of Weather and Health in 1865," *Papers and Proceedings of the Royal Society of Tasmania* (1864-1866), 132-134; Francis Abbott, "Relative Frequency of the Winds at the Following Stations," *Papers and Proceedings of the Royal Society of Tasmania* (1867), 13-14.

[43] See C. E. Stanley, "On the Introduction of Salmon from the Rivers of Scotland into Tasmania," *Papers and Proceedings of the Royal Society of Van Diemen's Land* (1849-1851), 135-143; Morton Allport, "On the Natural Enemies of the Salmon in Tasmania," *Papers and Proceedings of the Royal Society of Tasmania* (1864-1866), 62-65; Morton Allport, "The Attempt to introduce Salmon Ova by the Beautiful Star," *Papers and Proceedings of the Royal Society of Tasmania* (1864-1866), 110-114.

[44] See Christopher Rolleston, "On the mortality of Sydney from the 1st March 1857 to 28th February 1858," *The Sydney Magazine of Science and Art* 2 (1859), 81; William Thomas Denison, "On the filtration of water

Royal Society of Victoria, who had among their members, and later as their President (1859-1860), the acclaimed German botanist Sir Ferdinand von Mueller. Mueller frequently lauded the virtues of botany, husbandry and the natural sciences for colonial development: 'Need I remind you how wide a field of observation lies before us throughout all domains of nature—how many of its resources continue unknown or undeveloped?'[45] The development of natural industry remained a focus for the Victorians well into the late 1860s, with then President Robert Ellery congratulating all its members for their 'lively and increasing interest' in the topics: 'I need scarcely remind them that they can hardly take a nobler work in hand, or work in which there is yet so wide a space for progress and improvement.'[46]

This improvement-focused research agenda dominated Australia's scientific superstructure, and particularly its learned societies, in the 1860s and 1870s. Outside of Smith's presentation to the Philosophical Society of New South Wales, the concept of human antiquity was not consciously recorded anywhere by professional scientists or their affiliated institutions. The Royal Society of Victoria actually excluded one paper that touched on human antiquity, as it did not meet the scientific standards for inclusion. Written by a Mr Thomas Harrison in 1868, the paper sought to 'reconcile the various theories (both religious and scientific) propounded as to the origin of man.'[47] Only one

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through sand," *The Sydney Magazine of Science and Art* 2 (1859), 73-74; John Tebbutt, Jr., "On the desirability of a systematic search for, and observation of variable stars in the Southern Hemisphere," *Transactions of the Philosophical Society of New South Wales* (1862-1865), 126-139; Julius Berncastle, "On snake-bites and their antidotes," *Transactions of the Philosophical Society of New South Wales* (1862-1865), 191-196; John Tebbutt, Jr., "On Australian storms," *Transactions of the Philosophical Society of New South Wales* (1862-1865), 153-164; Morris Birkbeck Pell, "On the rates of mortality and expectation of life in New South Wales, as compared with England and other countries," *Transactions of the Royal Society of New South Wales* (1867), 66-76; George Robarts Smalley, "On the mutual influence of clock pendulums," *Transactions of the Royal Society of New South Wales* (1867), 78-83; Charles Mayes, "On the water supply of Sydney from George's River and Cook's River," *Transactions of the Royal Society of New South Wales* (1869), 134-146; John Smith, "On the results of the chemical examination of waters for the Sydney Water Commission," *Transactions of the Royal Society of New South Wales* (1869), 146-156; Christopher Rolleston, "Criminal statistics of New South Wales, 1860-1873," *Transactions of the Royal Society of New South Wales* (1874), 19-28.

[45] Ferdinand Mueller, "Anniversary Address of the President," *Transactions of the Philosophical Institute of Victoria* (1860), 1-8

[46] Ellery, "Anniversary Address of the President," v

[47] Thomas Harrison, "Notes relative to the respective theories, Creation by Law, and Creation by Fact," *Transactions and Proceedings of the Royal Society of Victoria* 9 (1868-1869), 85

quote, however, was printed in the *Transactions*, which described the paper as 'too much upon theological subjects to be printed.'[48] The only other example of a more direct engagement with the concept came from The Royal Society of Tasmania, whose members were interested in the ethnographic curios of its unique yet 'fast disappearing' Aboriginal population.[49] The Society frequently received submissions of stone hatchets, weapons, and even the skeletal remains of Aboriginal people. Specimens were accompanied by short, descriptive sentences, but rarely by analysis or interpretation. For example, in May 1869, a 'Mr. Rollins' presented a 'Flint Implement used by Tasmanian Aborigines for skinning Kangaroo,'[50] and in March 1870, a submission by 'Mr. Dinham' was recorded as 'Portions of Skull &c., of Aborigine dug up at Mona Vale.'[51] Even when submissions came 'with a note,' like the nine 'stone implements made by aborigines of Tasmania' donated in March 1871 by explorer and politician James Reid Scott, these notes were not published for posterity.[52]

Nowhere is the influence of Australia's settler-colonial economic support-base on the priorities of its scientific superstructure more clearly exhibited, however, than within the developing discipline of Australian geology. Even this discipline, responsible for the establishment and dissemination of the concept of human antiquity, could not compete with the mineralogical momentum of Australia's socio-economic boom in the 1850s. By the time the consensus on human antiquity was announced in 1859, Australia had in-residence two of the most appropriately trained scientists who might otherwise have engaged with the topic: palaeontologist and museum director Frederick McCoy, and Australia's pioneer geologist William Branwhite Clarke. Both men were active members of learned societies—McCoy in the Royal Society of Victoria, and Clarke in the Royal Society of New South Wales—which they used to promote their expertise and status as geological experts. Yet while their discipline's cultural-institutional infrastructure was steeped in British

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[48] Harrison, "Notes relative to the respective theories, Creation by Law, and Creation by Fact," 85
[49] The notion that Australia's Aboriginal population was headed for extinction, particularly in Tasmania, will be explored in more depth in Chapter Three.
[50] See *Papers and Proceedings of the Royal Society of Tasmania* (1869), 7
[51] See *Papers and Proceedings of the Royal Society of Tasmania* (1870-1872), 1.
[52] See *Papers and Proceedings of the Royal Society of Tasmania* (1870-1872), 46. For more on Scott, see Neil Smith, "Scott, James Reid (1839-1877)," *Australian Dictionary of Biography* 6, (Melbourne: Melbourne University Press, 1976).

epistemology, Australia's socio-economic support base kept Clarke and McCoy's research fixed on a settler-colonial priority of quantifying Australia's coal deposits.

The cultural capital of coal

The discipline of geology developed significantly in the years surrounding Britain's invasion of Australia, particularly regarding the quantification of geological antiquity. In 1786, German geologist Abraham Werner transformed the chemical cosmogonical paradigms of geology when he asserted that rocks should be grouped by the age and mode of their formation, even if their mineral composition varied. He was the first to actually conceptualise a 'geological formation,' and paved the way for more taxonomic geological classifications.[53] Equally significant was Scottish geologist James Hutton's *Theory of the Earth* (1795), which outlined a cyclic, causal theory for the development of the Earth through regular and uniform processes.[54] Dismissed by his immediate contemporaries, Hutton's theory gained gradual support in the nineteenth century, and eventually earned him a spot among geology's founding fathers as the first to emphasise the vastness of geologic time.[55] International scientists were eager to discover whether the Australian continent could confirm and extend their knowledge, and geological samples were collected by some of Australia's earliest European explorers.[56]

It was not until the gold rush inspired mineralogical surveys of the 1850s, however, that a more official geological practice was established in Australia. By that time, research by English geologist William Smith, and French geologists Georges Cuvier and Alexandre

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[53] Danish scientist Nicolas Steno was the first to give a historical reconstruction of the formation of geological layers in 1669, using organic fossils and sedimentary strata, but Werner was the first to actually conceptualise a geological 'formation' in his *A Short Classification and Description of the Different Mineral Assemblages* (1786). See Rachel Laudan, "Werner and the 'School of Freiberg'," in Rachel Laudan, *From Mineralogy to Geology: The Foundations of a Science, 1650-1830*, (Chicago: The University of Chicago Press, 1987): 87-112

[54] Published first as a paper for the Royal Society of Edinburgh in 1788 and later as a monograph in 1795, Hutton's theory did not go down well with his contemporaries. See Rachel Laudan, "The Huttonian Alternative," in Rachel Laudan, *From Mineralogy to Geology: The Foundations of a Science, 1650-1830*, (Chicago: The University of Chicago Press, 1987), 113-137

[55] See T. G. Vallance, "Presidential Address: Origins of Australian Geology," *Proceedings of the Linnean Society of New South Wales* 100:441-444 (1975-1976), 14

[56] See Moyal, *A Bright & Savage Land*, 104.

Brongniart, had determined that geological formations could be dated not just by the depositional relation of their stratified beds, but also by their fossil content; a development crucial for establishing human antiquity in Europe.[57] In addition, Charles Lyell's *Principles of Geology* (1830-1833) provided the long-awaited evidence for Hutton's theory of the slow and continuous changes of the earth's surface.[58] Lyell also added important subdivisions to the geological time scale first articulated by Italian geologist Giovanni Arduino in 1759, and later by Werner; annexing their Primary, Secondary and Tertiary strata periods with classifications like Carboniferous, Oolite/Jurassic, Cretaceous, Eocene, Miocene and Pliocene (Fig 1).[59] Although obtaining exact time-spans for these periods would take another century, the majority of geologists in Europe, and especially in Britain, had concluded the Earth was hundreds of thousands, if not millions of years old. With the age of geological formations now identifiable by their depositional relationship *and* their fossil content, European geologists set out to correlate their findings with others around the world.[60]

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[57] See Prologue. See also William Smith, *A delineation of the strata of England and Wales, with part of Scotland,* (London: J. Cary, 1815) and *Strata Identified by Organized Fossils*, (London: W. Arding, 1816); Georges Cuvier and Alexandre Brongniart, *Essais sur la géographie minéralogique des environs de Paris, avec une carte géognostique et des coupes de terrain (Essay on the mineralogical geography of the environs of Paris: with a geognostic map, and cuts of the terrain)*, (Paris: Baudouin, 1811) and Georges Cuvier, *Discours sur les révolutions de la surface du globe* (*Discourse on the upheavals of the surface of the globe*), (Paris: Chez G. Dufour et Ed. d'Ocagne, 1826). See also Vallance, "Presidential Address: Origins of Australian Geology," 16

[58] Several prominent geologists continued to argue for catastrophic theories to account for the change and development of the earth. See Martin J. S. Rudwick, *The Meaning of Fossils: Episodes in the history of palaeontology*, (Chicago: University of Chicago Press, 1972).

[59] Vallance, "Presidential Address: Origins of Australian Geology," 16; Martin J. S. Rudwick, *The Meaning of Fossils: Episodes in the history of palaeontology*, (Chicago: University of Chicago Press, 1972); Terry Mortenson, "The Historical Development of the Old-Earth Geological Timescale," *Answers in Depth* 2 (2007): 120-137

[60] See Rachel Laudan, "Historical Geology," in Rachel Laudan, *From Mineralogy to Geology: The Foundations of a Science, 1650-1830*, (Chicago: The University of Chicago Press, 1987), 138-179; D. F. Branagan and K. A. Townley, "The Geological Sciences in Australia—A Brief Historical Review," *Earth-Science Reviews* 12 (1976): 323-346.

ABRIDGED GENERAL TABLE OF FOSSILIFEROUS STRATA.

1. RECENT.		POST-TERTIARY.	TERTIARY OR CAINOZOIC.	NEOZOIC.
2. POST-PLIOCENE.				
3. NEWER PLIOCENE.		PLIOCENE.		
4. OLDER PLIOCENE.				
5. UPPER MIOCENE.		MIOCENE.		
6. LOWER MIOCENE.				
7. UPPER EOCENE.		EOCENE.		
8. MIDDLE EOCENE.				
9. LOWER EOCENE.				
10. MAESTRICHT BEDS.		CRETACEOUS.	SECONDARY OR MESOZOIC.	
11. WHITE CHALK.				
12. UPPER GREENSAND.				
13. GAULT.				
14. LOWER GREENSAND				
15. WEALDEN.				
16. PURBECK BEDS.		JURASSIC.		
17. PORTLAND STONE.				
18. KIMMERIDGE CLAY.				
19. CORAL RAG.				
20. OXFORD CLAY.				
21. GREAT OR BATH OOLITE.				
22. INFERIOR OOLITE.				
23. LIAS.				
24. UPPER TRIAS.		TRIASSIC.		
25. MIDDLE TRIAS.				
26. LOWER TRIAS.				
27. PERMIAN.		PERMIAN.	PRIMARY OR PALÆOZOIC.	PALÆOZOIC.
28. COAL MEASURES.		CARBONIFEROUS.		
29. CARBONIFEROUS LIMESTONE,				
30. UPPER	DEVONIAN.	DEVONIAN.		
31. MIDDLE				
32. LOWER				
33. UPPER	SILURIAN.	SILURIAN.		
34. MIDDLE				
35. LOWER				
36. UPPER	CAMBRIAN.	CAMBRIAN.		
37. LOWER				
38. UPPER	LAURENTIAN.	LAURENTIAN.		
39. LOWER				

Fig 1. Abridged table of fossilised strata.[61]

[61] Taken from Charles Lyell, *Elements of Geology, Sixth Edition,* (New York: D. Appleton and Company, 1866), 101

It was in this context, in 1839, that geologist Reverend William Branwhite Clarke (1798-1878) arrived in New South Wales to take up a chaplaincy in Sydney. As a geologist, Clarke was professionally trained, active, and connected to an international intellectual community. Trained at Cambridge University, and an elected fellow of the Geological Society of London, Clarke embodied the spirit of the 'pioneering scientist' from his earliest days in Australia.[62] He was an avid collector of rocks and fossils, and by the end of his first decade had amassed over 10,000 specimens.[63] Throughout the 1840s and 1850s, he examined Australia's geology on foot, from the Illawarra region in the south, to the Hunter region in the North. Clarke also corresponded regularly with his former teacher and mentor, the renowned Woodwardian Professor of Geology, Reverend Adam Sedgwick, and often sent specimens back to England for Sedgwick's perusal. Clarke was the ideal professional scientist to engage with the concept of human antiquity in the 1860s and 1870s, and he certainly knew of the fervour surrounding it: he was present for Professor John Smith's 1863 presentation to the Philosophical Society, and even wrote to *The Sydney Morning Herald* in 1864 about the concept's relevance for Australia's human past. In a letter to the Editor, Clarke discussed two sets of human remains discovered at Milson's Point, on Sydney's North Shore.[64] Having accompanied the local 'Registrar of deaths and burials' to disinter the skeletons, Clarke reported they belonged to an Aboriginal adult and child.[65]

Clarke could not 'resist the inclination to refer to the new theory of the 'Antiquity of Man,'' and claimed that while the bones were not fossilised, they were 'in such a state as to exhibit all the signs of great antiquity.'[66] He suggested, however, that the responsibility to investigate Australia's human antiquity lay not with geologists or palaeontologists, but

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[62] This persona was identified by Clarke's contemporaries and by historians. Clarke's life, collection habits, publications, and correspondence has been chronicled by historian Ann Mozley Moyal. See Ann Moyal, *The Web of Science: The Scientific Correspondence of the Rev. W. B. Clarke, Australia's Pioneer Geologist, Volume I*, (Australian Scholarly Publishing: Melbourne, 2003), 56

[63] Moyal, *The Web of Science, Volume I*, 7

[64] See *The Sydney Morning Herald,* "The human remains found at Milson's Point—The Government Gazette," February 24, 1864, 8; *Illawarra Mercury*, "Human remains found at the North Shore—General News," February 26, 1864, 3; and *The Courier*, "Human remains found at the North Shore—New South Wales," February 26, 1864, 3

[65] W. B. Clarke, "Human remains at Milson's Point, North Shore," *The Sydney Morning Herald*, February 27, 1864, 5

[66] Clarke, "Human remains at Milson's Point, North Shore," 5

with explorers, who might 'take the hint and look out for human bones of the '*Australian* type" while traversing the interior.[67] Given that Clarke had, by this time, surveyed much of New South Wales in both an official and unofficial capacity, his comments reveal a distinctly different set of scientific priorities in the years surrounding the consensus on human antiquity. Despite his training in British geology, and his connection to intellectuals interested in deepening the scientific understanding of human antiquity, Clarke's attention became fixed on two subjects of crucial importance to Australia's mineralogically-minded colonial governments: gold and coal. Clarke's work on gold is beyond the scope of this chapter.[68] It was his research on coal, however, that exacerbated Australia's professional detachment from the concept of human antiquity in the 1860s and 1870s.

Coal had both academic and economic significance for Clarke, and for Australia's broader scientific superstructure. When Clarke arrived in 1839, there was no consensus on the age of Australian coal deposits. Indeed, while geological paradigms were developing internationally, European scientists still had trouble understanding Australia's unique geological features, particularly its stratigraphic order. Apart from the 'primitive' frameworks published by visiting British geologist Joseph Beete Jukes and American geologist James Dwight Dana in the 1850s, models for understanding Australian geology were thin on the ground.[69] It was here the New South Wales' coalfields proved so significant: recognisable and rampant, coal offered the tantalising possibility of correlating Australia's geological formations with those of Europe; if only they could be accurately dated. This was an enormous opportunity for any geologist, but it also aligned with the more extractive settler-colonial desire to mine coal for use in Australia and the broader

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[67] Emphasis in original. Clarke, "Human remains at Milson's Point, North Shore," 5

[68] Clarke discovered traces of it as early as 1841, made a public prediction of its availability in 1847, and by the early 1850s, had earned a reputation as one of the colony's top mineralogical authorities. For more see R. K. Johns, *History and Role of Government Geological Surveys in Australia*, (Adelaide: A. B. James, Government printer, 1976), 31; W. B. Clarke, 'Geology - comparison of Russia and Australia,' *The Sydney Morning Herald*, September 28, 1847, 2; W. B. Clarke, *Plain Statements and Practical Hints Respecting the Discovery and Working of Gold in Australia*, (Sydney: Sands & Kenny, 1851); W. B. Clarke, *Researches in the Southern Gold Fields of New South Wales*, (Reading and Wellbank: Sydney, 1860); and Moyal, *The Web of Science, Volume I*, 10-17

[69] The geologic subdivisions that appeared in Jukes' *A sketch of the physical structure of Australia: so far as it is at present known* (1850) were considered primitive by European standards. See Branagan and Townley, 324; and T. G. Vallance, "Presidential Address: Origins of Australian Geology," 22-30.

British empire. Coal was first discovered in the Hunter region of New South Wales in 1796, had been mined by the colonial government since 1801, and by 1804, was being exported to India, Mauritius and South America.[70] It was an essential resource for the British, particularly in maintaining their 'naval supremacy' and 'offshoring the Industrial Revolution.'[71]

Investigating Australian coal was at the forefront of Clarke's mind even before he left England.[72] He was quick to appraise the Hunter and Illawarra coalfields in the early 1840s, and believed they were from the Secondary period with the same general antiquity as the coal formations of England. After further observations, however, Clarke instead dated the New South Wales coal beds to the much older Palaeozoic Era. From the outset, Clarke explicitly framed both the academic and economic significance of his research, presenting papers in June 1847 to the Geological Society of London—the discipline's most respected international institution—and the New South Wales' Legislative Council Committee of Enquiry into the Coalfields of Australia.[73] Both papers argued that Australia's coal formations had 'an antiquity in part greater than that of the European coal-fields.'[74] Clarke's argument relied heavily on his identification of the fossilised plant genera *Stigmaria* and *Lepidodendron*, widely recognised as belonging to the Carboniferous period of the Palaeozoic Era. 'Whatever conclusion we adopt,' he wrote, 'this is undoubted, that

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[70] See Hans A. Baer, "The nexus of the coal industry and the state in Australia: Historical dimensions and contemporary challenges," *Energy Policy* 99 (2016), 196; and Mark Dunn, *The Convict Valley: The Bloody Struggle on Australia's Early Frontier*, (Crows Nest: Allen & Unwin, 2020), 45-46.

[71] For 'naval supremacy' see Archibald S. Hurd, "Coal, Trade, and the Empire," *The Nineteenth century: a monthly review* 44:261 (1898): 718-723; for 'offshoring the Industrial Revolution' see On Barak, "Outsourcing: Energy and Empire in the Age of Coal, 1820-1911," *International Journal of Middle East Studies* 47:3 (2015): 425-445; see also Con H. Martin and Alan J. Hargraves, *History of coal mining in Australia: the Con Martin memorial volume*, (Parkville: Australasian Institute of Mining and Metallurgy, 1993); and J. Comerford, *Coal and Colonials: The Founding of the Australian Mining Industry*, (Aberdare: United Mineworkers Federation of Australia, 1997).

[72] Sedgwick, Clarke's mentor and former teacher at Cambridge, sent a letter in December 1838 encouraging Clarke to make the coal beds a primary object of his study while abroad. Letter from Adam Sedgwick to William Branwhite Clarke, December 10, 1838, MLMSS139/47, State Library of NSW.

[73] The paper was presented on June 16, 1847, and published in 1848 as W. B. Clarke, "On the Genera and Distribution of Plants in the Carboniferous System of New South Wales," *Proceedings of the Geological Society of London* 4 (1848): 60-63

[74] Clarke, "On the Genera and Distribution of Plants in the Carboniferous System of New South Wales," 63

the Australian carboniferous deposits have nothing in common…with the [European] jurassic system.'[75]

It was the difference of either a Jurassic or Carboniferous classification that drew Clarke into a protracted and acrimonious dispute with Frederick McCoy (1817-1899), a fiery palaeontologist born and raised in Ireland. While Clarke was honing his skills in New South Wales, McCoy spent the 1840s working for Irish geologist Richard Griffith as part of the British Geological Survey, and then as curatorial assistant to Professor Adam Sedgwick at the Woodwardian Museum in Cambridge.[76] Sedgwick first connected the pair in 1847, when he asked McCoy to examine some of Clarke's coal samples.[77] Unfortunately for Clarke, neither McCoy nor Sedgwick were convinced by his claim the New South Wales coalbeds were Carboniferous, and they instead declared the fossilised flora placed them in 'the age of the Oolites [Jurassic].'[78] Clarke wrote directly to McCoy the following year, confident he had correctly identified *Stigmaria* and *Lepidodendron*, and enclosing a set of freshly collected samples he hoped would settle the issue.[79] An agreement, however, would take another thirty years to reach.

Clarke began his correspondence with McCoy before Australia's colonial learned societies had created their networks of intellectual exchange, and their initial disagreement was exacerbated by the absence of this scientific superstructure.[80] It's continuation, however, came down to a combination of stubborn egotism and genuine methodological difficulties, which intensified their debate in the crucial years surrounding human

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[75] Clarke, "On the Genera and Distribution of Plants in the Carboniferous System of New South Wales," 63

[76] G. C. Fendley, "McCoy, Sir Frederick (1817–1899)," *Australian Dictionary of Biography*, Volume 5, (Melbourne: Melbourne University Press, 1974)

[77] Letter from Adam Sedgwick to William Branwhite Clarke, November 29, 1847, MLMSS139/47, 115-18, State Library of NSW, Sydney. See also Frederick McCoy, "On the Fossil Botany and Zoology of the Rocks associated with the Coal of Australia (with nine Plates)," *Annals and Magazine of Natural History* 20:130-136 (1847): 145-157

[78] Letter from Adam Sedgwick to William Branwhite Clarke, November 29, 1847, MLMSS139/47, 115-18, State Library of NSW.

[79] Letter from W.B. Clarke to Frederick McCoy, February 17, 1848, Papers of Adam Sedgwick, Cambridge University Library.

[80] In his very first letter to McCoy, in 1848, Clarke wrote: '…where no specimens exist for comparison, it is not to be [wondered at] or surprising if a person like myself falls into error on the questions of identity, & gentlemen at home who have access to the stones of the geological beds, must not be hard upon us gropers in the dark who have no light from beyond the wilderness.' Letter from W.B. Clarke to Frederick McCoy, February 17, 1848, Papers of Adam Sedgwick, Cambridge University Library.

antiquity's dissemination in Australia. When Frederick McCoy migrated to Australia, in 1855, to take a position at the University of Melbourne, Clarke's repeated invitations to visit the disputed coalfields were left unanswered.[81] Focused on his own academic establishment, McCoy sent brief, scattered replies that ignored Clarke's requests and expressed no desire to examine the stratigraphy.[82] In 1860, when the consensus on human antiquity began rippling across the Empire, their relationship turned from bad to worse. Both men had become distinguished members of their colony's respective learned societies, but rather than helping resolve the debate, their increased networks (and audiences) intensified the dispute and dominated space in their society's meetings and transactions.

The battle reached its bitter zenith in McCoy's intellectual stomping ground, the Royal Society of Victoria. Early in 1860, Clarke sent a paper on the age of Australia's coal formations to Sir Henry Barkly, Governor of Victoria and President of its Royal Society. The paper produced a searing response from McCoy, who claimed he had never doubted Clarke's identification of Palaeozoic coal fossils, but rather that Clarke's samples *'never came from the beds we were arguing about.'*[83] McCoy accused Clarke of not uncovering the samples himself, and argued it more likely they had 'tumble[d] in *from the coal beds in the upper part of the pit.*'[84] Although somewhat reasonable, McCoy's criticisms hinged on the pair's key methodological difference: they not only disagreed on the coal beds' antiquity as derived from fossil evidence, but also from the different beds' relationship to each other. The New South Wales coal formations consisted of three layers, which Clarke believed were a continuous, contemporaneous series from the Carboniferous period of the Palaeozoic era. More palaeontologist than geologist, McCoy discounted stratigraphy in favour of the

[81] See letter from W. B. Clarke to Frederick McCoy, June 18, 1855, National Museum of Victoria, Inward Correspondence 1854-1900, Box CDEF. See also letter from W. B. Clarke to Frederick McCoy, February 17, 1857, National Museum of Victoria, Inward Correspondence 1854-1988, Box CDEF

[82] See letter from Frederick McCoy to W. B. Clarke, February 23, 1855, MLMSS 139/42, 261-4, State Library of New South Wales. See also Letter from Frederick McCoy to W. B. Clarke, May 29, 1856, MLMSS 139/42, 265-8, State Library of New South Wales.

[83] Emphasis in original. Frederick McCoy, "A commentary on 'A communication made by the Rev. W. B. Clarke to his Excellency Sir henry Barkly, K.C.B., &c., President of the Royal Society of Victoria, on Professor McCoy's new Taeniopteris, &c., &c.", *Transactions of the Royal Society of Victoria* 5 (1860), 105

[84] Emphasis in original. McCoy, "A commentary on 'A communication made by the Rev. W. B. Clarke to his Excellency Sir henry Barkly, K.C.B., &c., President of the Royal Society of Victoria, on Professor McCoy's new Taeniopteris, &c., &c.", 107

fossils; identifying the lower bed as Carboniferous, but the coal seam and upper fossil bed as Jurassic. Dana and Jukes' frameworks for Australia's geology were well known among Australia's intellectuals by this time, but McCoy's refusal to examine the stratigraphy in person forced his reliance on a European model that saw fossil evidence as the primary marker of age; a paradigm fast approaching obsolescence.[85]

McCoy's intransigence and Clarke's belligerence kept the debate alive for years. When Clarke uncovered coalfields interposed with visible beds of Palaeozoic marine fossils, indisputable of a continuous Palaeozoic formation, McCoy still remained firm in his opposition and suspicion.[86] McCoy secured the support of his Society President, Sir Henry Barkly, as well as geologist Alfred Richard Selwyn, Victoria's current Government Surveyor.[87] Clarke, on the other hand, garnered support from a new generation of scientists who had recently arrived in the colonies. Among these emerging experts were geologist Benjamin Herschel Babbage, geological surveyor of South Australia; Charles Gould, geological surveyor of Tasmania; Richard Daintree, photographer and geological surveyor of Victoria and Queensland; and Julius von Haast, a German-born geologist working as a government surveyor in New Zealand. Through years of steady correspondence, Clarke established a solid support network of colonial geologists that, by 1869, helped establish a consensus on the Carboniferous antiquity of the New South Wales coal formations.[88] By

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[85] See William Stanley Jevons, "Remarks on the geological origin of Australia," *The Sydney Magazine of Science and Art* 2 (1859), 89-93. For McCoy's reputation as a stubborn 'cabinet naturalist' see Fendley, 'McCoy, Sir Frederick (1817–1899),' *Australian Dictionary of Biography*

[86] McCoy's comments outlined in Sir Henry Barkly, "Anniversary Address of the President, Delivered to the Members of the Royal Society, at the Anniversary Meeting, held on the 28th April, 1862," *Transactions and Proceedings of the Royal Society of Victoria* 6 (1861-1864): xxxvii-xlviii. For Clarke's arguments see W. B. Clarke, "On the Coal Seams near Stony Creek (junction of Singleton and Wollombi roads), West Maitland District, New South Wales (Originally read 23 December 1861)," *Transactions and Proceedings of the Royal Society of Victoria* 6 (1861-1864): 27-31.

[87] Sir Henry Barkly, "Anniversary Address of the President, Delivered to the Members of the Royal Society, at the Anniversary Meeting, held on the 28th April, 1862," *Transactions and Proceedings of the Royal Society of Victoria* 6 (1861-1864): xxxvii-xlviii. Several letters from Barkly to Clarke in December 1861 and January 1862 document both Selwyn and Barkly's concerns with Clarke's descriptions: see letter from Sir Henry Barkly to W. B. Clarke, January 2, 1860, MLMSS 139/33, 233-236, State Library of New South Wales.

[88] Clarke delighted in the recognition he received from Alfred Selwyn who, on his way through Sydney in 1869, confessed that he 'did not see how any one could come to any other conclusion than [Clarke] had done respecting our Carboniferous formation.' See letter from W. B. Clarke to Alexander Morrison Thomson, April 5, 1869, MLMSS 139/49, 263-266, State Library of New South Wales.

the early 1880s, the entire notion of 'an age' for Australian coal was extinguished, and no one issued any serious challenge to the idea that both Palaeozoic and Mesozoic coal beds existed in New South Wales, Queensland and Tasmania.[89]

The difference between a classification of Jurassic and Carboniferous may appear, in hindsight, to be fairly minimal. The dispute certainly exhausted Clarke and McCoy's contemporaries, but the prolonged debate exemplifies the laborious and sometimes hostile nature of establishing new scientific knowledge. It neatly exhibits the structures of scientific revolution identified by Thomas S. Kuhn,[90] and even mimics, in characters as much as characteristics, a well-known British debate from the 1830s. Dubbed the Great Devonian Controversy, this debate began when Sir Henry De la Beche, the esteemed first director of the Geological Survey of Great Britain, and the then 'amateur' geologists Roderick Murchison and Adam Sedgwick, quarrelled over the dating of fossilised plants found in coal beds in North Devon, England. Just like Clarke and McCoy, De la Beche, Murchison and Sedgwick did not disagree on the Carboniferous antiquity of the fossils, or the classification of the formations surrounding them, but rather on their relationship, and how that relationship could be interpreted to determine antiquity. The debate was detailed and intense, but eventually the geologists recognised that rocks of significantly different types, with somewhat different fossils, could be laid down simultaneously in different parts of the world.[91] In 1840, Murchison was able to correlate a layer of the troublesome English strata with formations in Russia, which effectively resolved the controversy and led to the conceptualisation of the Devonian geological period. Perhaps McCoy's stubborn support of the fossil evidence was in part an attempt to model himself on the now towering figures of Murchison, and his mentor, Sedgwick; though he would not experience the same success.

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[89] T. G. Vallance, "The fuss about coal: Troubled relations between palaeobotany and geology," in *Plants and Man in Australia*, ed. D. J. and S.G.M. Carr, (Sydney: Academic Press Australia, 1981): 136-176, 159

[90] See Thomas S. Kuhn, *The Structure of Scientific Revolutions: Fourth Edition*, (Chicago: The University of Chicago Press, 2012)

[91] Martin J. S. Rudwick has written the definitive account of the controversy, outlining its minutiae in his *The Great Devonian Controversy: The Shaping of Scientific Knowledge Among Gentlemanly Specialists*, (Chicago: The University of Chicago Press, 1985). The monograph has been called 'one of the most important studies in the history of science' and 'arguably the best work to date in the history of geology.' See David R. Oldroyd, "An Episode in Geology," *Science* 230:4724 (1985): 432-433.

The debate between Clarke and McCoy is a fascinating case study in how the structures and epistemologies of British professional science played out in the settler-colonial space. It exposes the layered dependencies of Australia's scientific superstructure on its British cultural-institutional infrastructure amid a socio-economic support base geared towards pragmatic, material development. Australia's lack of established networks were clear hindrances to Clarke in the early years of his research; just as his later institutional grounding and growing web of correspondents were crucial in overcoming them. Compounding this experience were bigger methodological questions embedded in the cultural-institutional infrastructure of British geology; which Clarke's relentless pursuit of field-data eventually resolved. Ultimately unfolding within a socio-economic support base fixated on mineral extraction, the cultural capital of geological antiquity outweighed that of its human counterpart in the 1860s and 1870s—especially for scientists eager to establish their reputations through a subject that had both academic and economic significance in Australia.

The first half of this chapter has demonstrated that Australia's professional scientists were, much like the broader public, consciously connected to the concept of human antiquity in the decades after its establishment. Unlike the Australian public, however, professional scientists dedicated their attention—and their institutional research repositories—to subjects that aligned with the materialistic, pragmatic demands of a settler-colonial project. The second half of this chapter demonstrates the power of these settler-colonial priorities by comparing human antiquity's entire conceptual absence in Australian science, with its more specific application and articulation in British science in the same period.

Part Two: the British transformation of time and space

The new science of anthropology

In the 1860s and 1870s, Australia's powerful settler-colonial priorities not only prevented its scientific professionals from engaging with the broad concept of human antiquity, but also with the concept's first application to Australia's human past. In Britain,

the logic of Australian Aboriginal antiquity was articulated by the new science of anthropology, a discipline created in a confluence of ethnology, racial science, human antiquity and Charles Darwin's evolutionary theory of natural selection. By the mid-nineteenth century, race had already come to be understood as a fixed biological category, but after the publication of Darwin's *On The Origin Of Species* (1859), a period of heated debate transformed the way scientists understood and ordered human development and racial affinity. This section of the chapter argues that through these debates, racial categories came to be understood—and ordered—as variations across time. This in turn forged a crucial conceptual link between human primitivity and human antiquity, foundational in the logic of Aboriginal antiquity. While Australian scientists were focusing on their mineralogical mandate, British anthropologists began reading Aboriginal primitivity as an unequivocal marker of their antiquity.

The discipline of anthropology, and its conceptual link between human primitivity and antiquity, had its beginnings in the paradigms of British ethnology, which itself had decades of racial science reticulated in its foundation. Historian Nancy Stepan argues between 1800 and 1850, there was a fundamental reorientation in British racial science.[92] When the concept of race had first become an object of systematic scientific investigation towards the end of the eighteenth century, differences in race were seen as changeable products of climate and civilisation. In the early decades of the nineteenth century, however, race came to be viewed as a stable and essential biological entity which could cause or prevent the development of civilised behaviours.[93] This 'fixed and distinct' notion of race was readily incorporated into one of the biggest debates of nineteenth century science; that of the unity or diversity of the human species. In 1800, most European scientists supported monogenesis, a theory of human unity that saw the world's various races as part of the same species. In Britain in particular, monogenists believed this unity could be traced back to a single pair of human ancestors, the Bible's Adam and Eve. Just as

[92] See Nancy Stepan, "'Race is Everything': The Growth of Racial Determinism, 1830-50," in *The Idea of Race in Science: Great Britain 1800-1960*, (London: The Macmillan Press Ltd, 1982): 20-46.
[93] See Stepan, "Race and the Return of the Great Chain of Being, 1800-50," in *The Idea of Race in Science: Great Britain 1800-1960*, (London: The Macmillan Press Ltd., 1982): 1-19.

the fixed and distinct notion of race was solidifying, however, there was a growing support for polygenesis, which saw the human races as separated by such profound mental, moral and physical differences as to constitute separate biological species. Stepan has shown how, in Britain, polygenesis was both 'religiously unorthodox, yet deeply appealing' for an empire grappling with the abolition of slavery and its concurrent imperial expansion.[94]

The discipline of ethnology was formalised in Britain in this context, and with a vested interest in these questions, almost entirely through the efforts of physician James Cowles Prichard (1786-1848). Prichard was the first English author to actually use the term 'ethnology' in his 1843 monograph *The Natural History of Man*,[95] and his multi-volume *Researches Into The Physical History of Mankind* (1813) is considered a foundational text of pre-Darwinian ethnology.[96] In 1843, Prichard co-founded the Ethnological Society of London (ESL) with the primary objective of understanding the cause of 'the distinguishing characteristics, physical and moral, of the varieties of Mankind which inhabit, or have inhabited, the Earth.'[97] By the time the ESL published the first volume of its *Journal of the Ethnological Society of London* five years later, Prichard had left a coterie of eager ethnologists in his wake.[98] The ESL, however, initially had little influence in Britain's scientific community, having inherited a complicated intellectual foundation. A devout Anglican, Prichard had staunchly supported a Biblically-based monogenetic interpretation of human history, to the extent it became the 'functionally autonomous motivation of his ethnology.'[99] Monogenesis was still popular in Britain, but against the growing evidence of human antiquity, the Bible's Mosaic chronology was not. Monogenesis also exacerbated some of ethnology's inherent biological and historical challenges. For example,

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[94] Stepan, 2

[95] Full title *The Natural History of Man: Comprising Inquiries Into the Modifying Influence of Physical and Moral Agencies on the Different Tribes of the Human Family,* (London: H. Bailliere, 1843).

[96] First published in 1813, Prichard's *Researches Into The Physical History of Mankind* was revised and republished frequently from 1836 to 1947.

[97] "Regulations," *Journal of the Ethnological Society of London* 1 (1848), 3

[98] Another of the ESL's founding members, German physician and geologist Johann Karl Ernst Dieffenbach, argued that Britain 'above all others,' had the ability to 'open a new era' for the important science of Ethnology. Ernest Dieffenbach, "The Study of Ethnology," *Journal of the Ethnological Society of London* 1 (1848), 16

[99] George W. Stocking Jnr., *Victorian Anthropology*, (New York: The Free Press, 1987), 49

ethnological scholarship already had to account for the biological differences between human races and explain those differences in a story of global distribution; but a Biblically-based, monogenetic framework also had to trace this story back to a single point of origin. Compounded by a lack of industry connections and a series of internal leadership changes, the ESL found itself relegated to the fringes of British science.

Then, in 1859, the dual revelations of human antiquity and natural selection sparked renewed interest in ethnology, reviving the ESL and establishing new battlegrounds in the debate on human diversity. Human antiquity was transformative in this debate: it leant a plausibility to natural selection by bridging the temporal discontinuity between humans and earlier animal forms, and also provided ample temporal space for the existence and development of different human races.[100] For monogenists, this may have made locating a single-species origin point more difficult, but it gave considerable support to biological arguments of the diversification of races.[101] Polygenists also incorporated human antiquity into their frameworks, claiming an expanded temporality did not necessitate racial change or development. The two camps differed, however, in their interpretation of natural selection. Darwin himself was an outspoken monogenist, and although *The Origin* did not specifically address the topic of human evolution, its conceptualisation of gradual species evolution aligned much more with monogenesis than it did with polygenesis.[102]

These were just a few of the battle lines drawn in scientific debates in the 1860s, but they unfolded with particular vigour within the ESL, and over the course of a decade, worked to reshape the discipline of ethnology into the new science of anthropology. When

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[100] Both Charles Lyell and Charles Darwin acknowledged this. See Sir Charles Lyell, "Introductory Address by the President: On the Occurrence of Works of Human Art in Post-Pliocene Deposits," *Report of the 29th Meeting of the British Association for the Advancement of Science (1859)*, (Fleet Street, London: Taylor and Francis, Red Lion Court, 1860), 95; and Charles Darwin, *The Descent of Man, and Selection in Relation to Sex*, (London: John Murray, 1871), 3

[101] Charles Lyell made this exact argument in his 1863 monograph on human antiquity: "So long as physiologists continued to believe that man had not existed on the earth above six thousand years, they might, with good reason, withhold their assent from the doctrine of unity of origin of so many distinct races; but the difficulty becomes less and less, exactly in proportion as we enlarge our ideas of the lapse of time during which different communities may have spread slowly, and become isolated, each exposed for ages to a peculiar set of conditions." See Charles Lyell, *The Geological Evidences of the Antiquity of Man, with remarks on theories of the Origin of Species by Variation* (London: John Murray, 1863), 386.

[102] Stepan, 48-49

interest in ethnology surged in the early 1860s, the ESL's original membership of naval officers, clergymen and civil servants, was suddenly replaced by youthful scientists: men like John Lubbock, a banker who would go on to establish and define the discipline of prehistoric archaeology; Edward Burnett Tylor, a cultural evolutionist now widely recognised as the founder of cultural anthropology; and Thomas Henry Huxley, the biologist known as 'Darwin's Bulldog,' whose collection of essays, *Man's Place In Nature* (1863), sent its own shockwave through evolutionary science.[103] In the influx of new members were several scholars pursuing newer intellectual trends in physical anthropology and archaeology.[104] Among them was James Hunt (1833-1869), an ambitious speech pathologist with a keen interest in human racial differences.

Hunt rose quickly at the ESL and wielded a visible influence over administration, membership and outreach in his role as honorary secretary.[105] Before long, tensions arose between the older ESL members and the emerging subset of 'anthropologicals.' As a dedicated disciple of the contentious (and largely disgraced) racial scientist, Robert Knox, Hunt's scholarship and ideas were gaining a similar reputation among his peers as controversial at best, and discriminatory at worst.[106] In 1862, Hunt and a group of followers left the ESL to form their own learned society, dubbed the Anthropological Society of London (ASL). Installed as its first President, Hunt wasted no time in carving an intellectual space for the ASL, claiming it would serve scientists interested in human nature with a

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[103] For more on Huxley see Ruth Barton, *The X Club: power and authority in Victorian science*, (Chicago: Chicago University Press, 2018); Ian Hesketh, *Of apes and ancestors: evolution, Christianity, and the Oxford debate*, (Toronto: University of Toronto Press, 2009); Leonard Huxley, *Life and letters of Thomas Henry Huxley*, (New York: D. Appleton and Co., 1901).
[104] Stocking Jnr., *Victorian Anthropology*, 246.
[105] Efram Sera-Shriar, "Observing Human Difference: James Hunt, Thomas Huxley and Competing Disciplinary Strategies in the 1860s," *Annals of Science* 70:4 (2013), 465
[106] For more on Robert Knox's scientific ideas, see Efram Sera-Shriar, "Ethnology in the Metropole: Robert Knox, Robert Gordon Latham and Local Sites of Observational Training," *Studies in History and Philosophy of Biological and Biomedical Sciences* 42 (2011): 486-496; Evelleen Richards, "The 'Moral Anatomy' of Robert Knox: The Interplay between Biological and Social Thought in Victorian Scientific Naturalism," *Journal of the History of Biology* 22:3 (1989): 373-436; A. W. Bates, *The Anatomy of Robert Knox: Murder, Mad Science and Medical Regulation in Nineteenth-Century Edinburgh*, (Brighton: Sussex Academic Press, 2010); Nancy Stepan, "'Race is Everything': The Growth of Racial Determinism, 1830-50," in *The Idea of Race in Science: Great Britain 1800-1960*, (London: The Macmillan Press Ltd, 1982): 20-46; Douglas A. Lorimer, "'Nature,' Racism, and Late Victorian Science," *Canadian Journal of History/Annales Canadiennes d'Histoire* 25:3 (1990): 369-385.

stronger publishing body, a closer devotion to the anatomical aspects of ethnology, and an institutional arena for the 'free discussion' of various 'exciting questions' stimulated by their contemporary intellectual and political context.[107] While born from the discipline of ethnology, Hunt distinguished anthropology as a new science concerned with 'the whole nature of man,' rather than just 'the history or science of races' preoccupied with questions of human unity or plurality.[108]

Often referred to as the 'anthropological controversy,' most historians characterise this split in Britain's scientific superstructure with a liberal, inclusive ESL on one side, and a sexist, racially-insensitive ASL on the other.[109] While not entirely incorrect, the split was driven less by Hunt's contentious racial views and more by his insistence that the 'science of man' should be based on anatomical and physiological evidence rather than ethnology's traditional non-physical datasets like linguistics.[110] These methodological disagreements took place amid a flurry of professional competition involving some of the biggest personalities in British science. Hunt was an outspoken critic of Darwin, arguing there was little difference between 'a discipline of Darwin and a discipline of Moses.'[111] While not strictly a Darwinist organisation, those most loyal to the zoologist had remained steadfast members of the ESL, and frequently criticised the ASL.[112]

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[107] James Hunt, "Introductory Address on the Study of Anthropology," *The Anthropological Review* 1:1 (1863): 1-20.
[108] Hunt, "Introductory Address on the Study of Anthropology," 2.
[109] For an account of Hunt's views on slavery and race, see Douglas Lorimer, *Colour, Class and the Victorians: English Attitudes to the Negro in the Mid-Nineteenth-Century* (Leicester: Leicester University Press, 1978). For an account of the views of Hunt (and other British scientists) on women, see Evelleen Richards, "Huxley and Woman's Place in Science: The Woman Question and the Control of Victorian Anthropology," in *History, Humanity and Evolution: Essays for John C. Greene,* ed. James Moore (Cambridge: Cambridge University Press, 1989): 253-284.
[110] See James Hunt, "Introductory Address on the Study of Anthropology," *The Anthropological Review* 1:1 (1863): 1-20; James Hunt, "On the Negro's Place in Nature," *Journal of the Anthropological Society of London* 2 (1864): xv-lvi; and James Hunt, "On Physio-Anthropology, Its Aim and Method," *Journal of the Ethnological Society of London* 5 (1867): ccix-cclxxi.
[111] Hunt argued, 'one calls in natural selection with unlimited power, and the other calls in a Deity provided in the same manner.' See James Hunt, "On The Doctrine of Continuity Applied to Anthropology," *Anthropological Review* 5:16 (1867), 116
[112] In a letter to John Lubbock in May 1863, Thomas Henry Huxley described the ASL as 'a nest of imposters,' with whom, he made clear, he would have no interaction. Letter quoted in Mark Patton, *Science, Politics and Business in the Work of Sir John Lubbock: A Man of Universal Mind*, (Hampshire: Ashgate Publishing Ltd., 2007), 62

Just like intellectuals carving their careers in colonial Australia, Hunt seized the opportunity to position himself as a scientific reformer: he worked to simultaneously promote and transform the methodology of ethnology even before leaving the ESL, but he forged ahead with his vision at the ASL. Indeed, the society grew so rapidly in membership in the 1860s that even its opponents were forced to concede there 'was nothing like it in any other scientific body in the country.'[113] After the unexpected death of Hunt in 1868, and a fractious coexistence mediated by the British Association, the ESL and ASL eventually merged back into a single institution, the Anthropological Institute of Great Britain and Ireland, in 1871. The union did not immediately eliminate hostilities: methodological disagreements continued, and there remained a deep-felt resistance among the 'ethnologicals' to anthropology as a designation and a discipline.[114] By the mid 1870s, however, the in-fighting had mellowed, and both disciplines were left transformed.

The years of debate achieved a settled consensus on humanity's vast antiquity, its monogenetic origin, and, coupled with the general acceptance of natural selection, the progressive character of the growth of human civilisations.[115] As a result, ethnology was freed from its strictly religious monogenism and could investigate the history of human races in entirely naturalistic terms. The discipline of anthropology had, through the ASL, achieved its own scientific legitimacy and respectability. Indeed, it soon became the dominant label for the science of man, subsuming ethnology under the broad umbrella of 'anthropological inquiry.' The historical aspect of this inquiry still had its difficulties in an expanded timeline, but its content had changed dramatically: after decades centred on the question of human unity, anthropology was now focused on unpacking the origin and development of human civilisation. The concept of human antiquity was also brought under this anthropological umbrella. What had once been the speciality of geologists, now became a subject of scrutiny for the uniquely capable anthropologists.

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[113] See Luke Burke, *The ethnological journal: a monthly record of ethnological research and criticism,* (London, 1865-1866) 91-93. See also Stocking, *Victorian Anthropology,* 248.

[114] As Stocking notes, part of the resistance can be attributed to the contempt held for Hunt and the legacy of controversy and debt he left in his wake. See Stocking, *Victorian Anthropology,* 257

[115] Nancy Stepan argues that by 1871, there was a general acceptance of the evolutionary theory outlined in *On The Origin of Species*. See Stepan, 69. See also Stocking, *Victorian Anthropology,* 258

In the 1870s, there were a mass of scientists, both professional and 'amateur', who published their idea of what human development looked like and how it could be measured. Ironically, in an attempt to answer new intellectual questions, many British scientists referred *back* to the observations and assumptions of the pre-Darwinian ethnology they had supposedly left behind: that is, using non-European races as scientific objects to explain humanity's physical, social and cultural differences. The key difference in the science of anthropology, however, was its abandonment of ethnology's comparative methodology in favour of a developmental, evolutionary perspective.[116] Historian Nancy Stepan argues that Darwin himself was somewhat responsible for 'accommodating the new evolutionary science to the old racial science' when he tried to apply natural selection to humans in *The Descent of Man* (1871).[117] By suggesting that humanity's descent from some lower, animalistic form could be measured in steps not of 'kind,' but of 'degree,' Darwin opened up an enormous space between 'civilised' Europeans and their animal ancestors; a space the new cohort of British anthropologists were eager to fill.[118] The result was an inherent ordering of racial categories in a developmental evolutionary narrative that mapped across time. What had, under ethnology, been a human history interpreted primarily in terms of movement in space, was now legitimised under anthropology as a history of development across time.

The logic of Aboriginal antiquity

There is a substantial body of research that has exposed how anthropology's racialised, developmental narratives constructed discriminatory evolutionary hierarchies with pervasive images of Indigenous primitivity. Historians Russell McGregor, Warwick

[116] This turn towards sociocultural evolution cannot be explained as simply a transposition of older ethnological frameworks onto newer evolutionary ones, nor as simply the transposition of biological reasoning onto social and cultural phenomena; but rather, as an extended symptom of the complex interaction and fusion of ethnology, anthropology, and Darwinian evolution that occurred during the 1860s and 1870s. As Stocking notes, 'the traditions of debate about old questions and the polemical context in which the new were raised both affected the way in which the old answers to new questions were formulated.' Stocking, *Victorian Anthropology*, 150

[117] Stepan, 52

[118] Stepan, 52. For more on the space between human and naturalistic animal forms, see Chapter Five.

Anderson, Barry Butcher and Paul Turnbull have, among others, demonstrated how British science positioned Aboriginal Australians as simplistic savages; members of a race that, for much of the nineteenth and twentieth-centuries, teetered on the edge of an inevitable extinction.[119] Overlooked in this scholarship, however, is how the new science of anthropology used its racialised perception of primitivity to construct a logic of Aboriginal antiquity. This section of the chapter will argue that when human racial differences began to be conceptualised as variations across time, the discipline of British anthropology forged a paradigmatic link between the concepts of human primitivity and human antiquity. In the 1860s and 1870s, that link was used by British anthropologists James Bonwick and Charles Staniland Wake to argue that Aboriginal Australians were among the oldest humans on earth. This was the crucial intellectual link Australia's professional scientists missed in favour of their pragmatic, settler-colonial priorities.

Bonwick and Wake both saw the antiquity of Aboriginal Australians as premised and proven by their unmistakable primitivity. Neither of them were, by traditional measures, 'professionally' trained scientists. The recently formalised science of anthropology, however, was grounded in theoretical interpretation: one gained legitimacy as an anthropologist by *doing* anthropology, first from the armchair, and then later, as Chapter Three will explore, in the field. Bonwick forged his reputation through the wide readership of his monographs and papers; Wake through his publications and involvement with the ASL and the Anthropological Institute of Great Britain and Ireland. This brief study of their scholarship does not intend to position their claims about Aboriginal Australians as the pinnacle of British anthropology. Rather, this section argues their scholarship reveals the link between human primitivity and human antiquity existed as a

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[119] See Russell McGregor, *Imagined Destinies: Aboriginal Australians and the doomed race theory, 1880-1939,* (Carlton: Melbourne University Press, 1997); Russell McGregor, "The concept of primitivity in the early anthropological writings of A.P. Elkin," *Aboriginal History* 17:2 (1993): 95-104; Warwick Anderson, *The cultivation of whiteness: science, health and racial destiny in Australia,* (Carlton: Melbourne University Press, 2005); Barry W. Butcher, "Darwin down under: science, religion, and evolution in Australia," in *Disseminating Darwinism: The Role of Place, Race, Religion, and Gender*, ed. Ronald L. Numbers and John Stenhouse, (Cambridge: Cambridge University Press, 1999): 39-60; Paul Turnbull, "'The Aboriginal' Australian brain in the scientific imagination, 1820-1880," *Somatechnics* 2:2 (2012): 171-197; Paul Turnbull, "Australian Museums, Aboriginal Skeletal Remains, and the Imagining of Human Evolutionary History," *Museum and Society* 13:1 (2015): 72-87.

matter of course within the paradigms of anthropology. Bonwick and Wake's claims were not rejected by their peers, nor were they lauded as revolutionary; they were merely a logical reading of the concept of human antiquity in an Australian setting.

Born in England and trained as a schoolteacher, James Bonwick (1817-1906) migrated to the Australian colony of Van Diemen's Land in October 1841 to manage a school in Hobart. Bonwick travelled backwards and forwards between England and Australia throughout this life, but he lived in the colonies for extended periods from 1841-1859, and 1862-1869. In between his work as a teacher and school administrator, Bonwick indulged interests in history, anthropology and geology.[120] He was an 'indefatigable' writer who transcribed thousands of historical documents for the colonial government in Queensland, South Australia, New South Wales, Victoria and Tasmania.[121] While 'not a brilliant or original writer,' his 'industrious and useful' scholarship earned him steady intellectual respect among his contemporaries: 'He always had something to say which was worth knowing.'[122] His most famous works of anthropology were two volumes on Aboriginal Tasmanians: *Daily Life and Origin of the Tasmanians* (1870) and *The Last of the Tasmanians* (1870). Having lived in the colonies, Bonwick might be considered by some to be an Australian scientist, yet his monographs did not make an explicit argument for Tasmanian Aboriginal antiquity. Instead, it was in a paper presented to the Ethnological Society of London—and thus in Britain's scientific superstructure—that Bonwick laid out the logic for Aboriginal antiquity.

Published in 1870, Bonwick's paper claimed a substantial antiquity for Tasmanian Aborigines that was consistently connected to, and proven by, their inherent primitivity. To support this claim, he used an amalgamation of evidence drawn from the research of

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[120] Guy Featherstone, "Bonwick, James (1817–1906)," *Australian Dictionary of Biography* 3, (Melbourne: Melbourne University Press, 1969)

[121] See Featherstone, "Bonwick, James (1817–1906)," *Australian Dictionary of Biography* 3; and *The Australian Star*, "James Bonwick," February 8, 1906, 4 for descriptions of Bonwick's impressive output.

[122] See *The Australian Star*, "James Bonwick," February 8, 1906, 4; Esther Anne Beddow, *Appreciations of James Bonwick, born 1817, died 1906*, (State Library of New South Wales, 1906); Edward Edgar Pescott, *James Bonwick: a writer of school books and histories, with a bibliography of his writings*, (Melbourne: H.A. Evans, 1939); George MacKaness, "A Bibliography of James Bonwick (1817-1906), Australian Historian," *Journal and Proceedings of the Royal Australian Historical Society* 23:5 (1937), 35

his contemporaries: the biology of Thomas Henry Huxley and Alfred Russel Wallace, the botany of Joseph Dalton Hooker, the ethnology of the late James Cowles Prichard, and the palaeontology of Professor Richard Owen.[123] While none of these scientists actually addressed Aboriginal antiquity in their work, Bonwick used their research to argue that Australia had once been part of an ancient 'supercontinent,' from whence 'the various black races surrounding the Indian Ocean, and extending into the Pacific and Southern Oceans, may have radiated.'[124] Bonwick used, for example, Hooker's documentation of similar plant life in India, South Africa and Australia as evidence of this former land connection: 'The extension of the country of the Blackfellows was necessary to account for its vegetation.'[125] A sunken supercontinent would also explain the physical similarities, noted by Huxley and Prichard, between Aboriginal Tasmanians and the populations of Africa, Melanesia and Polynesia. Many of Bonwick's interpretations were based on a common perception of Aboriginal primitivity: 'The Blackfellows could no more cross the sea than could the gum-tree.'[126] Thus, Bonwick argued, to 'raise the sunken continent' and account for a terrestrial migration, one would have to 'go back through the Pleistocene to the Tertiary, and even advance considerably into the latter.'[127]

This substantial antiquity was not, Bonwick argued, just suggested by a geological connection to an ancient supercontinent, but was proven by the peculiarity and primitivity of Australia's life forms. Throughout the paper, Bonwick described Australia as home to 'the least changed developments of life.'[128] Aboriginal Tasmanians, in particular, were portrayed as 'the lowest of the human form, and the most isolated and peculiar of the family of man.'[129] Reflecting anthropology's paradigmatic link between primitivity and antiquity, Bonwick argued that the more developed and less peculiar a continent's life forms, the

[123] James Bonwick, "On the Origin of the Tasmanians Geologically Considered," *The Journal of the Ethnological Society of London* 2:2 (1870), 124
[124] Bonwick, "On the Origin of the Tasmanians Geologically Considered," 122
[125] Bonwick, "On the Origin of the Tasmanians Geologically Considered," 122
[126] Bonwick, "On the Origin of the Tasmanians Geologically Considered," 122
[127] Bonwick, "On the Origin of the Tasmanians Geologically Considered," 126
[128] Bonwick, "On the Origin of the Tasmanians Geologically Considered," 127
[129] Bonwick, "On the Origin of the Tasmanians Geologically Considered," 121

more 'inferior in geological age' the continent was.[130] Having taken stock of the various unique species discovered across Australia, Bonwick argued that Tasmania would 'rank high in terms of years, as the land holds 41 peculiar species out of 60.'[131] Indeed, Tasmania had twelve out of its twenty species of marsupials 'peculiar to itself.'[132] Convinced by such logic, Bonwick saw 'no occasion to halt' in applying it to Australia's human inhabitants, arguing the more peculiar 'inhabitants of the older portion, Tasmania, were older than those of most, if not all, of Australia.'[133]

Bonwick's paper encompassed many themes common in British science at the time. As his biographer Guy Featherstone notes, Bonwick was not especially original in his thinking, particularly in this paper, built primarily on the research of others.[134] The significance of Bonwick's argument, then, is not its distinction from those of his peers, but its demonstration of the paradigmatic link between primitivity and antiquity. Bonwick used contemporary evidence within an anthropological framework that saw the peculiarity and primitivity of Aboriginal Tasmanians as logical and compelling proof of their lengthy antiquity. Combined with the primitivity and peculiarity of Australia's fauna—of a more 'ancient type' than the 'Mammoths, Rhinoceroses, and Cave Lions' uncovered in Europe—Bonwick argued 'the lost continent' ought to be regarded 'as one of the earliest scenes, if not actually the first scene of man's existence here' on Earth.[135] Bonwick's paper provoked several comments from his fellow ESL members, but none that disputed or rejected his claim that the antiquity of Aboriginal Tasmanians placed them among the oldest human populations. Joseph Hooker spoke at length about species of 'Southern flora,' and stated only that as Aboriginal Tasmanians were 'extremely different from the Australians,' it was thus 'physically impossible that the Tasmanian could have come from Australia.'[136]

A more sophisticated argument for Aboriginal antiquity came, in the same period, from Charles Staniland Wake (1835-1910). Born in Hull, England, Wake trained and worked

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[130] Bonwick, "On the Origin of the Tasmanians Geologically Considered," 127
[131] Bonwick, "On the Origin of the Tasmanians Geologically Considered," 127-128
[132] Bonwick, "On the Origin of the Tasmanians Geologically Considered," 127-128
[133] Bonwick, "On the Origin of the Tasmanians Geologically Considered," 128
[134] See Guy Featherstone, *Life and Times of James Bonwick* (Masters thesis, University of Melbourne, 1968)
[135] Bonwick, "On the Origin of the Tasmanians Geologically Considered," 129-130
[136] Bonwick, "On the Origin of the Tasmanians Geologically Considered," 130-131

as a solicitor before his entrance onto the dramatic scene of British anthropology in the 1860s. He became a fellow of Hunt's Anthropological Society of London in 1863, and after giving up his legal practice, rose to prominence as one of the Society's delegates to the meeting of the British Association for the Advancement of Science in 1870.[137] When the ASL amalgamated with the ESL to become the Anthropological Institute of Great Britain and Ireland, Wake was appointed its first director.[138] During the continued hostilities of the Institute's first few years, Wake and several other officers who had been members of the ASL were relieved of their posts and replaced by former members of the ESL.[139] After a brief attempt to form yet another breakaway organisation—the London Anthropological Society—Wake returned to the Institute in 1873 and even served as a member of its Council for several years in the early 1880s.[140]

Between 1863 and 1907, Wake published 75 anthropological works on the marriage, kinship, and morality of the world's 'primitive' populations.[141] His opinion on the antiquity of Aboriginal Australians was visible in one of his earliest publications, an 1867 paper 'On the Antiquity of Man and Comparative Geology.'[142] Extending the well-known racial scientific theory that environmental conditions affected human capacity for civilisation, Wake argued that both the origin and development of human civilisation was related to geological antiquity:

> All great alterations in the climate and soil of a country have probably originated in geological change. If, however, there has not been for a long period any such change sufficient to effect an alteration of climate and soil, and if these conditions of existence are unfavourable to civilisation, the people subject to them must, the longer such conditions continue, show less and less capacity for civilisation.[143]

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[137] Robert Needham, "Editor's Introduction," in C. Staniland Wake, *The Development of Marriage and Kinship*, ed. Robert Needham, (Chicago: The University of Chicago Press, 1967), viii. For more biographical details see also Frederick Starr, "Obituary: Charles Staniland Wake," *American Anthropologist* 12 (1910): 343-344.
[138] See *Journal of the Anthropological Institute* 1 (1872): xxxvi
[139] Needham, "Editor's Introduction," ix
[140] Needham, "Editor's Introduction," ix
[141] A full bibliography can be found in Needham, "Editor's Introduction," xliii-xlvii
[142] C. Staniland Wake, "On the Antiquity of Man and Comparative Geology," *Journal of the Anthropological Society of London*, Vol. 5 (1867), cv-cxvii
[143] Wake, "On the Antiquity of Man and Comparative Geology," cv

This, he argued, indicated a link between the age of a continent and the capacity for civilisation 'of the aboriginal races which inhabit them."[144] When comparing the physical and mental conditions of the various human races with the continents they inhabited, Wake believed Australia and its Aboriginal population were 'equally effete.'

As research on its coalfields further affirmed Australia as one of the oldest continents on Earth', Wake argued it was no surprise 'its aboriginal inhabitants are the most uncivilised of the races of mankind.' It was not just their mere want of civilisation, but their 'apparent incapacity for improvement' that had to be explained. This, Wake argued, could only be done 'by supposing the Australian aborigines to have continued for a vast period of time under the influence of conditions of soil and climate totally unfitted for intellectual development."[145] For Wake, the depth of Aboriginal antiquity could be nothing short of enormous; a figure so substantial as to allow their primitive physical and mental 'race characteristics' to be arrested in development and fixed in time. When postulating how far back in time the human species had first appeared on earth, Wake argued Aboriginal primitivity, and thus antiquity, could be used as a rough guide: by examining 'the place in the human scale occupied by the aboriginal inhabitants of Australia…we may suppose man to have existed from the beginning of the great tertiary period."[146]

Wake developed the link between geological antiquity, human antiquity, and human primitivity throughout his career. In 1868, he published *Chapters on Man, With the Outlines of a Science of Comparative Psychology*, which again positioned Aboriginal Australians as the most primitive and ancient of all the 'dark uncivilised peoples of the southern hemisphere.' The 'African negro,' according to Wake, was known to have 'continued in his present state for 'upwards of 5000 years,' yet even they were elevated about the condition of Aboriginal Australians: 'What a vast period of time, therefore, must have been required thus to elevate him from the condition of primitive man, or even from

[144] Wake, "On the Antiquity of Man and Comparative Geology," cv
[145] Wake, "On the Antiquity of Man and Comparative Geology," cv-cvi
[146] Wake, "On the Antiquity of Man and Comparative Geology," cvi

that of the Australian savage, who now the most nearly approaches man's primitive state!'[147] Again, he was not surprised by their supposed intellectual incapacity, given they had 'existed under conditions of life so unfavourable to civilisation…ever since the beginning of the tertiary period.'[148]

Wake published two more papers on Aboriginal Australians in the early 1870s; one discussing their physical characteristics, in an attempt to determine whether all Aboriginal tribes formed a single race,[149] and another discussing their mental characteristics. In the latter, Wake argued Aboriginal Australians were the epitome of 'primitive man.' Although it made similar claims to his other publications, in this article Wake argued directly against the suggestion that Aboriginal Australians had fallen from a higher state of civilisation into their present primitivity.[150] From his collected observations, Wake argued Aboriginal Australians were 'something more than the race children of the present era—that, in fact, they represent the childhood of humanity itself.'[151] If they did not reveal the condition of humanity exactly as it was in 'primeval times' it could be no further than when 'the original potentialities of man's being had been but slightly developed by the struggle for existence.'[152] Wake argued the date of this period, so perfectly represented by Aboriginal Australians, 'could not have been long after man's first appearance on the earth.'[153]

Overlooked in the twentieth century, Wake's scholarship was well-received by his peers in the nineteenth century.[154] Given his involvement in the various anthropological

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[147] C. Staniland Wake, *Chapters on Man, With The Outlines of a Science of Comparative Psychology*, (London: Trübner and Co., 1868), 287
[148] Wake, *Chapters on Man,* 288
[149] C. Staniland Wake, "The Physical Characters of the Australian Aborigines," *The Journal of Anthropology* 1:3 (1871): 259-267.
[150] 'A race, whatever degradation it may undergo, could never lose all trace in its social condition of that which it once possessed, and sink back to the exact state in which it must have been when it first emerged from a condition of almost absolute barbarity. This, morally at least, is the position of the aborigines of Australia…' See C. Staniland Wake, "The Mental Characteristics of Primitive Man, as Exemplified by the Australian Aborigines," *The Journal of the Anthropological Institute of Great Britain and Ireland* 1 (1872), 83
[151] Wake, "The Mental Characteristics of Primitive Man, as Exemplified by the Australian Aborigines," 83
[152] Wake, "The Mental Characteristics of Primitive Man, as Exemplified by the Australian Aborigines," 83
[153] Wake, "The Mental Characteristics of Primitive Man, as Exemplified by the Australian Aborigines," 83
[154] Wake's biographer, Rodney Needham, who cobbled together the mysteries of Wake's life from limited and scattered sources, claims that Wake's anthropology 'received no notice' from scientists in the first half of the twentieth century. See Needham, "Editor's Introduction," vi; and Robert Needham, "Charles Staniland Wake 1835-1910: a biographical record," in *Studies in Social Anthropology: Essays in Memory of E.*

societies of the 1860s, Wake's fellows included some of Britain's most respected scientists. For example, Alfred Russel Wallace, the co-founder of natural selection and famed evolutionary biologist, approved of, and referenced, Wake's arguments on Aboriginal mental characteristics, as they aligned with his own theories on the ancient formation of human racial differences.[155] Indeed, even when criticising his depiction of Aboriginal mental capacity, Australian archaeologist John Mulvaney acknowledged Wake's work was 'widely quoted in its day.'[156] Even with this popularity, neither Wake's nor Bonwick's declaration of an Aboriginal antiquity premised by primitivity was regarded as particularly trailblazing at the time. Rather, Wake and Bonwick's scholarship was received as a logical reflection of the newly defined paradigms of British anthropology and its conceptual link between human antiquity and human primitivity, exhibited through Aboriginal Australians.

It was this crucial yet conventional paradigmatic connection that was absent from Australia's scientific superstructure in the 1860s and 1870s. Under the influence of an extractive settler-colonial socioeconomic support base, Australia's professional scientists would not engage with the concept of human antiquity until they began publishing their own anthropological scholarship in the 1880s. A rare foreshadowing of the science to come was recorded in the *Proceedings of the Royal Society of Tasmania* in August 1875, when explorer and politician James Reid Scott submitted a set of stone tools to the Society's collection.[157] The implements prompted comment from Catholic priest and avid geologist Reverend Julian Edmund Tenison-Woods (1832-1889), who likened them to 'a spear-head'

E. Evans-Pritchard by His Former Colleagues, eds. J. H. M. Beattie and R. G. Lienhardt, (Oxford: Oxford University Press, 1975): 354-387.

[155] Wallace quoted Wake in Alfred Russel Wallace, *Australasia*, (London: Edward Stanford, 1879), 90. For more on the idea of past racial formation, see Chapter Four.

[156] Mulvaney dismissed Wake's claims for Aboriginal antiquity as part of the 'uncritical enthusiasm for evolutionism' common at the time. See D. J. Mulvaney, "The Australian Aborigines 1606–1929: Opinion and Fieldwork, Part 2," *Australian Historical Studies* 8:31 (1958), 305. See also Introduction.

[157] Some earlier discussion was sparked in 1873 by an assortment of Aboriginal artefacts submitted by a Mr. H. S. Lewes, and a Mr. Arthur Clarke, which continued across several meetings. See *Papers and Proceedings of the Royal Society of Tasmania* (1873), 1, 10, 22, 23-25. For more on Scott, see Neil Smith, "Scott, James Reid (1839-1877)," *Australian Dictionary of Biography* 6, (Melbourne: Melbourne University Press, 1976).

featured in 'the *Geological Society's Journal* some years previously."[158] Tenison-Woods warned that 'arguments based on the antiquity of such relics might require modification,' considering evidence from Tasmania revealed 'stone age' implements actually belonged to 'the present century."[159]

This notion that human antiquity could be undermined by present populations' continued use of 'primitive' technologies appeared occasionally in the broader public debate on human antiquity.[160] By the mid-1870s, however, those who doubted the concept of human antiquity, and those who saw primitivity as a negation of it, found themselves in the minority. As such, Tenison-Woods received a firm rebuttal from his Society fellows, particularly the Anglican Bishop, Charles Henry Bromby, whose brother, John Edward Bromby, was one of the era's most outspoken public intellectuals and supporters of the concept of human antiquity.[161] While John Edward Bromby agreed that geologist's calculations would likely be modified over time, their 'main argument' on human antiquity was 'not disturbed by that flint implement before them."[162] In fact, Bromby believed placing Tasmanian flint implements alongside similar examples from Europe 'plainly' proved that 'those savages who lived some untold periods ago, and those who till lately inhabited this island' were of 'the same human race,' and thus 'with common instincts have fallen back in the same stage of civilisation, upon the same rude weapons suggested to them by the same flint material lying before their eyes."[163]

Although this comment does not explicitly assign any antiquity to Tasmanian Aborigines, his statements reveal a hint of anthropology's conceptual link between human primitivity and human antiquity. For Tenison-Woods, primitivity seemed to undermine and disprove human antiquity. For Bromby, primitivity was a clear indicator of it;

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[158] Presumably the Geological Society of London. See *Papers and Proceedings of the Royal Society of Tasmania* (1875-1876), 41
[159] *Papers and Proceedings of the Royal Society of Tasmania* (1875-1876), 41
[160] See Chapter One.
[161] John Edward Bromby delivered several high profile public lectures in Melbourne in the late 1860s, mounting passionate and widely revered arguments for the acceptance of a high human antiquity. See Chapter One.
[162] Charles Henry Bromby in *Papers and Proceedings of the Royal Society of Tasmania* (1875-1876), 44
[163] Charles Henry Bromby in *Papers and Proceedings of the Royal Society of Tasmania* (1875-1876), 44

potentially, in the case of Tasmanian Aborigines, who may have simply 'fallen back' into a stage of primitive culture, but undoubtedly in the case of 'those savages' who had lived 'some untold periods ago' in Europe. Although primitivity did not, in some circumstances, categorically prove antiquity, it could never preclude it.

Conclusion

This chapter covers a complex period in the history of human antiquity in Australia. Against Australia's intense public discussion—in which local intellectuals articulated a clear scientific understanding of the concept—the lack of professional scientific discussion seems to confirm the historical narrative that Australia was an isolated intellectual outpost, disconnected and disinterested in producing scholarship similar to that of their British colleagues. Yet just like the detailed survey in Chapter One, this chapter has painted a more complicated picture of the relationship between Australia's scientific superstructure and the concept of human antiquity. This chapter has argued that Australia's nascent professional community was connected and conscious in the 1860s and 1870s, but their desire to replicate British scientific epistemologies conflicted with the materialistic, pragmatic demands of a settler-colonial project. In this context, their eagerness to emulate their British colleagues led not to an engagement with human antiquity, but to a prioritisation of scientific subjects whose outputs related more directly to the material advancement of the colonies.

The consequence of these settler-colonial priorities was that Australia's professional scientists missed out on the logic of Aboriginal antiquity when it was at its most conspicuous within the epistemologies of British science. While Australian scientists were focused on minerals and meteorology, a confluence of racial science, human antiquity, and the evolutionary theory of natural selection transformed the discipline of ethnology into the new science of anthropology. Within the paradigms of this new science, there existed a conceptual link between human primitivity and human antiquity that allowed anthropologists to read the primitivity of Aboriginal Australians as a marker of their antiquity. Several British anthropologists used this link to argue for an extensive antiquity

for Aboriginal Australians in the 1860s and 1870s, and even placed them as among the oldest humans on Earth. These were not shocking or revolutionary claims: Aboriginal antiquity was not a concept that was separate from human antiquity, but rather, through the paradigms of anthropology, was a logical application of it in the Australian space.

This chapter has shown how and why the concept of human antiquity was missing from the professional outlets of Australia's scientific superstructure in the 1860s and 1870s. It has also revealed the significance of this absence by comparing it to the concept's clear application to Aboriginal Australians emerging in Britain. Australia's professional silence on human antiquity was an unfulfilled intellectual opportunity; but it was one that, had it been taken up, could have laid a drastically different foundation for generations of future professionals. When Australia's professional scientists began to replicate anthropology in Australia in the 1880s, they not only engaged with human antiquity but applied the concept to Australia through their own arguments for an extensive Aboriginal antiquity. The very scholars who represented Australia's first professional engagement with the concept of human antiquity, however, also set in motion a substantial paradigm shift that would, in the space of one academic generation, erase the logic of Aboriginal antiquity from its foundational science of anthropology. Chapter Three traces this dramatic removal, while Chapters Four, Five and Six explore its broader intellectual legacies. When historicised in this longer intellectual history, the choice Australian scientists made to overlook human antiquity in the 1860s and 1870s is a disastrous one.

Chapter Three

Shifting history, changing paradigms: Erasing Aboriginal antiquity from the logic of anthropology, 1880-1920

In 1880, emerging anthropologists Alfred William Howitt and Lorimer Fison published an epic study of the life and customs of two Australian Aboriginal tribes. Lauded for its extensive field data, *Kamilaroi and Kurnai* was the first cornerstone of the professional practice of anthropology in Australia. It was also Australia's first 'professional' scientific engagement with the concept of human antiquity. In one of the monograph's many sections, Howitt situated several Kurnai oral histories within a larger geological history of Australia, arguing they represented the 'recollection of actual occurrences' in the Jurassic period, some untold ages ago.[1] The legends had since been passed down, Howitt reasoned, from one generation to another, through 'periods of time during which even the physical features of the earth's surface have been less constant than the customs of the savages who roamed over it.'[2] Throughout their co-authored monograph, and in his own solo publications, Howitt consistently argued for a vast antiquity for Australia's Aboriginal peoples. His anthropology, informed by geology and a nineteenth century framework of developmental evolution, was one that explicitly assigned 'a vast antiquity' to Tasmanian Aborigines, and 'a very long period of at least prehistoric time' to the antiquity of mainland Aboriginal Australians.[3]

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[1] A. W. Howitt, "The Kurnai: Their Customs in Peace and War," in *Kamilaroi and Kurnai*: *group-marriage and relationship, and marriage by elopement drawn chiefly from the usage of the Australian Aborigines: also the Kurnai tribe, their customs in peace and war*, Lorimer Fison and A.W. Howitt, (Melbourne, Sydney, Adelaide, Brisbane: George Robertson, 1880), 274

[2] Howitt, "The Kurnai: Their Customs in Peace and War," 274

[3] See A. W. Howitt, "On the Origin of the Aborigines of Tasmania and Australia," *Report of the Australasian Association for the Advancement of Science* 7 (1898), 751; and A. W. Howitt, *The Native Tribes of South-East Australia*, (London: Macmillian and Co, 1904), 33

Howitt and Fison shaped the science of anthropology in Australia; so much so that the scholarship of the discipline's next most memorable duo, Walter Baldwin Spencer and Francis James Gillen, was dedicated to them.[4] Yet Spencer and Gillen's *The Native Tribes of Central Australia* (1899) shared none of Howitt and Fison's convictions on Aboriginal antiquity. Neither *Native Tribes* nor any of Spencer and Gillen's subsequent anthropological texts even addressed the topic of Aboriginal antiquity, origin, or development, and when confronted with oral histories that corresponded with Australia's ancient geology, dismissed these as 'a remarkable coincidence.'[5] In the space of one academic generation, the logic of Aboriginal antiquity had been erased from the paradigms of anthropology. Was this simply the result of different individual interpretations? Or a different reading of geological evidence? How could Australia's Aboriginal antiquity have gone from being located in the Jurassic to something that wasn't worth mentioning—all within the discipline that had so recently claimed intellectual ownership of the concept of human antiquity itself?

To understand this dramatic change, this chapter examines the scientists who consciously shaped the professional practice of anthropology in Australia and, through their scholarship, traces the discipline's formalisation from a 'colonial' pursuit in the 1880s to an institutionalised university discipline in the 1920s. The first section of this chapter will argue that in this 40-year period, the science of anthropology shifted its theoretical underpinnings from a framework of developmental evolution to one of structural functionalism. As we saw in Chapter Two, British anthropology had legitimised itself in the 1870s as a science uniquely capable of uncovering human origins and plotting sociocultural development. Evidence that began emerging from colonial scholars, however, unsettled the discipline's theories of homogenous human evolution. Australia's indigenous peoples continued to be recognised as the most primitive rung on the evolutionary ladder, but studies of their kinship structures and religious beliefs revealed intertribal differences that

[4] Walter Baldwin Spencer and Francis Gillen dedicated *The Native Tribes of Central Australia* (1899) to Howitt and Fison for laying 'the foundation of our knowledge of Australian Anthropology.' See front matter of *The Native Tribes of Central Australia,* (London: Macmillan, 1899).
[5] Spencer and Gillen, *The Native Tribes of Central Australia*, 388

did not fit neatly with overarching theories of humanity's teleological progress. After decades of debate on topics like marriage, kinship and totemism, anthropology shifted its methodological and theoretical foundations from a desire to understand human origins and development, to a paradigm that ignored theoretical questions of historical progress and instead captured portraits of present-day populations through observational fieldwork.

While the existence of such a shift is not in itself a novel argument, its effect on Aboriginal antiquity forms the most significant chapter in this dissertation's century-long historicisation of human antiquity. The chapter will argue that anthropology's paradigm shift from developmental evolution to structural functionalism necessitated an elimination of the once-foundational scientific logic of Aboriginal antiquity. The concept was first severed from its logically paired notion of human primitivity, and then removed from anthropology's disciplinary purview altogether. Sections two, three and four of this chapter trace the severance and eventual erasure of Aboriginal antiquity across three sets of texts that were central to the formalisation of Australian anthropology: those of A. W. Howitt and Lorimer Fison in the 1880s, Henry Ling Roth and E. B. Tylor in the 1890s, and Walter Baldwin Spencer and Francis Gillen in the early twentieth century. Through them, Aboriginal antiquity went from being implicit, to abstract, and then entirely absent from the paradigms of anthropology. As a result, anthropologists could position Aboriginal Australians as the most primitive but not necessarily the most ancient of the world's human races.

This chapter argues that the conceptual elimination of Aboriginal antiquity was not just a part of anthropology's disciplinary development in Australia but a crucial functioning aspect of it. Evolutionary paradigms were gradually unable to answer questions the discipline had set for itself, while evidence emerging from Australian anthropologists issued implicit and explicit challenges to armchair theorists in Europe. As a result, the discipline severed one of its key theoretical tenets and shifted its paradigms in order to survive as a formalised science. In one sense, this intellectual episode represents yet another element of Australia's scientific superstructure whose British cultural-institutional infrastructure had distinct outcomes within the socioeconomic support base of settler Australia. It is also an example of what historian Tim Murray calls processes of scientific

'normalization,' in which disturbing scientific data is defused through reinterpretation or reformulation.[6] Yet it is only by placing this paradigm shift within an in-depth intellectual history that the true significance and function of anthropology's elimination of human antiquity can be comprehended: as an episode of scientific normalisation endemic to Australian anthropology, crucial to its disciplinary survival, and with enduring effects on all future scientific interpretations of human antiquity in Australia.

From developmental evolution to structural functionalism

Scientific interest in the features and functions of human societies has been present in Australia since British invasion in 1788. As we saw in Chapter Two, however, 'anthropology' was not recognised as a distinct form of British scientific inquiry until the 1860s and 1870s, when practitioners fought for its legitimacy within debates sparked by the dual intellectual revelations of human antiquity and natural selection. Indeed, many historians argue that anthropology was not legitimised in Australia until a Chair of Anthropology was established at the University of Sydney in 1925, lending the discipline academic status as the 'expert' science on Aboriginal Australians.[7] Despite ongoing debate, historians describe three general stages in the discipline's international development: an early period of widespread ethnographic collection conducted by amateurs; followed by a more professional and theoretically grounded colonial period ruled by the metropolitan armchair anthropologist in Europe; eventually replaced by a formalised and institutionalised period in which anthropology became the domain of the trained field researcher.[8] Within this framework, the shift from the 'armchair' to the 'field' is the pivotal

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[6] Tim Murray, "Archaeology, ideology and the threat of the past: Sir Henry Rider Haggard and the acquisition of time," in his *From Antiquarian to Archaeologist: The History and Philology of Archaeology,* (Barnsley: Pen and Sword Books, 2014), 70-71; and "On 'normalizing' the Palaeolithic: an orthodoxy questioned," in his *From Antiquarian to Archaeologist: The History and Philology of Archaeology,* (Barnsley: Pen and Sword Books, 2014), 128

[7] Geoffrey Gray, *A Cautious Silence: The politics of Australian anthropology*, (Canberra: Aboriginal Studies Press, 2007); Anna Grimshaw, *The Ethnographer's Eye: Ways of Seeing in Modern Anthropology*, (Cambridge: Cambridge University Press, 2001), 1

[8] Anthropology's definition, scope and methodology continue to be hotly debated by practitioners, with the discipline viewed by some as an 'ill-defined, hopefully holistic, multivariate intellectual endeavour.' For a general discussion on contemporary debates see Don D. Fowler and Nancy J. Parezo, "Nomenclature Wars: Ethnologists and Anthropologists Seeking to Be Scientists, 1840-1910," *Journal of Anthropological Research*

moment most often lauded as the beginnings of 'real' anthropology; and certainly the type of anthropology institutionalised in Australian universities in the twentieth century.[9]

The shift is usually portrayed as autogenetic; stemming from metropolitan anthropologists who recognised the 'limitations of the armchair' and had their theory-based research surpassed by 'hands-on' fieldwork that was grounded in place.[10] Historians such as Helen Gardner, Robert Kenny, Samuel Furphy and Rebe Taylor, have critiqued this image of self-generated change and the 'centre-periphery' narratives that accentuate it.[11] They argue the move away from armchair anthropology arose less from internal self-reflection on the part of European scientists, and more as a result of external challenges issued by colonial fieldworkers whose scholarship disrupted anthropology's theoretical framework. Others, such as historian Efram Sera-Shriar, have argued the opposite, pleading for a critical engagement with anthropology's periodisation that marks no substantial break in the move from the armchair to the field.[12] Armchair anthropology, Sera-Shriar claims, was 'not a passive pursuit' that simply synthesised the research of others; nor were metropolitan practitioners detached from the activities of their informants collecting data in the field, colonial or otherwise.[13]

Regardless of whether it was purely self-generated, the disciplinary shift from the armchair to the field necessitated a broad methodological and theoretical change that underpinned the twentieth century practice of anthropology in Britain, the United States

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74:3 (2018): 388-411. For descriptions of the general phases in anthropology's international development see Geoffrey Gray, *A Cautious Silence: The politics of Australian anthropology*, (Canberra: Aboriginal Studies Press, 2007); Anna Grimshaw, *The Ethnographer's Eye: Ways of Seeing in Modern Anthropology*, (Cambridge: Cambridge University Press, 2001).

[9] Helen Gardner and Robert Kenny, "Before the Field: Colonial Anthropology Reassessed," *Oceania* 86:3 (2016), 219. See also L. R. Hiatt, *Arguments about Aborigines: Australia and the Evolution of Social Anthropology*, (Cambridge: Cambridge University Press, 1996).

[10] Gardner and Kenny, "Before the Field: Colonial Anthropology Reassessed," 219

[11] See in particular the special issue of *Oceania* 86:3 (2016), to which Helen Gardner, Robert Kenny, Samuel Furphy and Rebe Taylor contributed.

[12] See Efram Sera-Shriar, "Ethnology in the Metropole: Robert Knox, Robert Gordon Latham and Local Sites of Observational Training," *Studies in History and Philosophy of Biological and Biomedical Sciences* 42 (2011): 486–496; and Efram Sera-Shriar, *The Making of British Anthropology, 1813–1871,* (London: Pickering & Chatto, 2013), 4.

[13] Sera-Shriar describes nineteenth century metropolitan anthropologists as exerting control over outsourced research while remaining simultaneously cognisant of the limitations of their methods. See Efram Sera-Shriar, "What is armchair anthropology? Observational practices in 19th-century British human Sciences," *History of the Human Sciences* 27:2 (2014), 27.

and Australia: transitioning a scientific practice rooted in theories of homogenous developmental evolution to one rooted in structural-functionalism, whose analysis focused on the mechanisms of institutions and structures within specific human societies. What began in the 1870s as a science laden with theory, intent on discovering human origins and plotting their racial development, was gradually transformed into a discipline that ignored dense theory and questions of historical progress, to instead capture complete portraits of present-day populations through observational fieldwork. This change in anthropology's methodological and theoretical foundation is widely recognised by historians and anthropologists alike, and an extensive amount of scholarship has been dedicated to demonstrating its lengthy and complex transition across Europe, the United States, and elsewhere.[14]

Of significance to this chapter is how this paradigm shift affected the discipline's understanding and use of human antiquity. The evolutionary anthropology that emerged in Britain after the disciplinary debates of the 1860s and 1870s was one that understood racial differences as temporal moments in human history. This framework constructed a conceptual link between human primitivity and human antiquity that foregrounded Aboriginal Australians as among the most primitive and thus the most ancient human populations on Earth. Human antiquity and the distinct antiquity of Aboriginal Australians were therefore logical components of late nineteenth century evolutionary anthropology. During the shift to the structural functionalist anthropology of the twentieth century, these evolutionary narratives came to be seen by practitioners as purely speculative accounts born from fragmentary evidence and placed within excessively theoretical frameworks. As observational fieldwork became, in the twentieth century, anthropology's primary empirical method, the entire notion of tracing human development across time was abandoned in favour of focusing on human societies as they existed in an ethnographic present. Thus, by eliminating the historical aspect of their inquiry, functionalist

[14] See George W. Stocking Jnr., *After Tylor: British Social Anthropology 1888-1951,* (Madison: University of Wisconsin Press, 1995); Jack Goody, *The Expansive Moment: The Rise of Social Anthropology in Britain and Africa 1918-1970,* (Cambridge: Cambridge University Press, 1996); Henrika Kuklick, *The Savage Within: The Social History of British Anthropology, 1885-1945,* (Cambridge: Cambridge University Press, 1991).

anthropologists also eliminated the conceptual link between primitivity and antiquity that had, for a few crucial decades, upheld the indisputable logic of Aboriginal antiquity.

Although functionalist anthropology was critical of the conjectural historical component of evolutionary anthropology, it was not so critical of the foundational idea that human societies followed a developmental teleology from 'primitive' to 'civilised'. Historian Russell McGregor argues that functionalist anthropologists were heavily indebted to these developmental ideas, and it was only 'too easy' for them to adopt the same labels and slip into the same conceptual world as their evolutionary predecessors.[15] McGregor highlights in particular how Alfred Radcliffe-Brown and Adolphus Peter Elkin, two of Australia's most influential twentieth century functionalist anthropologists, maintained the evolutionary concept of primitivity for Australian Aboriginal societies and cultures.[16] The result, therefore, was a functionalist anthropological framework that espoused Aboriginal primitivity while simultaneously ignoring any suggestion of Aboriginal antiquity.

The emergence of a functionalist anthropology that would see the eventual erasure of human antiquity from its paradigms has staggering implications in the context of settler-colonial Australia. Historian Patrick Wolfe, a pioneer in the field of settler colonial theory in Australia, argues the single overwhelming feature of anthropology's paradigm shift is that it coincided with the consolidation of bourgeoisie power, at the turn of the century, in the completion of the initial expansionary phase of Britain's colonising project.[17] In other words, the decades in which British anthropology transitioned from armchair to field, from evolution to synchrony, and from universalism to particularity, were the same decades that saw the end of Britain's expanding imperial frontier, after which, colonialism began to turn inwards and foster local autonomy. While the argument that Australian anthropology played an influential role in the consolidation of government power in the early decades of the twentieth century is not unique, Wolfe's delineation of the complex entanglements of functionalist anthropology, British imperialism, and changes in broader western science is.

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[15] Russell McGregor, "The Concept of Primitivity in the Early Anthropological Writings of A. P. Elkin," *Aboriginal History* 17:2 (1993): 95-104.
[16] McGregor, "The Concept of Primitivity in the Early Anthropological Writings of A. P. Elkin," 95-104.
[17] Patrick Wolfe, *Settler Colonialism and the Transformation of Anthropology: The Politics and Poetics of an Ethnographic Event,* (London: Cassell, 1999), 47

Building upon the analysis of historian George W. Stocking Jnr., Wolfe pushes the well-known description of anthropology's 'synchronic functionalism' to one of 'synchronic relativism."[18] He uses the term relativism specifically to stress anthropology's paradigm shift away from universal evolutionary narratives that could order human history, to the new framework that isolated and relativised indigenous societies both spatially and temporally; that is, it portrayed them as a geographically distinct, ethnographic 'Other' that could only be authentically studied in the present.[19] As a result, synchronic relativism created a scientific discourse that relegated Aboriginal Australians to abstract societies that existed both within, yet simultaneously outside of the structure of settler Australia.[20] In an era when the very existence of Aboriginal people issued a challenge to the settler-colonial hegemony, functionalist anthropology reproduced representations of Aboriginal Australians as conveniently existing somewhere and nowhere; a timeless, self-generating subaltern 'Other' that could neither be affected by, nor dependent on, the society of their invaders. It was this construction of Aboriginal Australians as impervious to dispossession that Wolfe argues was the most powerful and useful aspect of anthropology's new paradigm in the turn-of-the-century consolidation of colonial power: 'In settler-colonial formations, it was not so much that structural-functionalism organised colonial power as that it hid it.'[21]

This process must be reframed as a severance and gradual erasure of the specific scientific concept of human antiquity. Although Wolfe stresses the synchronic aspect of functionalist anthropology was at the heart of the paradigm's isolation of Aboriginal

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[18] Wolfe outlines his preference for the term 'relativism' above Stocking's 'functionalism' as its ability to encompass the three influential national anthropological variants of French structuralism, British structural-functionalism and American cultural-relativism. See Wolfe, *Settler Colonialism and the Transformation of Anthropology: The Politics and Poetics of an Ethnographic Event,* 44, 47. For Stocking's definitive take on structural functionalism, see George W. Stocking, Jr., *Colonial situations: essays on the contextualisation of ethnographic knowledge,* (Madison: University of Wisconsin Press, 1991).

[19] Other scholars have argued that time and space were concepts utilised by anthropologists to isolate their ethnographic objects as a social and cultural 'Other.' See for example, Johannes Fabian, *Time and the other: how anthropology makes its object*, (New York: Columbia University Press, 1983).

[20] Wolfe, *Settler Colonialism and the Transformation of Anthropology: The Politics and Poetics of an Ethnographic Event,* 52

[21] Wolfe, *Settler Colonialism and the Transformation of Anthropology: The Politics and Poetics of an Ethnographic Event,* 52

Australians from concepts of time and space, the core object of his scholarship is to situate anthropology's paradigm shift within settler Australia's turn-of-the-century bourgeoisie class formation.[22] This chapter—indeed this dissertation—does not contest that anthropology's construction of synchronic Aboriginality played into the structures of settler-colonial power in the twentieth century. The goal of this chapter, however, is to historicise Wolfe's 'synchronic relativism' as it ought to be—a reformulation of human antiquity—in order to situate anthropology's paradigm shift within a broader intellectual history of the scientific concept of human ancientness.

Doing so has two unique points of significance. First, recognising that anthropology's paradigm shift severed the concept of human antiquity from human primitivity highlights the intensity of this elimination within the discipline that had so recently used its logic to *prove* an extensive Aboriginal antiquity by their exclusive primitivity. Second, an intellectual history of this paradigm shift allows us to connect its conceptualisation of human antiquity both to the earlier British epistemologies from whence it came, and, more importantly, to later interpretations of human antiquity in Australia. This paradigm shift, and its construction of Aboriginal primitivity severed from antiquity, is the lynchpin of current historical narratives that claim there was no 'scientific' understanding of Aboriginal antiquity in Australia until the 1960s: Aboriginal Australians might have been primitive, they argue, but they were not necessarily seen as ancient. While not entirely incorrect, these narratives ignore the instances in which this much more mutable concept of Aboriginal antiquity was used by scientists across disciplines to claim a deep *human* past for Australia while simultaneously denying a deep *Aboriginal* past.

Such intellectual legacies will be explored in Chapters Four, Five and Six of this dissertation. The rest of this chapter will trace the gradual severance and erasure of Aboriginal antiquity across the three sets of texts that were foundational for functionalist anthropology in Australia: beginning with Howitt and Fison in the 1880s; continuing through the works of Edward B. Tylor and Henry Ling Roth in the 1890s; until the early

[22] Wolfe, *Settler Colonialism and the Transformation of Anthropology: The Politics and Poetics of an Ethnographic Event,* 52

twentieth century works of Walter Baldwin Spencer and Francis Gillen that epitomised anthropology's institutionalised and antiquity-free paradigm. Through a connected intellectual history, Australian anthropology becomes a discipline that not only constructed a discourse of Aboriginal timelessness to perpetuate settler-colonial invasion, but one that transformed one of its core theoretical tenets, at the exact moment it was being highlighted by its inaugural professionals, in order to do so.

Implicit antiquity and the beginnings of change

Alfred William Howitt (1830-1908) and Lorimer Fison (1832-1907) are two names that have become synonymous with Australian anthropology. After twenty years in which Australia's professional scientists were largely absent from the debates and digestion of human antiquity, the scholarship of Howitt and Fison represented Australia's first professional engagement with the concept. Aboriginal antiquity featured as a logical component of their evolutionary paradigm in the 1880s, just as did for their British peers in the 1860s and 1870s. Yet while they were the first to replicate the professional science of anthropology in Australia, Howitt and Fison's field-research prompted methodological changes that would eventually transform the discipline and shift its focus away from Aboriginal antiquity.

Both born in England, each was initially drawn to the Australian colonies by the potential of the Victorian goldfields.[23] Although they met briefly on a drover route in the 1850s, it was not until the 1870s that their famous anthropological collaboration began. Until then, they each developed their skills and status in the emergent science of anthropology. After becoming an ordained Wesleyan, Fison left Australia in 1863 for Fiji, where he served several stints as a missionary.[24] His position allowed close contact with the

[23] Howitt arrived with his father and brother in 1854, and Fison sometime in the late 1850s. See W. E. H. Stanner "Howitt, Alfred William (1830–1908)," *Australian Dictionary of Biography Volume 4* (Melbourne: Melbourne University Press, 1972): 432-435; and "Fison, Lorimer (1832–1907)," *Australian Dictionary of Biography Volume 4* (Melbourne: Melbourne University Press, 1972): 175-176. Stanner argues that there is "slender and less dependable evidence" available on Lorimer Fison's movements in Australia after his expulsion from Caius College, Cambridge, in 1855/1856.

[24] The first from 1863 to 1871, and later from 1875 to 1884, when he served as principal of the Navuloa Training Institution.

native Fijians, and amplified his passion for ethnology just as the discipline was being reshaped within the broader debates of British science. In 1869, Fison assembled his research in response to American ethnologist Lewis Henry Morgan (1818-1881), who had sent out a call for information on the kinship systems of 'primitive' peoples. Fison's account of both Fijian and Tongan systems of kinship were later included in Morgan's seminal monograph S*ystems of Consanguinity and Affinity of the Human Family* (1871). Fison returned to Australia in 1871, the year that marked the end of hostilities between the Ethnological Society of London and the Anthropological Society of London, and anthropology's formalisation as a distinct branch of British science. Upon his return, Fison turned his developing anthropological interest to Aboriginal Australians, and in June the following year, published his own newspaper call-out seeking anyone with information on 'the Victorian aborigines.'[25] He received a solitary reply from Alfred William Howitt.

By the time he answered Fison's request, A. W. Howitt had already spent several years cultivating his own interest in ethnology, geology and human evolution. Howitt left the Victorian goldfields in 1854 to earn a living as a drover. His skills saw him employed as the leader of several exploratory expeditions, funded by either the colonial government or private syndicates, to examine the pastoral and gold mining potential of land beyond the boundaries of the colonies.[26] Howitt's most famous expedition, organised by the Royal Society of Victoria, was in 1861, when he led two parties in search of missing explorers Robert O'Hara Burke, William Wills, John King and Charley Gray. Howitt rescued King, the only survivor, in the first journey, before returning later to recover the remains of Burke and Wills.[27] In recognition of his services in the rescue, Howitt was appointed police magistrate and warden of the Omeo goldfields in 1863; a post that marked the beginning of his life-long career as a public official. Although Howitt would become more closely associated with the legacy of Australian anthropology than his partner, the beginnings of his anthropological career owed much to his relationship with Fison. Howitt had been

[25] L. Fison, "Correspondence: Laws of consanguinity and affinity among the Australian Aborigines," *The Australasian*, June 15, 1872, 6-7
[26] Stanner, "Howitt, Alfred William (1830–1908)."
[27] Stanner, "Howitt, Alfred William (1830–1908)."

diligently recording details of the Aboriginal tribes of south-east Victoria since about 1864, but his collaboration with Fison, and subsequent introduction to the ideas of Morgan, allowed the pair to amass a wealth of data throughout the 1870s.

Their landmark contribution to Australian anthropology came in 1880, with the co-authored monograph *Kamilaroi and Kurnai*. Compiled from exhaustive fieldwork, it offered in-depth explanations of the kinship, marriage systems, relationship structures and class divisions of the Kamilaroi peoples of northern New South Wales, and the Kurnai people of Gippsland, Victoria. At the time of its publication, *Kamilaroi and Kurnai* was the first comprehensive analysis of Australian Aboriginal social structures, and was recognised for its substantial contribution to anthropology in both content and method. The sheer volume of data, and the intimate picture of Aboriginal life constructed from it, was enviable to any European anthropologist confined by inclination or circumstance to their armchair. Indeed, historians Helen Gardner and Patrick McConvell argue the book issued an explicit critique of armchair anthropology that was felt by the discipline's leading experts in Britain.[28] For example, Howitt and Fison were particularly critical of the scholarship of English archaeological heavyweight Sir John Lubbock and Scottish anthropologist John Ferguson McLennan for their 'mythic depictions' of the origins of primitive psychology, marriage and kinship.[29]

Historians place *Kamilaroi and Kurnai* at the forefront of the late nineteenth and early twentieth century shift from 'armchair' to 'field' anthropology.[30] It was also at the forefront of Australian anthropology's changing relationship with the concept of human antiquity. *Kamilaroi and Kurnai* demonstrated the power of the methodology that would

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[28] Helen Gardner and Patrick McConvell, *Southern Anthropology—a History of Fison and Howitt's Kamilaroi and Kurnai*, (New York: Palgrave Macmillian, 2015), 13

[29] Gardner and McConvell, 220 For more on these critiques and their reception in Europe, see "Chapter 14: *Kamilaroi and Kurnai*: The Content and the Form," *Southern Anthropology—a History of Fison and Howitt's Kamilaroi and Kurnai*, (New York: Palgrave Macmillian, 2015), 212-228; and "Chapter 16: The British Response to *Kamilaroi and Kurnai*," *Southern Anthropology—a History of Fison and Howitt's Kamilaroi and Kurnai*, (New York: Palgrave Macmillian, 2015), 253-269.

[30] In his 1968 Boyer Lecture, renowned Australian anthropologist W. E. H. Stanner argued that the 1880 publication of *Kamilaroi and Kurnai* marked a shift in the intellectual interest in Indigenous Australians and the quality of ethnological investigations that concerned them. "The Boyer Lectures: After the Dreaming (1968)," in W. E. H. Stanner and Robert Manne, *The Dreaming and Other Essays*, (Melbourne: Black Inc., 2009): 172-213.

come to define functionalist anthropology in the twentieth century, but it maintained two hallmarks of its nineteenth century theoretical framework: the conviction that anthropology had the unique capability to uncover the origin and development of human civilisation; and the grounding of this investigation in an evolutionary paradigm that took for granted the vast antiquity of the human species. As this section will argue, in their monograph and personal correspondence—which formed the intellectual background to *Kamilaroi and Kurnai*—both Howitt and Fison identified this human antiquity as distinctly Aboriginal, proven by evolutionary frameworks and confirmed by Australia's geology.

Like other nineteenth century scientists working in the colonies, Howitt and Fison maintained an active correspondence with each other and various international scholars who kept them connected to scientific debates and discussions abroad.[31] Howitt was heavily influenced by the work of English biologist and anthropologist Herbert Spencer, whose take on species evolution, outlined in his *The Principles of Biology* (1864), was one of gradual environmental change coupled with constant competition between organisms.[32] Howitt applied Spencer's evolutionism to race relations in Australia, where he saw the primitive 'Australian savage' struggling against the environmental and cultural changes introduced by the British.[33] Having been shaped by colonial Australia's booming mineralogical interest in the 1850s, Howitt also had an understanding and appreciation for geology, which he admitted to Fison had likely eased his acceptance of universal natural laws and the glacial pace of evolutionary change. In one letter, for example, Howitt argued Australian

[31] In the years leading up to the publication of *Kamilaroi and Kurnai*, Howitt and Fison exchanged the latest scientific texts, and discussed their theories of human evolution and development. For a detailed exploration of their correspondence and discussion, see "Chapter 12: Time, Human Difference and Evolution in Oceania," in Gardner and McConvell, *Southern Anthropology—a History of Fison and Howitt's Kamilaroi and Kurnai*, 177-192. They also corresponded with British scientists like Charles Darwin, John Lubbock, E. B. Tylor, John McLennan, James Frazer, Andrew Lang, and of course the American anthropologist Lewis Henry Morgan. See Ian Keen, "The Anthropologist as Geologist: Howitt in Colonial Gippsland," *The Australian Journal of Anthropology* 11:1 (2000): 78-97.
[32] For more on Herbert Spencer, see Herbert Spencer, *The Principles of Biology*, (London: Williams and Norgate, 1864); Derek Freeman, "The Evolutionary Theories of Charles Darwin and Herbert Spencer," *Current Anthropology* 15:3 (1974): 211-237; Alberto Mingardi, *Herbert Spencer*, (London: Continuum, 2011).
[33] Spencer would go on to be the first to use the phrase 'survival of the fittest' in a later edition of *The Principles of Biology*. Gardner and McConvell, 186

Aboriginal kinship systems could have progressed to the next stage in civilised development had they been left for another 10,000 years: 'What is this but evolution!'[34]

While Howitt had a firm belief in contemporary evolutionary theories, and thus in the logic of Aboriginal antiquity within them, Fison was less convinced. He maintained a correspondence with Lewis Henry Morgan, and again contributed data to the American's scholarship, but Fison was a staunch empiricist whose own experiences in Fiji had taught him to distrust overly prescriptive theories about 'savage' peoples: 'I believe in Evolution. Only I don't believe in the Evolutionists,' he wrote to Howitt in 1874.[35] This stance was not helped by the fact that Morgan's *Ancient Society* (1877) misrepresented the data on Australian Aborigines Fison had sent, even after he warned Morgan of the material's scarce and 'bewilderingly contradictory' nature.[36] Despite his misgivings, however, Fison did believe in some form of progressive evolution that placed 'savage' peoples at the lower end of development, and therefore at an earlier temporal stage. In an 1876 letter to Howitt, Fison reasoned the indigenous peoples of the South Pacific region 'had most assuredly made a certain advance, small though it was, and long as they took about it—10,000 or 100,000 or two times 100,000 years if you can prove them.'[37]

Howitt and Fison both believed in evolutionary frameworks that incorporated a vast human antiquity, and while they spoke explicitly about these ideas in their correspondence, their application to Aboriginal Australians was more subtly expressed in *Kamilaroi and Kurnai*. Tempered perhaps by Fison's mild distrust of theory, the book contained scattered statements and phrases that implied a generalised, vast antiquity for Aboriginal Australians. Words such as 'archaic' and 'ancient' were frequently used by both authors to describe Aboriginal class divisions, marriage systems and kinship structures. For example, Howitt referenced the work of Scottish historian Henry S. Maine on 'archaic society in the

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[34] Letter from A. W. Howitt to Lorimer Fison, July 4, 1876, TIP 3/33/13/12, The Tippett Collection, St Marks National Memorial Library, Canberra

[35] Letter from Lorimer Fison to A. W. Howitt, July 6, 1874, Letterbook number 4, Reel 3, PMB 1039, Pacific Manuscripts Bureau, Australian National University, Canberra.

[36] Letter from Lorimer Fison to Henry Lewis Morgan, December 16, 1873, Letterbook number 4, Reel 3, PMB 1039, Pacific Manuscripts Bureau, Australian National University, Canberra.

[37] Letter from Lorimer Fison to A. W. Howitt, May 20, 1876, Letterbook number 5, Reel 3, PMB 1039, Pacific Manuscripts Bureau, Australian National University, Canberra

dawn of history,' claiming it also held truths 'as to the earlier form of society which has come down to us among the Australian savages.'[38] Lewis Henry Morgan, to whom the volume was dedicated and had written its preface, also implied a vast antiquity for Aboriginal Australians when he framed the work as capable of unravelling the mysteries of human origins and development. The volume was so comprehensive, Morgan remarked, all he could do by way of introduction was draw attention to the 'value of the materials' and 'their bearing upon the early history of mankind.'[39] For Morgan, Fison's description of the social structures of the Kamilaroi represented some of the oldest yet witnessed in Australian Aboriginal tribes, existing from 'a very early period' in human history.[40]

Fison was careful in his articulation of evolution, and the link between primitivity and antiquity. At the end of his first section on Kamilaroi marriage and descent, he expressed disdain for scholars who maintained that 'all savages were once civilised people.'[41] The Bible, Fison argued, certainly did not describe man as being created in a state of civilisation, but rather in one of helpless innocence, in which certain tribes 'must have been driven away from the line of progress at its very beginning.'[42] Even if one did not take Genesis literally, Fison believed the 'plain inference' drawn from history either sacred or profane, was that the human species had begun at 'a very low point in the social scale.'[43] Along this linear path of development, human evolution could only take a number of forms:

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[38] A. W. Howitt, "Summary and Conclusions," in *Kamilaroi and Kurnai*: *group-marriage and relationship, and marriage by elopement drawn chiefly from the usage of the Australian Aborigines: also the Kurnai tribe, their customs in peace and war*, Lorimer Fison and A.W. Howitt, (Melbourne, Sydney, Adelaide, Brisbane: George Robertson, 1880), 333

[39] Lewis Henry Morgan, "Preface," in *Kamilaroi and Kurnai*: *group-marriage and relationship, and marriage by elopement drawn chiefly from the usage of the Australian Aborigines: also the Kurnai tribe, their customs in peace and war*, Lorimer Fison and A.W. Howitt, (Melbourne, Sydney, Adelaide, Brisbane: George Robertson, 1880), 1

[40] Morgan, "Preface," 5-6

[41] Lorimer Fison, "Kamilaroi Marriage Descent, and Relationship: An Attempt to Trace the Origin and Development of the Turanian System of Kinship, as Shown in the Class Divisions of the Australian Aborigines, with Their Laws of Marriage and Descent," in *Kamilaroi and Kurnai*: *group-marriage and relationship, and marriage by elopement drawn chiefly from the usage of the Australian Aborigines: also the Kurnai tribe, their customs in peace and war*, Lorimer Fison and A.W. Howitt, (Melbourne, Sydney, Adelaide, Brisbane: George Robertson, 1880), 161-162

[42] Fison, "Kamilaroi Marriage Descent, and Relationship," 162-163

[43] Fison, "Kamilaroi Marriage Descent, and Relationship," 163

> ...certain races have made a continuous advance...others, after making considerable progress, came to a halt and remained stationary; while others again, who, at the very beginning, fell out, or were driven out, from the line of progress, are found in the present day at a point lower than that from which the start was made; degraded, therefore, to that extent, but certainly not degraded from a civilization to which they never attained.[44]

It is unclear in which of the latter two groups Fison thought the Kamilaroi belonged: the marginally civilised descendants of 'those savages of the olden times,' or remnants of a people diverted and delayed at the outset of creation.[45] It was clear, however, that he had no intention of including the Kamilaroi in the same stage of civilisation as European races, nor in locating their potential diversion from 'progress' at a particular moment in time. While believing in a gradual evolutionary narrative with an implicit antiquity for primitive peoples, Fison remained adamant that researchers should 'count our acquisitions to knowledge by the facts we add to our store, and not by theories which overleap the facts.'[46] His evolutionary musings therefore remained exactly that, with antiquity a proven yet generalised concept on which he offered no further comment.

In his chapters, Howitt expressed a similar disapproval of the degradation theory, but he made much more direct references to, and arguments for, Aboriginal antiquity. Howitt described the degradation theory as one that positioned humanity as initially consisting of individuals 'independent of each other,' who then 'coalesced as a society under a chief or head.'[47] To argue against this, Howitt used his research on Aboriginal marriage systems, which he believed had progressed from an older practice of communal marriage, to a more modern practice of individual marriage: tribes like the Kamilaroi and Dieri practiced communal marriage; the Turra tribe practiced individual marriage with an occasional revival of older communal rights; while among the Kurnai, individual marriage

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[44] Fison, "Kamilaroi Marriage Descent, and Relationship," 163
[45] Fison, "Kamilaroi Marriage Descent, and Relationship," 162
[46] Fison, "Kamilaroi Marriage Descent, and Relationship," 163-164
[47] A. W. Howitt, " Summary and conclusions," *Kamilaroi and Kurnai*: *group-marriage and relationship, and marriage by elopement drawn chiefly from the usage of the Australian Aborigines: also the Kurnai tribe, their customs in peace and war*, Lorimer Fison and A.W. Howitt, (Melbourne, Sydney, Adelaide, Brisbane: George Robertson, 1880), 337

was firmly established with traces of group marriage virtually indistinguishable.[48] For Howitt, this evinced a clear course of social development for Aboriginal Australians. Far from being degenerate descendants of former civilised races, Howitt instead believed that within the 'archaic conditions' of Aboriginal marriage systems one could actually witness 'the progenitors of the civilized races.'[49]

Similarly to Fison, Howitt noted it was 'not possible to surmise' exactly how much time had passed to allow these Aboriginal societies to 'slowly progress from that point at which their primitive social history terminates…to an analogous position to that in which our Aryan ancestors first become visible to us in the dim and distant past.'[50] In the 1880s, scientists were still reliant on a timescale of broad geological divisions that offered no absolute determination of age. The overall temporal depth of geological processes, however, was broadly understood; especially by Howitt, who was extremely well versed in geology. Throughout the 1860s and 1870s, Howitt consumed British geological scholarship and even conducted his own geological surveys of the Bairnsdale region of Victoria.[51] Informed by Lyellian geology and a Spencer-inspired evolutionism, Howitt used Aboriginal family and marriage structures as empirical markers of Aboriginal antiquity.

Howitt also used his knowledge of geology to position Aboriginal oral histories as empirical markers of Aboriginal antiquity. In his detailed chapter *The Kurnai: Their Customs in Peace and War,* Howitt recorded two Kurnai oral histories: one relating to the creation of a present-day sea to the south of Gippsland, which had 'long ago' been land that the Kurnai lived on; and another in which the 'fathers of the Kurnai' were spearing sharks 'where the Mitchell river now flows at Bairnsdale.'[52] Over five pages, Howitt situated these stories in a detailed geological history of the region, in which the land surface of South-Eastern Australia had been continuously unbroken 'as far back, at least, as the period of the

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[48] Howitt, " Summary and conclusions," 342
[49] Howitt, " Summary and conclusions," 362
[50] Howitt, " Summary and conclusions," 363
[51] See Ian Keen, "The Anthropologist as Geologist: Howitt in Colonial Gippsland," *The Australian Journal of Anthropology* 11:1 (2000): 78-97.
[52] A. W. Howitt, "The Kurnai: Their Customs in Peace and War," *Kamilaroi and Kurnai*: *group-marriage and relationship, and marriage by elopement drawn chiefly from the usage of the Australian Aborigines: also the Kurnai tribe, their customs in peace and war*, Lorimer Fison and A.W. Howitt, (Melbourne, Sydney, Adelaide, Brisbane: George Robertson, 1880), 269-270

Oolitic carbonaceous formations of Victoria.'[53] Although not a recognised period on the geologic timescale, the adjective 'oolitic' or 'oolithic'—derived from the sedimentary limestone 'oolite'—was often used in nineteenth century geological texts as a synonym for the Jurassic period, widely recognised as the era in which the coal deposits of continental Europe were formed.[54] Howitt claimed there was nothing in the geological history of Victoria 'which would render the existence of man in it less probable than when it was first discovered by the early navigators.'[55] He reiterated his opinion that it could not be determined 'through how much of geologic time the progenitors of the Australian savage have inhabited it,' but stated that if the collected views of geologists were 'near the truth,' then the separation of Tasmania from mainland Australia 'may have occurred within the time during which the present aborigines have inhabited this continent.'[56] In the sentence that followed, Howitt made a direct correlation between the Kurnai legends and the geologic time scale:

> I suspect that the two Kurnai legends of history refer to the time following the period when the Newer Pliocene beds of East Gippsland were formed. To the same period may, perhaps, be referred also other tales told by the Kurnai of a great deluge which, they allege, once happened in South Gippsland. It is, therefore, possible that these legends are the recollection of actual occurrences handed down from one generation of the Kurnai to another, through periods of time during which even the physical features of the earth's surface have been less constant than the customs of the savages who roamed over it.[57]

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[53] Howitt, "The Kurnai: Their Customs in Peace and War," 273

[54] Two prominent examples of revered nineteenth scientists who used the term 'oolitic' synonymously with Jurassic, and in particular relation to European coal beds, are the Woodwardian Professor of Geology at Cambridge, Adam Sedgwick, and palaeontologist and Director of the National Museum of Victoria Frederick McCoy. In correspondence with William Branwhite Clarke, Australia's pioneer geologist, Sedgwick described both his and McCoy's opinions that a selection of fossils found by Clarke were 'oolitic,' and placed the coalfields of New South Wales in the same geological division as those of Europe, that is, 'the age of the Oolites.' Letter from Adam Sedgwick to William Branwhite Clarke, November 29, 1847. See also the tables of fossilised strata as outlined by Sir Charles Lyell, in both his *Principles of Geology: Eleventh Edition,* (London: John Murray, 1872) 135 and his *Elements of Geology: Sixth Edition*, (New York: D. Appleton and Co., 1866), 101. Lyell incorporated different types of oolite limestone into his Jurassic division in all earlier editions of these works.

[55] Howitt, "The Kurnai: Their Customs in Peace and War," 274

[56] Howitt, "The Kurnai: Their Customs in Peace and War," 274

[57] Howitt, "The Kurnai: Their Customs in Peace and War," 274

In one paragraph, Howitt suggested two things: that the present day Kurnai peoples had been living in Victoria long enough to witness the separation of Tasmania from the mainland; and that the ancestors of the Kurnai could have been living on the Australian continent at the end of the Pliocene period. When situated within his claim that South-Eastern Australia had been continuously unbroken 'as far back, at least, as the period of the Oolitic carbonaceous formations,' Howitt suggested that the separation of Tasmania from Victoria, witnessed by the contemporary Kurnai tribe, may have occurred before or during the Oolitic/Jurassic period, whose antiquity was recognised as contemporaneous with European coalbeds. Even if this was merely a suggestion, Howitt's description of the 'Newer Pliocene beds of East Gippsland' left little room for interpretation: using widely renowned geological nomenclature, Howitt assigned an antiquity to the Kurnai that went well beyond the geologically 'recent' period.

Howitt made even more explicit arguments for Aboriginal antiquity in his later, solo publications. As President of the Ethnology and Anthropology Section of the Australasian Association for the Advancement of Science (AAAS), founded in 1888 as Australia's imitation of the famed British Association, Howitt delivered a paper that directly addressed questions of Aboriginal origin. After summarising the arguments that had been made to-date by other anthropologists, including Henry Ling Roth and Edward B. Tylor, Howitt stated he was 'much impressed by the immense periods of time' that seemed 'essential as one of the elements' in solving the 'problem' of human origin in Australia.[58] Howitt believed Aboriginal Australians had arrived on the continent via a 'complete, or almost complete' north-western land connection with the Indo-Asiatic region.[59] Tracing this migration back through time, he argued, would take the anthropologist to a 'distant prehistoric, if not in Pleistocene or older time.'[60] Howitt repeated this same argument verbatim in his final anthropological monograph, *The Natives Tribes of South-East Australia* (1904). Published

[58] A. W. Howitt, "On the Origin of the Aborigines of Tasmania and Australia," *Report of the Australasian Association for the Advancement of Science* 7 (1898), 745-746
[59] Howitt, "On the Origin of the Aborigines of Tasmania and Australia," 747
[60] Howitt, "On the Origin of the Aborigines of Tasmania and Australia," 747

just four years before his death, *The Native Tribes* was an accumulation of over forty years of Howitt's research on Aboriginal Australians. Its first chapter bore the same title as his AAAS paper and outlined the same argument:

> I have before said, and desire again to repeat, that the conclusions to which I have been led as to the origin of the Tasmanians and Australians, necessarily demand a vast antiquity on the Australian continent for the former and even a very long period of at least prehistoric time for the latter.[61]

Perhaps sensing the beginnings of the disciplinary change that was to come, Howitt acknowledged these views would be 'accepted or rejected by competent authorities according as they stand the test of criticism, of time, and of the accumulation of further knowledge.' And yet, while he believed his conclusions would undoubtedly be modified by 'new facts,' he remained firm and confident in his belief that 'the antiquity of occupation which I have postulated for the aborigines of both Australia and Tasmania in this continent will not be lessened.'[62]

Apart from, perhaps, James Bonwick before them, Howitt and Fison were Australia's first professional scientists to engage in-depth with the antiquity of Aboriginal Australians. While both men received university educations in London,[63] their status as professionals in Australian anthropology owed much to the years they spent in proximity with Aboriginal people. The sheer volume of data they had collected was authoritatively communicated to a scientific community both at home and abroad. Indeed, Charles Darwin was one of the first British readers of *Kamilaroi and Kurnai*—having received a complimentary copy from Howitt himself—and he declared the book to be 'so important' he sent it on to his friend, John Lubbock, and his correspondent, anthropologist John McLennan.[64] Howitt and

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[61] Howitt, "On the Origin of the Aborigines of Tasmania and Australia," 751, and A. W. Howitt, *The Native Tribes of South-East Australia*, (London: Macmillian and Co, 1904), 33

[62] Howitt, "On the Origin of the Aborigines of Tasmania and Australia," 755, and Howitt, *The Native Tribes of South-East Australia*, 33

[63] Howitt in England, Heidelberg and University College School, London; Fison in Sheffield, and then Caius College, Cambridge.

[64] See Helen Gardner and Patrick McConvell, "Introduction: The Publication of *Kamilaroi and Kurnai*," in *Southern Anthropology—a History of Fison and Howitt's Kamilaroi and Kurnai. Palgrave Studies in Pacific History*, (London: Palgrave Macmillan, 2015), 3-4

Fison's challenge to the authority of armchair anthropologists in Britain was clear, but it was not one that challenged an evolutionary paradigm with an embedded logic of Aboriginal antiquity. Their demonstration of comprehensive fieldwork would eventually lead to the paradigm shift that displaced overarching theoretical frameworks and eliminated the concept of Aboriginal antiquity, but before this could happen, two British-based anthropologists made a crucial contribution to Australian anthropology with their scholarship on Tasmanian Aborigines. Through their texts, Edward B. Tylor and Henry Ling Roth would do the important work of obscuring and abstracting human antiquity away from the concept of primitivity, so that their historical time-depth could be more easily severed in twentieth century functionalist anthropology.

Abstracting antiquity in a settler-colonial climax

Tasmanian Aborigines occupied a significant portion of the scientific literature of Australian and European scholars in the nineteenth century and beyond. Anthropologists, archaeologists, biologists, anatomists and historians alike were fascinated by the isolated and seemingly bizarre human population. The twentieth century would see them feature in debates surrounding controversial archaeological theories of evolutionary regression in the 1970s, and in the explosive revelations of frontier violence and genocide that engrossed historians from the 1980s well into the twenty-first century.[65] In the late nineteenth century, ideas about Tasmanian Aborigines formed a crucial part of the broader scientific discourse on race and migration. Although an enormous amount of literature was generated in this period, a common theme that underpinned them was that Tasmanian Aborigines were a population distinct from their Aboriginal neighbours on the Australian

[65] See especially the works of Australian archaeologist Rhys Jones, whose theories of the Tasmanian Aborigines' isolation and evolutionary regression in the 1970s, were condemned by critics as mimicking discriminatory nineteenth century evolutionary theory. Rhys Jones, "The Tasmanian Paradox," in *Stone Tools as Cultural Markers*, ed. R. V. S. Wright, (Canberra: Australian Institute of Aboriginal Studies, 1977): 189–204; Rhys Jones, "Why Did the Tasmanians Stop Eating Fish?" in *Explorations in Ethnoarchaeology*, ed. R. A. Gould, (Albuquerque: University of New Mexico Press, 1978): 11–47; Tom Haydon, *The Last Tasmanian*, (1978). See also Lyndall Ryan, *The Aboriginal Tasmanians*, (St Lucia: University of Queensland Press, 1981); Henry Reynolds, *The Other Side of the Frontier: Aboriginal Resistance to the European Invasion of Australia*, (Townsville: James Cook University of North Queensland, 1981); Keith Windschuttle, *The Fabrication of Aboriginal History*, (Paddington: Macleay Press, 2002) for debates around frontier violence and Tasmanian genocide.

mainland. Anthropologists in particular believed the Tasmanian Aborigines harboured crucial clues to uncovering humanity's origin and development, with some scholars even reviving theories of polygenesis to account for the differences between Australia's indigenous peoples.

Within these discussions, two British-based anthropologists produced authoritative images of Aboriginal Tasmanians that played a crucial intermediate role in anthropology's paradigmatic severance of human antiquity from human primitivity: Edward Burnett Tylor's 1894 paper 'On The Tasmanians as Representatives of Palaeolithic Man,' and Henry Ling Roth's 1890 monograph *The Aborigines of Tasmania*. Each publication stood out from its contemporaries: Tylor's, because of his respected and already well-established position within the international discipline of anthropology; and Roth's, because of its holistic and detailed portrayal of a 'lost' human society. Each author used the Tasmanian Aborigines to specific effect in their interpretative frameworks. Tylor, intent on demonstrating his theory of homogenous cultural development, used the Tasmanians as modern representatives of Palaeolithic humanity and a Stone Age culture. Roth, intent on discovering their origin, used the Tasmanians to sketch a complex line of human migration and racial affiliation, positioning them as members of a 'Nigritic Stock' that had once populated the whole continent of Australia. While each text contained language that seemed to imply a vast antiquity for Tasmanian Aborigines, both authors embedded their analysis in racialised and theoretical abstractions that instead began to conceptually obscure that antiquity. The allusive language of Tylor and Roth worked differently from the implied antiquity built into the evolutionism of Howitt and Fison. Compounded by a discourse of extinction and the scientific authority of the 'doomed-race' theory, Tylor and Roth conceptually severed their Tasmanian subjects from any temporal past, present or future to create the ultimate representative tool for their anthropology: an abstract embodiment of human primitivity that had no consequent antiquity.

Born in London to a pair of wealthy Quakers, Edward Burnett Tylor (1832-1917) has long been considered one of the founding fathers of British anthropology. Tylor first became interested in ethnology when he visited Mexico in 1856, and he published his first

book of anthropology a few years later.[66] It was his *Researches into the Early History of Mankind and the Development of Civilization* (1865), however, that laid the foundations for his anthropological acclaim. Throughout his career, and particularly in his most famous work *Primitive Culture* (1871), Tylor defined and introduced into English the 'modern anthropological meaning and science of 'culture'.'[67] Despite disagreements over the level of conscious intent behind Tylor's 'modern' concept of culture, the significance of his influence on social anthropology remains undisputed.[68]

Just like the work of Howitt and Fison, Tylor's theory of culture was steeped in nineteenth century evolutionism. With a developmental narrative similar to that of his contemporary, John Lubbock, Tylor described human cultural development as progressing through a series of stages, from primitive savagery to sophisticated civilisation. To define each stage, Tylor used material culture, paying particular attention to the stone implements and weapons that designated the 'Stone Age.' While admitting the Stone Age had not 'entirely passed away,' Tylor argued the exclusive use of Stone Age technology represented a 'very low state of culture' and was therefore only witnessed in the 'lower races' of humanity.[69] Included in these 'lower races' were Aboriginal Australians, preceded slightly by the more archaic Tasmanian Aborigines. For Tylor, the natives of Van Diemen's Land were among 'the lowest tribes known to Ethnology,'[70] and were communities in which 'original Stone Age conditions had never been interfered with, until they came within the range of European discovery.'[71] Tylor did not explicitly mention human antiquity, nor add a temporal element to his descriptions of the 'Stone Age.' The British consensus on human

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[66] Tylor visited Mexico with Henry Christy, a fellow Quaker and British textile manufacturer with a passion for collecting antiquities. See Robert H. Lowe, "Edward B. Tylor," *American Anthropologist* 19:2 (1917), 1

[67] Joan Leopold, *Culture in Comparative and Evolutionary Perspective: E. B. Tylor and the Making of Primitive Culture*, (Berlin: Dietrich Reimer Verlag, 1980), 67

[68] Joan Leopold argues that Tylor should be recognised for 'consciously and formally' introducing the concept of modern culture to British anthropology. Leopold, 67. See Alfred L. Krober and Clyde Kluckhohn, *Culture: A critical review of concepts and definitions*, (Cambridge, Massachusetts: The Museum, 1952), 150; and George W. Stocking, Jnr., *Victorian Anthropology*, (New York: The Free Press, 1987), 302, for critiques of the 'conscious' and 'modern' aspects of Tylor's definition of culture.

[69] E. B. Tylor, *Researches into the Early History of Mankind and the Development of Civilization*, (London: John Murray, 1865), 192

[70] Tylor, *Researches,* 327

[71] Tylor, *Researches,* 204

antiquity, however, had been announced only six years before, and was an accepted part of Tylor's intellectual backdrop.

Tylor took his evolutionary ideas one step further in *Primitive Culture* (1871), a two-volume study that sought to reconstruct the entire history of human cultural development. Along with providing his frequently cited definition of culture, *Primitive Culture* also expanded on his theory of the uniform development of 'lower civilisation.' In *Researches*, Tylor argued that similar stages of development could be observed in primitive peoples in different times and places.[72] Then, in *Primitive Culture*, he argued that 'lower races' not only had uniform similarities with each other, but also with extinct prehistoric peoples, making them the visible remains of the 'early state of the human race at large.'[73] These 'survivals of culture,' Tylor reasoned, could be placed along the course of 'advancing civilisation' as 'way-marks full of meaning.'[74] For those that could 'decipher their signs,' primitive populations acted as 'primeval monuments of barbaric thought and life.'[75] Thus, after reading the factual 'way-marks' collected by anthropologists and ethnographers around the world, Tylor believed 'few would dispute' that the following races were 'arranged rightly in order of culture: Australian, Tahitian, Aztec, Chinese, Italian.'[76] In the space of six years, from *Researches* to *Primitive Culture*, Indigenous Australians had gone from being members of a 'low culture' with an implied antiquity, to living exemplars of an early stage of humanity.

It was Tylor's conceptual distinction between Indigenous Australians as *exemplars* of culture, rather than *members* of a culture, that paved the way for his ultimate anthropological abstraction that obscured their once logical antiquity. Tylor's 'survivals of culture' notion reached its zenith in the 1890s: first, in his preface to Henry Ling Roth's monograph *The Aborigines of Tasmania* (1890), and later, in his comprehensive and widely lauded paper 'On The Tasmanians as Representatives of Palaeolithic Man.' Tylor's Preface

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[72] Tylor, *Researches,* 362
[73] E. B. Tylor, *Primitive Culture: Research into the Development of Mythology, Philosophy, Religion, Art, and Custom*, (London: John Murray, 1871), 21,30,37
[74] Tylor, *Primitive Culture*, 21
[75] Tylor, *Primitive Culture*, 21
[76] Tylor, *Primitive Culture*, 27

to Roth's first edition of *The Aborigines of Tasmania* may have only been a compact two and a half pages, but his forthright descriptions created a lasting image of Tasmanian Aborigines:

> If there have remained anywhere up to modern times men whose condition has changed little since the early Stone Age, the Tasmanians seem to have been such a people…Many tribes in the late Stone Age have lasted on into modern times, but it appears that the aborigines of Tasmania…by the workmanship of their stone implements rather represented the condition of Palaeolithic Man.[77]

Here, Tasmanian Aborigines existed in a condition that had 'changed little' since the 'early Stone Age,' but rather than being members of Stone Age tribes that had 'lasted into modern times,' they instead 'represented the condition of Palaeolithic Man.' The distinction was subtle but powerful, and Tylor pushed it even further in a paper read before the Anthropological Institute of Great Britain and Ireland a few years later. Published in the Institute's *Journal* in 1894, the paper detailed a series of stone artefacts that Tylor used to cement Tasmanian Aborigines as representatives of Palaeolithic humanity.[78] It is important to note that while Tylor relied heavily on archaeological evidence to bolster his theories, he consistently represented himself, and was recognised by his peers, as an anthropologist. Stone tools formed just one component of the dataset Tylor used throughout his publications: he also plotted cultural development through language, art, and tribal myths and customs. Indeed, it was the anthropologist's unique ability to bring together these diverse archives that supposedly allowed them to make the most sense of human history and development.[79]

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[77] E. B. Tylor, "Preface," in *The Aborigines of Tasmania*, Henry Ling Roth, (London: Kegan Paul, Trench, Trubner & Co., 1890), v

[78] Among these was the Taunton Scraper, a stone implement first examined by Tylor in 1862. E. B. Tylor, "On the Tasmanians as Representatives of Palaeolithic Man," *The Journal of the Anthropological Institute of Great Britain and Ireland* 23 (1894), 141. Australian historian Rebe Taylor gives an in-depth analysis of Tylor's reliance on the Taunton Scraper in her *Into the Heart of Tasmania: A Search For Human Antiquity* (Carlton: Melbourne University Press, 2017) and "The First Stone and the Last Tasmanian: The Colonial Correspondence of Edward Burnett Tylor and Henry Ling Roth," *Oceania* 86:3 (2016): 320–343.

[79] See Chapter Two. See also George W. Stocking, Jr., "Evolutionary Ideas and Anthropological Institutions," *Victorian Anthropology*, (New York: The Free Press, 1987): 238-273.

Tylor argued the appearance and use of these 'rude tools' undoubtedly determined their 'Palaeolithic character.'[80] Similarly to Howitt and Fison, he disliked the degradation theory, of which he saw no evidence among the implement making in Tasmania.[81] Instead, Tylor argued only one conclusion could be drawn: 'during the present century the [Tasmanian] native habitually made and used for the ordinary purposes of life stone implements of a low Palaeolithic kind.'[82] Fitting this analysis within his existing framework, Tylor used the Tasmanian Aborigines' use of 'Stone Age' technology as 'a standard for comparison with their position in general culture.'[83] Thus, Tasmanian Aboriginal technology, culture, and peoples, came together to represent 'the earliest distinctly recognisable period of human civilisation.'[84]

Tylor's construction of the Palaeolithic Tasmanian had a powerful impact on perceptions of their antiquity, and indeed, on any notion of a history at all. Despite using language that seemed to imply a vast antiquity in a developmental evolutionary framework, Tylor consistently positioned Tasmanian Aborigines as purely *representative* of Palaeolithic humanity. For example, Tylor described the Tasmanian tools as having been 'known to the Stone Age of the Old World,'[85] but did not extend this connection beyond their technology to the Tasmanian people themselves. At one point in the paper, Tylor appeared to make a more direct link between Tasmanian Aborigines and some antiquity when he described 'the *persistence* among these modern savages of a state of stone implement making comparable to that of mankind in their remotest acknowledged antiquity.'[86] Yet even this description of a persistent practice remained shrouded in abstract imagery, positioning it as comparable to, but not inherited from, previous practice in remote antiquity. The only instance in which Tylor's description verged on a more specific connection to antiquity was when he discussed evolution, or as he called it, the 'problem of civilisation.'[87] Following a

[80] Tylor, "On the Tasmanians as Representatives of Palaeolithic Man," 142-143
[81] Tylor, "On the Tasmanians as Representatives of Palaeolithic Man," 148
[82] Tylor, "On the Tasmanians as Representatives of Palaeolithic Man," 147-148
[83] Tylor, "On the Tasmanians as Representatives of Palaeolithic Man," 143
[84] Tylor, "On the Tasmanians as Representatives of Palaeolithic Man," 149
[85] Emphasis added. Tylor, "On the Tasmanians as Representatives of Palaeolithic Man," 147
[86] Emphasis added. Tylor, "On the Tasmanians as Representatives of Palaeolithic Man," 142
[87] Tylor, "On the Tasmanians as Representatives of Palaeolithic Man," 150

Lamarckian evolutionary theory that highlighted the importance of environmental impacts, Tylor argued Tasmanian culture appeared to have remained 'comparatively unchanged…from remote prehistoric ages.'[88] Outside of this sentence, however, Tylor's allusions to antiquity were indistinct and only ever in relation to Tasmanian Aboriginal culture and technology; never to the peoples themselves.

This chapter has already noted that nineteenth century anthropologists may not have made categorical claims about Aboriginal antiquity as it was an assumed component of anthropological inquiry, and the geological dating methods available to them remained generalised and relative. There is an important difference, however, between Tylor's allusions to antiquity and those of his peers, like Howitt. Although the antiquity Howitt claimed for Aboriginal Australians was never quantified in years, he made arguments throughout his career for a substantial antiquity that was informed by geology and directly linked to present-day Aboriginal peoples. Using only material culture to construct his image of the Palaeolithic Tasmanian, Tylor's lack of geological references disconnected this image from time and place. Even the geological descriptor of 'Palaeolithic' lost its temporality amid Tylor's insistent portrayal of Tasmanian Aborigines as 'representatives' of culture 'comparable' with the past. Tylor's allusive descriptions allowed him to utilise 'primitive' Tasmanian culture in his developmental narrative without forging a subsequent connection between that primitivity and its once logical antiquity.

This complex conceptual abstraction was compounded by a discourse of extinction that permeated Tylor's texts, the literature of his peers, and the imperial context that surrounded them. The idea that all of Australia's Aboriginal peoples were 'doomed' to a 'natural' and inescapable extinction had taken root in Australian society in the early decades of the nineteenth century.[89] By the century's end, the idea had reached its apogee, heightened by the widespread belief the Tasmanian Aborigines were in fact already extinct. This notion of extinction was closely bound up in nineteenth century racial science, which fixed race as a measurable biological entity with inherent capabilities and characteristics.

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[88] Tylor, "On the Tasmanians as Representatives of Palaeolithic Man," 150

[89] Russell McGregor, *Imagined Destinies: Aboriginal Australians and the Doomed Race Theory, 1880-1939*, (Carlton South: Melbourne University Press, 1997), ix

The concept of Tasmanian extinction did not, therefore, refer to the demise of all peoples of Tasmanian Aboriginal descent, but rather to the disappearance of a full-blooded racial entity.[90] As a result, Truganini, an Aboriginal woman from Bruny Island, was considered to have been the last 'full-blood' Tasmanian, whose death in 1876 signalled the extinction of her entire race.[91] Tylor's anthropology embodied and reproduced this discourse. In *Researches* (1865), he referred to the Tasmanian Aborigines as a race whose 'dismal history is now closing in total extinction,'[92] while his preface to Roth's *The Aborigines of Tasmania*, twenty-five years later, described them as a population whose 'last survivors have but just died out.'[93] He even linked this extinction to his abstracted Palaeolithic imagery: 'Looking at the vestiges of a people so representative of the rudest type of man,' Tylor stated, 'anthropologists must join with philanthropists in regretting their unhappy fate, which fills a dismal page of our colonial history.'[94] Imbued with the scientific authority of the doomed-race theory, Tylor's allusive descriptions utilised Tasmanian Aboriginal culture in a developmental narrative that had even less impetus to draw connections between the past and an extinct present. Tylor may well have believed in a vast Aboriginal antiquity, but his consistent representation of Tasmanian Aborigines as disconnected Palaeolithic representations perpetuated an image of timelessness that aligned all too nicely with the contextual belief in their inevitable and just extinction.

Historian Rebe Taylor and archaeologist Tim Murray have both highlighted the complex process of abstraction embedded in Tylor's anthropology. Taylor argues that

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[90] McGregor, 51

[91] See also A.L. McCann, "The Literature of Extinction," *Meanjin*, 65:1 (2006): 48-54; Rebe Taylor, "Genocide, Extinction and Aboriginal Self-determination in Tasmanian Historiography," *History Compass* 11:6 (2013): 405–418; Ian Anderson, "Re-claiming TRU-GER-NAN-NER: De-colonising the Symbol," in *Speaking Positions: Aboriginality, Gender and Ethnicity in Australian Cultural Studies*, ed. Penelope van Toorn and David English, (Melbourne: Department of Humanities, Victoria University of Technology, 1995): 31–42; A. Dirk Moses, "Preface" and "Genocide and Settler Society in Australian History," in *Genocide and Settler Society*, ed. A. Dirk Moses, (New York: Berghahn Books, 2004): 1-3, 4-48; Henry Reynolds, *An Indelible Stain?: The Question of Genocide in Australia*, (Melbourne: Viking, 2001); Henry Reynolds, "Genocide in Tasmania?" in A. Dirk Moses (ed.), *Genocide and Settler Society*, (New York and Oxford: Berghahn Books, 2004): 128–150; Bernard Smith, "The Spectre of Truganini, The 1980 Boyer Lectures," (Sydney: Australian Broadcasting Commission, 1980).

[92] Tylor, *Researches,* 327

[93] Tylor, "Preface," (1890) v

[94] Tylor, "Preface," (1890) vii

various European scientists in the nineteenth century studied Aboriginal Australians not for their own sake but in order to discover the history and development of their own ancient past, which ultimately eliminated the history of Tasmanian Aborigines by ignoring it completely.[95] She argues that Tylor's Palaeolithic representations achieved the same result, transforming the Tasmanian Aborigines into images that stood for 'another time, place and people, and not for themselves.'[96] Murray takes this one step further to explicitly examine the scientific concept of human antiquity, rather than what Taylor terms history. He argues that scientists like Tylor needed a 'human face for the Palaeolithic' in order to combat the unintelligibility of the deep human past.[97] Such a 'crisis of intelligibility' would then lead to what Murray has dubbed scientific 'normalization' or 'naturalization,' in which potentially disturbing data is defused through reinterpretation or reformulation.[98] In the nineteenth century, intelligibility was achieved by literally *creating* a prehistoric past, which was then broken up into a series of ethnographic presents and linked vertically by small-scale processes such as diffusion and migration to explain change.[99] Thus by using Tasmanian Aborigines as the interpretable 'face' of the Palaeolithic period, Tylor not only denied a history to contemporary Aboriginal peoples but perpetuated an understanding of the Palaeolithic as synchronous with the present. This synchronicity, Murray argues, extinguished the vast time-scale that had actually allowed the acceptance of a high human antiquity in the first place.[100]

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[95] See Rebe Taylor, *Into the Heart of Tasmania: A Search For Human Antiquity* (Carlton: Melbourne University Press, 2017) for an analysis of the research of amateur English archaeologist Ernest Westlake. Westlake utilised Tasmanian stone implements as comparative devices in his study of antiquity in the Auvergne region of France.

[96] Taylor, "The First Stone and the Last Tasmanian: The Colonial Correspondence of Edward Burnett Tylor and Henry Ling Roth," 329

[97] Tim Murray, "Tasmania and the constitution of 'the dawn of humanity,'" *Antiquity,* 66:252, (1992), 733

[98] The process of normalization has many forms: redescribing abnormal evidence in more conventional terms, thus defining the threat out of existence; setting up interpretive instruments or frameworks that are so abstracted from the evidence that the two cannot effectively connect; or by simply pretending the aberrant evidence does not exist. See Introduction, and also Tim Murray, "On 'normalizing' the Palaeolithic: an orthodoxy questioned," in his *From Antiquarian to Archaeologist: The History and Philology of Archaeology,* (Barnsley: Pen and Sword Books, 2014): 127-148.

[99] Murray, "Archaeology, ideology and the threat of the past: Sir Henry Rider Haggard and the acquisition of time," 69

[100] Murray, "Tasmania and the constitution of 'the dawn of humanity,'" 733-734

Although Murray is the only historian to highlight the effect Tylor's abstraction had on the specific concept of Aboriginal antiquity, one of his core aims is to also foreground the function of this anthropological analogy *within* the paradigms of prehistoric archaeology.[101] He groups Tylor together with other nineteenth century 'prehistorians' and implies that their collective practices of normalization removed the concept of Aboriginal antiquity from a variety of disciplines, until it could be 'proven' by the objective and ubiquitous method of radiocarbon dating. Such a suggestion works to both overemphasise and undercut the crucial role of anthropology in the history of human antiquity in Australia. Tylor's normalization must be analysed in connection with the other canonical texts responsible for anthropology's development in Australia, and especially those on Tasmanian Aborigines. In the 1890s, that was Henry Ling Roth's *The Aborigines of Tasmania*. Born and educated in London, Henry Ling Roth (1855-1925) arrived in Australia in 1878 on a commission to investigate the sugar industry of Queensland.[102] Although he had a strong interest in anthropology, Roth spent his Australian years dedicated to his research on the sugar industry. When he returned to England in 1884, he began pursuing anthropology in his spare time.

Although never as prolific as his brother Walter Edmund Roth,[103] Henry Ling's *The Aborigines of Tasmania* (1890) established his authoritative reputation in the discipline of Australian anthropology. With a preface by the respected Tylor, Roth's monograph surpassed those of earlier anthropologist James Bonwick and dominated the landscape of Tasmanian Aboriginal anthropology for close to seventy years. Although a work of 'armchair' anthropology, compiled in London largely from the research and writings of

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[101] Emphasis added. Murray specifically argues that despite the renowned and far-reaching scholarship of Donald K. Grayson (*The Establishment of Human Antiquity* 1983) and George W. Stocking (*Race, Culture and Evolution: Essays in the history of anthropology* 1968), we still lack a vantage point on the operation of normalisation in prehistoric archaeology. See Murray, "Tasmania and the constitution of 'the dawn of humanity,'" 734

[102] Helga M. Griffin, "Roth, Henry Ling (1855–1925)," *Australian Dictionary of Biography Volume 11*, (Melbourne: Melbourne University Press, 1988)

[103] Henry Ling's younger brothers accompanied him to Australia; Reuter Emerich Roth, a physician, and Walter Edmund Roth, a physician, anthropologist, and later, the Protector of Aborigines in Northern Queensland. Walter Edmund would go on to pen the popular monograph *Ethnological Studies Among North-West Central Queensland Aborigines*, the first of its kind upon its publication in 1897.

others, Roth earned his 'expert' status by presenting the book as an exclusive volume on the 'lost' Tasmanian race, with comprehensive yet accessible chapters covering everything from physical appearance, astronomy, and religion, to psychology, language, customs of war, and interactions with Europeans.[104] The encyclopaedic volume acted as a sort of representative survey of scientific opinion, with typical depictions of Tasmanian Aboriginal primitivity. For example, the chapter on Tasmanian psychology had descriptions that ranged from their being the 'most degraded' of the human races, 'placed nearly at the bottom step of the ladder…not a trace of any civilisation,'[105] to 'less barbarous than the natives of New Holland' and with skilled intellect in terms of shelter and subsistence 'in their native wilds.'[106]

Roth's fourteenth and final chapter dealt exclusively with the question of Tasmanian Aboriginal origins. His conception of origin, however, had little to do with temporality, and was instead bound up in racial abstractions and an obsessive discussion of racial migration. He outlined some of the major contemporary arguments surrounding racial migration and species variation: Professor Thomas Henry Huxley's research on Australian and Tasmanian Aboriginal skulls; American ethnologist Daniel Garrison Brinton's division of human races; French physician Paul Topinard's study of Tasmanian crania; French biologist Jean Louis Armand de Quatrefages de Bréau's racialised human genealogical table; and British zoologist Professor Sydney J. Hickson's research on the characteristics of Tasmanian hair. Each scientist made claims about the migration of the Tasmanians and their racial affiliation with the rest of the world's 'primitive' peoples. Some saw them as most closely related to the 'Negrito' populations of Africa; others argued their origins lay in Melanesia with the Papuans, or perhaps even the Polynesians. Many scholars placed the Tasmanians in a separate racial category to the Aborigines on mainland Australia, with some difference

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[104] Roth described the updated second edition, published in 1899, as a work nearing 'absolute completeness.' Henry Ling Roth, quoted in Griffin, "Roth, Henry Ling (1855–1925)."

[105] Dumoutier, as quoted in Henry Ling Roth, *The Aborigines of Tasmania*, (London: Kegan Paul, Trench, Trubner & Co., 1890), p.29

[106] Roth made an annotation to these descriptions in his 1899 second edition, however, and stated that while Tasmanian Aborigines had displayed a 'desire for instruction' and could adopt the 'outward appearance of civilisation,' to describe them as being in any way intellectual was 'absurd.' Henry Ling Roth, *The Aborigines of Tasmania: Second Edition,* (Halifax, England: F. King & Sons, 1899), 24

of opinion over which population had been the first to arrive on the landmass. Roth himself argued that a comparison of the Tasmanians and the 'Negritos' revealed such a close relationship of osteology, hair and language, he was 'not far wrong in concluding that this Nigritic Stock once peopled the whole of the Australian continent and Tasmania, until annihilated and partly assimilated by the invaders now known as Aboriginal Australians.'[107]

With this short summary, and some musing on potential cultural overlaps between Australians and Tasmanians, Roth concluded the last detailed piece of Tasmanian Aboriginal anthropology to be published until the mid-1960s.[108] He made no direct mention of Aboriginal antiquity and rarely engaged in the suggestive descriptions that appeared in other texts. There were only two moments in which he suggested a temporality for the migration patterns he discussed. In a paragraph on language, Roth quoted English geologist Joseph Beete Jukes, who argued philology could throw light on 'the ancient past of this unhappy race.'[109] Jukes also referred to the migration of the Tasmanians from mainland Australia as having 'taken place at a very remote period.'[110] Aside from these, Roth made no other references to the geologic timescale. Even his description of the mainland arrival of the Australian Aborigines as a 'neolithic invasion'[111] related instead to a period of material cultural development than it did to a temporal stage in history. Just as Tylor's complex Palaeolithic abstractions worked to obscure Tasmanian antiquity, so too did Roth's untethered fixation on race and migration.

Roth's abstracted anthropology was also compounded by a discourse of extinction. Indeed, the notion of extinction was crucial for his comprehensive study of a supposedly 'lost race,' an appellation Roth fiercely defended. In 1889, James Barnard, government printer of Tasmania and Vice-President of the Royal Society of Tasmania, published a paper on 'the Last Living Aboriginal of Tasmania.' In it, Barnard claimed Mrs Fanny Cochrane Smith, a Tasmanian Aborigine born at the Wybalenna Aboriginal establishment on

[107] Roth, *The Aborigines of Tasmania: Second Edition,* 227
[108] For Roth's scholastic supremacy until the 1960s, see Taylor, "The First Stone and the Last Tasmanian," 321
[109] Joseph Beete Jukes, as quoted in Roth, *The Aborigines of Tasmania: Second Edition,* 225
[110] Joseph Beete Jukes, as quoted in Roth, *The Aborigines of Tasmania: Second Edition,* 225
[111] Roth, *The Aborigines of Tasmania: Second Edition,* 227

Flinders Island, was in fact the 'sole survivor and representative of the race.'[112] Barnard's widely circulated article issued an implicit challenge to the narrative Roth had laid out in his first edition of *The Aborigines of Tasmania*, published almost simultaneously in 1890. In the eight years between the publication of his first and second editions, Roth engaged in a lengthy correspondence with Hobart-born barrister and local historian James Backhouse Walker.[113] With details provided by Walker, Roth investigated the 'validity' of Mrs Smith's aboriginality through methods similar to those in his monograph: assessing written claims of her identity; using photographs to make physical comparisons between Mrs Smith and Truganini, critiquing the shape of the face, eyes and lips; and even attempting to obtain hair samples from Mrs Smith to determine its curl and coarseness. Roth outlined his results in a paper to the *Anthropological Institute*, and an appendix to the updated second edition of his *The Aborigines of Tasmania*.[114] After his years of research, Roth claimed with confidence that while Mrs Smith's 'facial characteristics partake largely of those of the Tasmanians,' there was 'considerable modification in almost every feature which tends to show that she is of mixed blood.'[115] He therefore argued she could not be considered 'a true Tasmanian aboriginal,' and it was with the death of Truganini that scientists had 'lost for ever [sic] a living representative of the Tasmanian race.'[116]

Tylor and Roth's anthropology formed a crucial, intermediary moment in the discipline's paradigmatic shift and ultimate erasure of Aboriginal antiquity. Intent on plotting cultural development and racial migration, neither Tylor nor Roth framed their developmental narratives with any temporality. While not in itself abnormal, they consistently depicted Tasmanian Aborigines as abstracted representations, but not embodiments, of a cultural and racial primitivity. Compounded by a discourse of extinction, Tylor and Roth's abstracted representations upheld Tasmanian primitivity

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[112] James Barnard, 'Notes on the Last Living Aboriginal of Tasmania," *Papers and Proceedings of the Royal Society of Tasmania* (1889), 60. Barnard's article was widely circulated, especially after being republished in the *Report of the Second Meeting of the Australasian Association for the Advancement of Science*.
[113] Rebe Taylor investigates the correspondence between Roth and Walker in "The First Stone and the Last Tasmanian," 320-343.
[114] See Henry Ling Roth, "Is Mrs. F. C. Smith a 'Last Living Aboriginal of Tasmania'?" *The Journal of the Anthropological Institute of Great Britain and Ireland* 27 (1898): 451-454.
[115] Roth, *The Aborigines of Tasmania*, lxxxvii
[116] Roth, *The Aborigines of Tasmania*, lxxxvii

while severing them from their once logical antiquity. Tim Murray remarks that without using Aboriginal Tasmanians in their scholarship, Palaeolithic humanity would have been 'only the most ghostly of shadows' in nineteenth century anthropology.[117] Instead, Tylor and Roth constructed their own ghosts, whose timeless primitivity exerted a powerful influence over Aboriginal Tasmanians well into the late twentieth century. These ghostly abstractions would fit only too easily with the present-day focus of structural-functionalism, and would soon be used with this new paradigm to apply a timelessness to all Aboriginal peoples. Such representations, with a primitivity severed from a once logical antiquity, were epitomised in the anthropology of Walter Baldwin Spencer and Francis Gillen in the early twentieth century.

Erasing antiquity on the final frontier

The only duo in Australian anthropology more renowned and revered than Howitt and Fison is that of Walter Baldwin Spencer (1860-1929) and Francis James Gillen (1855-1912). Apart from their impressive list of influential publications, Spencer and Gillen carve a memorable image in the history of anthropology through their unlikely partnership: Spencer, an educated, English-born biologist who travelled to Australia in 1887 to become inaugural Professor of Biology at the University of Melbourne; Gillen, an Australian born son of Irish immigrants who worked as a public servant in the isolated rural districts of South Australia and the Northern Territory. The pair's scholarship came at a crucial moment in anthropology's disciplinary shift to structural functionalism. Their meticulous fieldwork helped solidify it as the discipline's methodology in the early twentieth century, but of greater impact was their involvement in a series of international debates on religion and totemism. During these debates, anthropologists began to realise the limitations of their original theoretical frameworks for establishing the origin and development of human societies. Gradually, they eliminated the historical aspect of their inquiry and instead prioritised the study of distinct populations in the present. Not only did this shift remove anthropology's embedded logic of Aboriginal antiquity, it eroded the comparative power

[117] Murray, "Tasmania and the constitution of 'the dawn of humanity,'" 733

of Aboriginal peoples altogether. Spencer and Gillen were both progenitors *and* products of this change: their scholarship made no explicit or implicit mention of Aboriginal antiquity in the first place, yet after the tumult of the totemism debates, they removed even the most minor reference to temporality from their publications. Building upon an already abstracted notion of Tasmanian Aboriginality, Spencer and Gillen's omissions completed anthropology's paradigmatic severance and erasure of Aboriginal antiquity.

Spencer and Gillen first met in Alice Springs in 1894, where the latter was working as magistrate and Aboriginal sub-protector.[118] Spencer arrived in Alice Springs as part of the Horn Expedition, a three-month scientific survey funded by mining magnate William Austin Horn. Recruited to act as zoologist and photographer, Spencer travelled alongside naturalists, taxidermists, geologists and anatomists to document Australia's mysterious central interior. Spencer had already developed an interest in anthropology by the time he met Gillen, and despite the Horn Expedition appointing Edward Charles Stirling as its official anthropologist, Spencer made extensive notes on the Aboriginal peoples he encountered along the way.[119] Gillen had been interested in Aboriginal Australians since his youth, which he spent working as a postal messenger and then on Australia's overland telegraph. His journals depict a young man unafraid of Aborigines, and a paternalistic concern for their welfare which characterised his career.[120] Spencer stayed with Gillen at the end of the Horn Expedition and the pair eagerly exchanged stories. He encouraged Gillen to contribute to the Expedition's report (of which he was the editor) and even believed Gillen had enough data for his own publication.[121] Spencer returned to Alice Springs in the summer of 1896, where he and Gillen conducted their first bout of research.

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[118] D. J. Mulvaney, "Gillen, Francis James (1855–1912)," *Australian Dictionary of Biography Volume 9*, (Melbourne: Melbourne University Press, 1983)

[119] D. J. Mulvaney and J. H. Calaby, *'So Much That Is New' Baldwin Spencer, 1860-1929: A Biography*, (Melbourne: University of Melbourne Press, 1985), 122

[120] Gillen earned a reputation as a fair Protector of Aborigines with a pacifist approach. Gillen's personal diaries reveal that he did not carry a revolver when on-duty (Mulvaney and Calaby, 163), and that he often expressed a desire to enter Parliament to pursue Aboriginal welfare policies (Mulvaney and Calaby, 175).

[121] Australian historian, archaeologist and Spencer's biographer D. J. Mulvaney highlights the significance of this moment in Spencer's transformation from biologist to anthropologist: 'What began as his offer to assist in publishing Gillen's ethnological notes matured into an enduring partnership and a landmark in anthropological history.' Mulvaney, "Gillen, Francis James (1855–1912)." See also Mulvaney and Calaby, 163

Together, they produced four of Australian anthropology's most seminal texts, and formed such a close relationship that Spencer continued to list Gillen as a co-author even after his death in 1912.[122]

In 1899, they published their first major collaboration, *The Native Tribes of Central Australia*. It's impact on Australian anthropology was similar to that of *Kamilaroi and Kurnai*, and has earned an equivalent foundational status in the discipline's history. Indeed, Spencer and Gillen even dedicated *Native Tribes* to Howitt and Fison, claiming they had 'laid the foundation of our knowledge of Australian Anthropology.'[123] *Native Tribes* gave a comprehensive account of the lives and customs of the Arrernte of Alice Springs and the surrounding districts of Central Australia.[124] Like Howitt and Fison, Spencer and Gillen conducted a considerable amount of fieldwork for the book, and also drew on the decades of interactions Gillen had already recorded with the Arrernte. They appealed to this authoritative experience in their Preface: claiming to be 'fully initiated members' of the tribe, Spencer and Gillen had supposedly enjoyed unique access to the ceremonies and practices of the Arrernte; some of which, they argued, had never been seen before by Europeans.[125]

The impression that *Native Tribes* offered an intimate and exclusive insight into Aboriginal life was heightened by Spencer's photography: a total of 133 black and white photographs and illustrations were included in the first edition, depicting Aboriginal bodies, living conditions, and ceremonial dress and dance. The book's wealth of exclusive data left an immediate impression on its early reviewers, some of whom were leading scholars in the international field of anthropology. English folklore expert Edwin Sidney Hartland, anthropologist Henry Ling Roth, renowned French sociologist Émile Durkheim, and Durkheim's nephew and fellow sociologist, Marcel Mauss, all commended the duo on

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[122] Both *Across Australia* (1912) and *The Arunta: a study of a stone age people* (1927) were published with Gillen as co-author.
[123] Walter Baldwin Spencer and Francis Gillen, *The Native Tribes of Central Australia,* (London: Macmillan, 1899)
[124] Arrernte is now recognised as the correct spelling of the tribal name, although they have been referred to as Aranda, Arunta, and Arrarnta in various anthropological and historical texts. Spencer and Gillen use Arunta exclusively throughout *Native Tribes*.
[125] Spencer and Gillen, *The Native Tribes of Central Australia,* vii-viii

their meticulous study and the standard it set for further research.[126] Although not all armchair anthropologists were yet convinced of the necessity of fieldwork, what had begun with Howitt and Fison was being solidified by Spencer and Gillen: anthropology was beginning to be reshaped into the scientific portrayal of a contemporary human population, written by participant observers from sustained fieldwork.[127]

More important than its reinforcement of participant observation, however, was *Native Tribes*' incorporation in a series of international debates on human religion and totemism. Spencer and Gillen dedicated multiple chapters to the ceremonial life and totemic beliefs of the Arrernte, and their data was met with enthusiasm in Europe and the United States, where anthropologists had been attempting to uncover clues to the origin and historical development of human religion. Spencer and Gillen did not address the origin or development of Arrernte 'religion' in *Native Tribes*, but their totemistic data was seized by anthropologists whose evolutionary framework proclaimed the religious practices of 'primitive' peoples were capable of illuminating early stages in the linear progression of all human religion. The ensuing debate was detailed and all-consuming, and had two crucial outcomes. First, anthropologists across Europe, the United States and Australia realised the inefficacy of using data from distinct native societies as a homogenous cover-all for the development of 'primitive' peoples. Second, exhausted by the 'misrepresentations' of their research, Spencer and Gillen removed the only temporal reference that tethered the Arrernte to a period of history, the 'Alcheringa,' from all of their future publications. The totemism debates were therefore critical to securing anthropology's paradigm shift to structural functionalism and completing its renunciation of human antiquity as a founding disciplinary principle.

One of the first to use Spencer and Gillen's research in a broader developmental framework was Sir James George Frazer (1854-1941), a Scottish anthropologist and folklorist

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[126] See E. S. Hartland, "Review of The Natives Tribes of Central Australia," *Folk-Lore* 10 (1899): 233–239; Henry Ling Roth, "Review of The Native Tribes of Central Australia," *Nature* 59 (1899): 511–512; Émile Durkheim, "Review of The Native Tribes of Central Australia," *L'Anne´e sociologique* 3 (1900): 330–336; Marcel Mauss, "Review of The Native Tribes of Central Australia," *L'Anne´e sociologique* 3 (1900): 205–215.
[127] George W. Stocking, Jr., *The Ethnographer's Magic and Other Essays in the History of Anthropology*, (Madison: University of Wisconsin Press, 1992), 24

who spent his career searching for the 'primitive' origins of totemism and religion. Frazer was heavily involved in the publication of *Native Tribes*. Having been informed of its potential by Lorimer Fison—who corresponded regularly with Frazer, Spencer and Gillen—Frazer used his editorial position at Macmillan and Co. to promote and then monitor the book's publication.[128] Frazer's interest in *Native Tribes* was driven almost entirely by the conviction that its data confirmed his own theory on the broader history of totemism. Where he had previously argued totemistic practices were early forms of religion, the research in *Native Tribes* prompted Frazer to reframe totemistic practices as 'magical,' representing a style that predated the development of religion.[129]

Frazer's claim that he had answered one of the burning questions in anthropology caused an understandable stir among his contemporaries, and the subsequent debate lasted for almost twenty years.[130] Émile Durkheim's *The Elementary Forms of Religious Life* (1912) was perhaps the most famous monograph to emerge from the debate, positioning itself in strong opposition to Frazer and his reading of Spencer and Gillen's data. Across international and sub-disciplinary boundaries, disagreements in the totemism debate ranged from the specific terminology used to describe indigenous practices, to the reliability of source material itself. A major critique forwarded by some practitioners was whether the Arrernte and other indigenous peoples could even be used as accurate representations of primordial humanity, as they, like many others, had consistent interactions with Europeans. While developmental evolution and the doomed race theory

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[128] Henrika Kuklick, "'Humanity in the chrysalis stage': indigenous Australians in the anthropological imagination, 1899-1926," *The British Journal for the History of Science* 39:4 (2006), 540-541

[129] The change in Frazer's view of totemism is outlined in his seminal work, *The Golden Bough*, a comparative study of mythology and religion. The first edition, published in 1890, was titled *The Golden Bough: A Study in Comparative Religion*. After reading the work of Spencer and Gillen, Frazer reformulated his argument in the monograph's second edition, retitled *The Golden Bough: A Study in Magic and Religion* and published in 1900. See also Kuklick, 541

[130] The intricacies of the totemism debate are beyond the scope of this chapter, but have been explored at length by various historians. See especially Henrika Kuklick, "'Humanity in the chrysalis stage': indigenous Australians in the anthropological imagination, 1899-1926," *The British Journal for the History of Science* 39:4 (2006): 535-568; Patrick Wolfe, *Settler Colonialism and the Transformation of Anthropology: The Politics and Poetics of an Ethnographic Event*, (London: Cassell, 1999); Adam Kuper, "The question of totemism," in his *The Reinvention of Primitive Society: Transformation of a Myth*, (New York: Routledge, 2005): 82-112; Robert Alun Jones, *The Secret of the Totem: Religion and Society from McLennan to Freud*, (New York: Columbia University Press, 2005); L. R. Haitt, *Arguments about Aborigines: Australia and the evolution of social anthropology*, (Cambridge: Cambridge University Press, 1996).

prescribed the inevitable death of indigenous peoples in the face of 'higher civilisation,' it also conveyed an idea of post-contact cultural contamination: how could any 'primitive' society that had been breached by outsiders continue to represent 'authentic' savagery? This was the lament of Scottish folklorist Andrew Lang, whose brutal review of Spencer and Gillen argued that using the Arrernte to describe the course of human history could only be seen as 'ingenious guessing,' as there were no living 'specimens of primordial humankind available for study.'[131]

As the debate around totemism continued, critiques on the ability to read 'savage' populations comparatively continued to roll in, from North America and across Europe. Professor Sigmund Freud, the Austrian neurologist and founder of psychoanalysis, offered his opinion in 1913 in his *Totem and Taboo: Resemblances between the psychic lives of savage and neurotics*. He argued, when discussing the 'controversial' topic of totemism, it was 'not altogether easy' for researchers to decide what could be considered 'a faithful copy of the significant past' and what was 'a secondary distortion of it.'[132] In 1914, English anthropologist and neurologist William H. R. Rivers claimed the recent attempts to reach a consensus on totemism had been plagued by 'doubt and difficulty' largely because Australian totemism had been taken to represent totemism everywhere.[133] One of the most scathing critiques came from Polish anthropologist Bronisław Malinowski, whose work in Melanesia and the Pacific would see him become one of the most respected functional anthropologists of the twentieth century. In an early essay on 'Totemism and exogamy,' Malinowski argued the focus of an 'exact scientist' should be on understanding the 'mechanism and essence of social phenomena as they exist at present and are accessible to observation, and not in order that these phenomena should serve as the riddle of a prehistoric past about which we cannot know anything empirically.'[134]

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[131] See Andrew Lang, "The origin of totemic names and beliefs," *Folk-Lore* 13 (1902): 347–393.
[132] Sigmund Freud, *Totem and Taboo: Resemblances between the psychic lives of savage and neurotics,* (New York: Moffat, Yard and Company, 1918), 5
[133] W. H. R. Rivers, "The terminology of totemism," *Anthropos* 9 (1914), 640
[134] Bronisław Malinowski, "Totemism and exogamy," in *The Early Writings of Bronisław Malinowski*, ed. Robert J. Thornton and Peter Skalnı'k, trans. Ludwik Krzyzanowski, (Cambridge: Cambridge University Press, 1993), 140. Malinowski originally published his essay in three parts from 1911 to 1913.

It's important to note here that Spencer and Gillen themselves did not engage in any musings on the origin of religion or totemism in *Native Tribes*. Their encyclopaedia of observations came with only occasional analysis, and was largely interrogated and framed in a debate orchestrated by others. Indeed, historian Henrika Kuklick argues the duo were distressed by the 'interpretative exuberance' of their readers and colleagues.[135] Such was this distress that Spencer and Gillen's second publication, *The Northern Tribes of Central Australia* (1904), was presented as a 'sequel' to *Native Tribes*, in which the authors attempted to dispel the misconceptions that had accumulated around their previous data while also laying out new research.[136] In *Northern Tribes*, Spencer and Gillen were hesitant to enter into debate or make clear-cut assertions about the representative nature of Aboriginal Australians, pointing out both similarities and stark differences between the various tribes they had studied over the past decades. They made vague qualitative statements about these differences, arguing it was 'difficult to avoid the conclusion' that the central Aboriginal tribes, which, 'for long ages, have been shielded by their geographical isolation from external influences,' represented cruder, more primitive forms of customs and beliefs than the northern tribes.[137] In the next paragraph, however, Spencer and Gillen argued that regarding their study of the Arrernte, 'it may perhaps be advisable to point out' that the tribe appeared so different for the simple fact 'it was the one which had been studied in greatest detail."[138]

Spencer was more direct about the futility of studying indigenous societies comparatively in his personal correspondence. In a letter to Frazer in June 1903, one year before the publication of *Northern Tribes*, Spencer bluntly stated there was 'no such thing as an all-around "primitive' tribe."[139] While this frank dismissal never made it into a publication, Spencer and Gillen's vague commentary, and the conflicting controversy of the

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[135] Kuklick, 552
[136] Walter Baldwin Spencer and Francis Gillen, *The Northern Tribes of Central Australia*, (London: Macmillan and Co., 1904), vii
[137] Spencer and Gillen, *The Northern Tribes of Central Australia*, xii
[138] Spencer and Gillen, *The Northern Tribes of Central Australia*, xii-xiii
[139] Letter from Walter Baldwin Spencer to James George Frazer, 7 June 1903, in *Spencer's Scientific Correspondence with Sir J. G. Frazer and Others,* ed. R. R. Marett and T. K. Penniman, (London: Oxford University Press, 1932), 93

totemism debates, reflected the growing sense of distrust among anthropologists as to the comparative power of indigenous populations. If 'primitive' tribes lost their authenticity through the very act of being observed, there was no way anthropologists could utilise their observational fieldwork in a feasible narrative of homogenous human development. Similarities in totemism soon came to be seen as subjective and superficial, and by the time the dust settled in the 1920s, anthropologists concluded that any attempt to explain the development of sociocultural practices in terms of evolutionary progress was impossible: charting human development in a linear, homogenous form had simply become too difficult.[140] As a result, Aboriginal Australians, while still undoubtedly primitive, had lost their value as exemplars of primordial humanity. The inability to even *represent* a developmental stage in human history further severed Aboriginal Australians from the scientific concept of human antiquity that had once underpinned their inclusion in anthropological inquiry. A concept that began as an implied intellectual backdrop, and transitioned to a timeless abstraction, had now become entirely absent from both the historical and representative anthropological narratives that now surrounded Aboriginal Australians.

This severance, while a symptom of anthropology's broader paradigm shift, was reflected and perpetuated by Spencer and Gillen's own self-erasure of the few temporal allusions that had appeared in their inaugural work. Both Spencer and Gillen maintained a belief in a general evolutionism whose racial hierarchies prescribed Aboriginal primitivity. Indeed, Spencer would go on to become one of the most recognised evolutionists in Australian academia in the early twentieth century, and he continued to perpetuate a narrative of Aboriginal primitivity well into the 1920s.[141] This primitivity was rarely connected to a concept of human antiquity; for either the Arrernte, or the subsequent tribes

[140] See Kuklick, 553; and Robert Kenny, "Why the Armchair in the First Place? Then Why Get up from It? (And Why Did Some Remain Seated?)" *Oceania* 86:3 (2016), 234-235

[141] Spencer's Presidential Address to the Australasian Association for the Advancement of Science in 1921, and again in the Preface to his final work of anthropology, *The Arunta* (1927), outlined Australia as a type of evolutionary backwater: 'Australia is the present home and refuge of creatures, often crude and quaint, that have elsewhere passed away and given place to higher forms. This applies equally to the aboriginal as to the platypus and kangaroo.' Walter Baldwin Spencer and Francis Gillen, *The Arunta*, (London: Macmillan and Co., 1927), vii

Spencer and Gillen analysed in later texts. In *Northern Tribes*, Spencer and Gillen made one implicit mention of historical time-depth when arguing against the degradation theory, claiming instead that environmental conditions had left Australia's Aboriginal tribes 'shut off from contact with other peoples' to develop '*for long ages* without the stimulus derived from external sources.'[142]

The only temporal allusion the authors made in *Native Tribes* was during a discussion of Arrernte totems, in which Spencer and Gillen used the term 'Alcheringa,' defined as 'the name applied to the far distant past with which the earliest traditions of the tribe deal.'[143] The Alcheringa had different temporal periods—the early Alcheringa, middle Alcheringa, and later Alcheringa—and dealt with distinct aspects of the tribe's creation.[144] According to Arrernte oral histories, Spencer and Gillen explained that during the early Alcheringa, their Country had been covered with salt water, which was gradually withdrawn towards the north 'by the people of that country who always wanted to get it and to keep it for themselves.'[145] Spencer and Gillen immediately offered this qualification:

> Though it is scarcely credible that there can be any tradition relating to a time so far past, yet it is a remarkable coincidence that this tradition reflects what geological evidence shows to have been the case, so far as the existence of a great inland sea is concerned.[146]

Like Howitt in *Kamilaroi and Kurnai*, Spencer and Gillen used a knowledge of Australian geology to assess Aboriginal histories reflecting a vast antiquity. Unlike Howitt, however, Spencer and Gillen dismissed the possibility that Arrernte oral traditions could reach so far back in time, despite their corroboration with geological evidence. For the Arrernte, the Alcheringa was an *actual* period of their ancient past that was now embodied in living memory. At the hands of Spencer and Gillen, however, it became a mythical storytelling device that had no grounding in reality.[147]

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[142] Emphasis added. Spencer and Gillen, *The Native Tribes of Central Australia*, 54
[143] Spencer and Gillen, *The Native Tribes of Central Australia*, 73
[144] Such as the creation of men and women, of circumcision, and of marriage.
[145] Spencer and Gillen, *The Native Tribes of Central Australia*, 388
[146] Spencer and Gillen, *The Native Tribes of Central Australia*, 388
[147] Patrick Wolfe has written a damning analysis of Spencer and Gillen's framing of 'Alcheringa,' in which he claims the anthropologists helped manipulate and transform the 'Alcheringa' into the homogenous and

Spencer and Gillen made no further mention of the 'Alcheringa' in *Native Tribes*, nor indeed in the rest of their anthropology. Against the ferocious totemism debates, and its erosion of the comparative power of indigenous peoples, Spencer and Gillen's omission of any reference to temporality completed anthropology's paradigmatic severance and erasure of Aboriginal antiquity. While Spencer clearly believed in Aboriginal primitivity, he did not believe in the comparative power of Aboriginal societies within developmental evolutionary frameworks. The primitive yet not necessarily ancient Aboriginal Australian was thus enshrined in the new paradigm of functionalist anthropology, in which the very concept of time, and change over time, had been removed.

Conclusion

Over the four decades the science of anthropology was formalised in Australia, the discipline underwent a powerful paradigm shift from developmental evolution to structural functionalism. As part of this shift, the once foundational logic of Aboriginal antiquity was entirely removed from anthropological inquiry. The concept of Aboriginal primitivity, however, was not: while the totemism debates had eroded the comparative power of 'primitive' populations, anthropologists still maintained racialised, evolutionary hierarchies that positioned indigenous populations on the lowest rung of development. Australian anthropologists were both products and progenitors of this change, and this chapter has mapped the gradual severance and erasure of Aboriginal antiquity across the texts that were foundational in anthropology's professional establishment in Australia.

In the 1880s, A. W. Howitt and Lorimer Fison argued explicitly for a distinct Aboriginal antiquity, linked to their primitivity and proven by a geologically-backed evolutionism. It was also their demonstration of comprehensive fieldwork, however, that challenged armchair anthropologists and sparked the beginning of anthropology's paradigm shift. A crucial intermediary contribution came in the 1890s from E. B. Tylor and

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totalising concept of the 'Dreamtime.' Wolfe describes how the 'Alcheringa' was transformed from an actual temporal period of Arrernte history, to a mythic, abstract period that existed 'everywhere and nowhere.' The argument has caused debate and division among some historians. See Patrick Wolfe, "On Being Woken Up: the Dreamtime in Anthropology and in Australian Settler Culture," *Comparative Studies in Society and History* 32 (1991): 197-224.

Henry Ling Roth, who transformed Tasmanian Aborigines into abstract representations of racial and cultural primitivity. Compounded by a discourse of extinction, Tylor and Roth's anthropological abstractions upheld a Tasmanian primitivity that was severed from its once logical antiquity. In the early twentieth century, these ghostly abstractions fit neatly into the present-day focus of anthropology's new paradigm of structural-functionalism, which applied its primitive timelessness to all Aboriginal Australians. These representations were epitomised in the anthropology of Walter Baldwin Spencer and Francis Gillen, whose authoritative and popular scholarship completed anthropology's paradigmatic severance of the logic of Aboriginal antiquity.

The conceptual elimination of Aboriginal antiquity was not just a part of anthropology's disciplinary development in Australia but a crucial functioning aspect of it. The first professional scientists in Australia to explicitly engage with the concept of Aboriginal antiquity not only eliminated that antiquity from their theoretical foundation but transformed the very tenets of their discipline in order to do so. Yet while anthropology had eliminated the logic of Aboriginal antiquity from their paradigms, it did not eliminate the broader category of human antiquity as an object of inquiry for Australia's other scientists, or for the general public. Instead of replicating anthropology's disregard for human antiquity, the reality was altogether more complicated. In the early twentieth century, both Australia's professional scientists and the broader public remained engrossed in investigating and understanding Australia's *human* antiquity, but recognising and articulating the *aboriginality* of that antiquity was a process that became increasingly fraught and fluid. Australia's human antiquity was proven and disproven several times over in the decades before radiocarbon dating. For some, this antiquity was undoubtedly Aboriginal; for others, the Aboriginality of Australia's ancient human populations, and their connection to contemporary Aboriginal peoples, remained ambiguous.

Chapter Four

In the eye of the beholder: 'True' Aboriginality and antiquity in Victoria, 1890-1912

On December 5, 1890, while excavating sandstone for the construction of a new Town Hall in Warrnambool, Victoria, a group of quarry workers, about 50-feet down, spotted what looked like two sets of human footprints etched into the rock. Just behind the footprints were several curved impressions that suggested the pair had once sat down, side by side, at the base of a large sand dune. News of the discovery quickly reached Joseph Archibald, the eccentric and passionate curator of the Warrnambool Museum, who had instructed the quarry manager to alert him to any interesting imprints. Archibald arrived the next day to find the section of rock 'slung unceremoniously from its bed,' but managed to salvage the two buttock impressions, and one set of footprints, and encased them safely under glass back at the Museum. Two months later, Archibald recounted the discovery for Melbourne's most popular newspaper, *The Argus*. Archibald described the slab as 'post tertiary sand rock,' assigning it to both the 'Post-Pliocene' and 'Recent' periods on the geologic time-scale.[1] He extended this substantial antiquity to the slab's impressions, which depicted a 'post tertiary idyl' of a 'young lady,' and her male 'companion…whatever may have been his custom,' who had left the imprint of an 'unclothed human body.'[2] After complimenting the lady on her 'nice little foot,' Archibald implored readers not to neglect Warrnambool's Museum or its sandstone quarries, and expressed excitement that similar artefacts might be unearthed in future.

The next day, *The Argus* published a reply. Signed 'Meddler,' the article blithely referred to another local and supposedly ancient artefact: 'The latest story of the 'oldest inhabitant,' as of the oldest ship, comes from Warrnambool.'[3] Meddler was referring to the

[1] J. Archibald, 'The Oldest Inhabitant,' *The Argus*, February 2, 1891, 8. See Chapter Two for timescale.
[2] J. Archibald, 'The Oldest Inhabitant,' *The Argus*, February 2, 1891, 8
[3] *The Argus,* 'Notes and Comments,' February 3, 1891, 6

'Mahogany Ship': a sixteenth century shipwreck, apparently hidden in Warrnambool's coastal dunes, that Archibald had written about in *The Argus* the year before.[4] Meddler agreed that 'our masters in geology' dated Warrnambool's sandstone back to 'periods more remote than those usually assigned to the era of civilised man.' Meddler was not convinced, however, of such an antiquity for Archibald's latest discovery: if the sandstone slab depicted ancient 'Australian inhabitants,' then they were people who were 'in their nature strikingly conformable to many circumstances of to-day.' The footprints, for example, appeared 'shod with a shoe or sandal.' Meddler thus had little faith in Archibald's scientific skills, and argued the slab should instead be sent to Melbourne to be examined by 'various juries of experts.' While it's 'full interpretation' might not be as 'instructive as that of the Rosetta stone,' Meddler believed 'it would be not less entertaining.'[5]

Snide commentary followed Joseph Archibald for the rest of his life, as he tried, again and again, to attain a more extensive and 'professional' recognition of the Warrnambool slab's human antiquity. Tom Griffiths is one of the only historians to recover Archibald from the archives, portraying him as a dedicated collector whose arguments were overlooked by scientists who preferred 'a head to a bottom any day.'[6] Indeed, the posterior nature of the imprints overshadowed many assessments of the slab, with one newspaper correspondent linking Archibald's historical obsessions by suggesting the impressions belonged to the skipper of the 'Mahogany Ship' and his wife.[7] Archibald thus appears much like French antiquarian Jacques Boucher de Perthes in the 1840s whose claims, regardless of their potential accuracy, suffered from their overenthusiasm and lack of theoretical framing.[8] Through this lens, the Warrnambool slab offers a powerful parable on the layered

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[4] Archibald believed the relic, often referred to as The Mahogany Ship, to be a lost 16th-century Portuguese or Spanish caravel. Others, however, were less convinced, and thought the vessel was likely nothing more than a whaler's punt. See J. Archibald, 'The Mahogany Shop: to the editor of the Age,' *The Age*, June 21, 1890, 11 and *The Argus*, 'The Royal Geographical Society of Australia,' June 27, 1891, 6

[5] *The Argus,* 'Notes and Comments,' February 3, 1891, 6

[6] Griffiths dedicates several pages to Joseph Archibald and the Warrnambool slab, examining both published papers and family correspondence to sketch a more personal portrait of the collector. See Tom Griffiths, *Hunters and Collectors: The Antiquarian Imagination in Australia,* (Cambridge University Press: Melbourne, 1996), 60-62.

[7] Unidentified newspaper clipping, 1891, in J. P. Archibald, 'Warrnambool District Newspaper Cuttings etc.,' 4, quoted in Griffiths, *Hunters and Collectors*, 62.

[8] See Prologue.

politics of professionalism. Through a more detailed case study, however, this chapter reveals the slab has greater significance in the history of human antiquity in Australia. Intellectual credentials were certainly a decisive factor in the slab's scientific acceptance; but this chapter argues the Warrnambool case study also demonstrates the emergence of a fluid concept of Aboriginal antiquity, with an ambiguous application to Aboriginal Australians. At times, scientists used this ambiguity to acknowledge a *human* antiquity for Australia, but not necessarily an *Aboriginal* antiquity.

This fluid antiquity emerged at the turn of the century as a response to the anthropological paradigm shift explored in Chapter Three. Human antiquity still had an enticing cultural capital for scientists in other disciplines, but as the logic of Aboriginal antiquity was gradually erased, they found it difficult to articulate Australia's human antiquity *as* Aboriginal. Who were these ancient humans, if the primitive Aborigine was not actually ancient? In an effort to overcome these articulation issues, scientists used a vernacular of racialisations born from the warped evolutionism of the late nineteenth century. As British scientists struggled to apply natural selection to the human species, they reworked the notion of a natural, physical evolution of man into a theory of a cultural, mental evolution. This theory posited that racial differences between humans had been naturally formed long ago, and that current populations were the resultant 'mixtures' of once 'pure' and 'true' human races. This warped evolutionism gave scientists the language they needed to describe a human antiquity for Australia without overturning the solidifying paradigm of Aboriginal timelessness.

The Warrnambool case study shows this process in action. Over twenty years, the scientists who appraised the Warrnambool slab used various racialisations to assign its antiquity to broadly generic humans, Aboriginal Australians, *Victorian* Aboriginal Australians, and even the abstract category of 'true' Aborigines. Section one examines the initial interpretations of Joseph Archibald and local naturalist C.G.W. Officer. While both men drew vague connections between the slab and Aboriginal Australians, Archibald's racialisations became more specific and explicit over time. This section argues that Archibald manipulated his racialisations in an attempt to tap into the logic of Aboriginal antiquity, still lingering in anthropology in the 1890s, to boost the slab's significance in the

eyes of professional scientists. Section two focuses on John Walter Gregory, a revered geologist who used the slab as part of a state-wide investigation into the antiquity of Victorian Aborigines in 1904. Heavily influenced by his anthropological colleagues, Gregory had the most difficulty describing Australia's human past while maintaining the rationale of Aboriginal timelessness. This section argues that, as a result, Gregory produced a confusing articulation of Aboriginal antiquity that encompassed a 'pre-Aboriginal race,' a 'true' Aboriginal race, but never *Victorian* Aborigines. Section Three focuses on German anthropologist Hermann Klaatsch who, in 1905, examined the Warrnambool slab as part of a larger research trip on human origins. Klaatsch was quick to label the slab as representing a distinctly Aboriginal antiquity, connected to contemporary Aboriginal Australians. This section argues, however, that Klaatsch's interpretation had little to do with overturning the paradigm of Aboriginal timelessness, and everything to do with his predetermined notion that Australia was the birthplace of the entire human race. In an effort to secure continuing funds for his research trip, Klaatsch went to the local media to publicise his bold claims of the slab's Aboriginal antiquity and Australia's place in a global human story.

By tracing these interpretations, this chapter ultimately argues that scientists manipulated racial typologies in order to prove their chosen claims about human antiquity in Australia. Historians are not blind to the role race and racism has played in nineteenth and twentieth century Australian science. One of the overarching arguments of this dissertation, however, is that contemporary histories have not historicised Australia's human antiquity as distinct from its Aboriginal antiquity; they have therefore overlooked the layered and contradictory levels of recognition both concepts received at the turn of the century, and the way some scientists constantly shifted the burden of proof for Aboriginal antiquity. Unpacking the complicated utilisations of the Warrnambool slab is crucial in redressing historical narratives that use the Victorian experience to represent a collective Australian understanding of human antiquity; but even more so for those that uphold the revolutionary nature of radiocarbon dating in human antiquity's discovery narrative in Australia. The Warrnambool case study demonstrates that had an absolute dating method existed at the turn of the century, the concept of Aboriginal antiquity would still have been tenuously subjected to racialised manipulation.

An 'amateur' articulation: Joseph Archibald and C.G.W. Officer

When the Warrnambool slab was unearthed in 1891, decades of warped evolutionism had influenced scientific understandings of race. We know that by 1850, human racial differences had come to be understood as 'fixed and distinct' biological categories, and Chapter Two explored how this notion was used by British scientists in the 1860s and 1870s to arrange human races in developmental hierarchies.[9] Of relevance to this chapter, however, is how in the same period, British scientists came to believe the world's different human races had become 'fixed' formations sometime in the deep past. This belief arose out of scientists' frustrated attempts to apply Charles Darwin's theory of natural selection to the human species. This process was so fraught, Nancy Stepan argues, that in the second half of the nineteenth century, the majority of British scientists interpreted evolution in such a way as to make natural selection 'no longer operative on physical man."[10] Perhaps the most famous example of this came from Darwin himself, who rejected the idea of natural selection for human racial formation, and instead championed his concept of sexual selection. Darwin had outlined some aspects of sexual selection in *On The Origin of Species* (1859) to explain what he termed secondary sexual characteristics, such as the horns or spurs male animals used to fight for mates, or ornamental and behavioural characteristics used to woo a mate during courtship. Sexual selection took centre stage, however, in *The Descent of Man, and Selection in Relation to Sex* (1871), in which Darwin used evidence from the animal kingdom to suggest human racial differences—including physical, mental and moral differences—had evolved in distinct races through sexual selection.[11] By maintaining that different races had 'a widely diff[erent] standard of beauty,' Darwin could explain racial differences that appeared to him to be ugly, distasteful, and

[9] See Nancy Stepan, "Race and the Return of the Great Chain of Being, 1800-50," in *The Idea of Race in Science: Great Britain 1800-1960*, (London: The Macmillan Press Ltd., 1982): 1-19. See also Chapter Two.
[10] Stepan, 85
[11] Evelleen Richards, *Darwin and the Making of Sexual Selection* (Chicago: The University of Chicago Press, 2017), xvii

with no immediate survival benefit.[12] Unfortunately for Darwin, sexual selection 'never quite made it,' and its validity was widely criticised until late in the twentieth century.[13]

Among its sceptics was Alfred Russel Wallace, Darwin's former friend, and co-founder of natural selection and the field of evolutionary biology. Although Wallace was not convinced by sexual selection, he too struggled to apply natural selection to humanity. His work-around, however, was much more popular than Darwin's. In a famous 1864 paper for the Anthropological Society of London, Wallace popularised the theory that natural selection *had* worked to create racial differences in humans, but only up until the point that they 'had become truly human' through the 'final evolution of the human brain.'[14] At this point, humans were able to escape natural evolutionary forces through their acquisition of intelligence and inventiveness. Human evolution thus came to be understood as a mental, cultural phenomenon rather than a physical or a natural one; and in turn, the physical formation of races was a process firmly confined to a vague, prehistoric past.

As a result of this broadly accepted, modified theory of natural selection, scientists came to view present day human populations as complex mixtures of prehistoric racial groups, often referred to as 'original' and 'pure' races.[15] As Stepan argues, contemporary scientists were presented 'not with fluctuating human populations, but only with the results of mixtures of races formed long ago.'[16] It was this logic, for example, that helped scientists proclaim the 'extinction' of the Aboriginal Tasmanians in 1876, after the death of Truganini, the supposedly last 'pure' and 'full-blood' Tasmanian.[17] For Aboriginal

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[12] Letter from Charles Darwin to Alfred Russel Wallace, 28 May 1864, in *The Correspondence of Charles Darwin (Volume 12)*, ed. Frederick Burkhart and Sydney Smith, (Cambridge: Cambridge University Press, 1985), 216-217. See Evelleen Richards, *Darwin and the Making of Sexual Selection* (Chicago: The University of Chicago Press, 2017) for an in-depth examination of the social and cultural influences on Darwin's conceptualisation of sexual selection.
[13] Richards, *Darwin and the Making of Sexual Selection,* xvii
[14] See Alfred Russel Wallace, "The Development of the Human Races under the Law of Natural Selection," reprinted in Alfred Russel Wallace, *Natural Selection and Tropical Nature: Essays on Descriptive and Theoretical Biology, New Edition*, (London: Macmillan and Co., 1891): 167-185; Stepan, 87-88; Peter J. Bowler, *Theories of Human Evolution: A Century of Debate, 1844-1944*, (Oxford: Basil Blackwell, 1987), 133
[15] Stepan, 103
[16] Stepan, 88
[17] See Chapter Three. See also Russell McGregor, *Imagined Destinies: Aboriginal Australians and the Doomed Race Theory, 1880-1939,* (Carlton South: Melbourne University Press, 1997); A.L. McCann, "The Literature of

Australians, however, the notion of race as an innate and prehistoric formation did not denote antiquity. Due to anthropology's erasure of Aboriginal antiquity, and its transformation of Aboriginal peoples into abstract *representations* rather than *members* of the past, a warped evolutionism emerged in the late nineteenth century in which a 'pure' Aboriginal race could be acknowledged as ancient, but left living Aboriginal peoples as relics of antiquity.

It was in this intellectual atmosphere, with its ambiguous notion of Aboriginality, that retired police sergeant Joseph Patrick Archibald (1823-1909) first set eyes on the Warrnambool slab. Born in Ireland, Archibald came to Australia in 1853 as second-in-command of a detachment of officers on the booming Victorian goldfields. After the goldfields, Archibald worked across Victoria before retiring to Warrnambool in 1878.[18] Archibald had a renowned passion for collecting antiquities, and in the early 1880s, he established a Museum that, for a while at least, formed a hub for 'a lively and literate group of townspeople."[19] Archibald was proud of the Museum's collection, which had a mixture of settler and Aboriginal Australian artefacts. He saw it as being able to connect visitors to Australia's human and geological history, and expressed his immense satisfaction that 'in this, the newest of all the countries in the world, we should be joining hands with remotest antiquity by means of these primitive implements.'[20] For Archibald, the sandstone slab was another artefact connecting contemporary Australia with its deep human past. When he wrote to *The Argus* in February 1891, he was convinced of the slab's humanity and it's 'post

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Extinction," *Meanjin*, 65:1 (2006): 48-54; Rebe Taylor, "Genocide, Extinction and Aboriginal Self-determination in Tasmanian Historiography," *History Compass* 11:6 (2013): 405–418; Ian Anderson, "Re-claiming TRU-GER-NAN-NER: De-colonising the Symbol," in Penelope van Toorn and David English (eds.), *Speaking Positions: Aboriginality, Gender and Ethnicity in Australian Cultural Studies*, (Melbourne: Department of Humanities, Victoria University of Technology, 1995): 31–42; A. Dirk Moses, "Preface" and "Genocide and Settler Society in Australian History," in A. Dirk Moses (ed.), *Genocide and Settler Society*, (New York and Oxford: Berghahn Books, 2004): 1-3, 4-48; Henry Reynolds, *An Indelible Stain?: The Question of Genocide in Australia*, (Melbourne: Viking, 2001); Henry Reynolds, "Genocide in Tasmania?" in A. Dirk Moses (ed.), *Genocide and Settler Society*, (New York and Oxford: Berghahn Books, 2004): 128–150; Bernard Smith, "The Spectre of Truganini, The 1980 Boyer Lectures," (Sydney: Australian Broadcasting Commission, 1980).

[18] For more biographical details, see Sylvia Lawson, *The Archibald paradox: a strange case of authorship,* (Melbourne: Allen Lane, 1983)

[19] Griffiths, *Hunters and Collectors*, 61

[20] Archibald family correspondence, quoted in Griffiths, *Hunters and Collectors*, 61

tertiary' antiquity. He did not, however, articulate this as a distinctly Aboriginal antiquity. Indeed, his cheerful letter depicted more of a tourist attraction than a scientific artefact, but Archibald soon changed his tone. In an effort to gain a more 'professional' scientific recognition for the slab, Archibald increased and specified his articulation of its antiquity: what began as evidence of a human 'post tertiary idyl' soon became an artefact of a vast 'antiquity for the Aboriginal race,' before it was finally described as a 'Discovery of the Most Ancient or Tertiary Men in Australia.' This section of the chapter argues Archibald's changing racialisations were an attempt to tap into the disappearing logic of Aboriginal antiquity, in order to boost the slab's overall significance.

The catalyst for Archibald's changing racialisations was a written interpretation of the slab from C.G.W. Officer, a member of the Melbourne-based Field Naturalists' Club of Victoria (FNCV). Formed in 1880, with the cantankerous Frederick McCoy as its President, the FNCV was a small intellectual club whose members sought to study and conserve Victoria's natural environment.[21] Officer had been prompted to visit Warrnambool after an 'energetic' letter from Archibald, and on 14 September 1891, he shared his opinion of the slab (now correctly identified as limestone) with the rest of the FNCV. Of chief concern for Officer was the 'supposed' human nature of the slab's impressions. He spent the majority of his paper arguing that under the right conditions—stepping onto wet sand, with dry loose sand blown immediately over the top—it was 'by no means impossible, or even improbable, that human footprints should be preserved' in a coastal dune.[22] Indeed, Officer claimed to have interviewed 'a good many' quarry workers who were 'unanimous in saying that they frequently had come across tracks of birds, dingoes or wombats, kangaroos, and what they were certain were human footprints.'[23] One worker had apparently traced a set of footsteps for 'nearly 50 yards' along the face of a petrified dune. Officer also dismissed doubts surrounding the clothing and 'footwear' of the imprinters, arguing toe impressions

[21] See *The Argus*, 'To correspondents,' May 18, 1880, 5; *The Age*, 'News of the Day,' May 18, 1880, 2; and Sheila Houghton and Gary Presland, *Leaves from our history: The Field Naturalists Club of Victoria 1880-2005*, (Box Hill: Field Naturalists Club of Victoria, 2005).
[22] C. G. W. Officer, 'The Discovery of Supposed Human Footprints on AEolian Rock at Warrnambool,' *The Victorian Naturalist* 8 (1891-1892), 35
[23] Officer, 35-36

were easily blended together through the pressure of standing up again, and the 'clothing' imprint resembled the possum-skin cloaks worn by local Aboriginal peoples.[24] For Officer, just as for Archibald and the quarrymen, the human origin of the Warrnambool impressions was indisputable.

Although he could not draw 'any definite conclusion as to their age in terms of years,' Officer was likewise satisfied by the slab's antiquity, which he placed in the same 'post tertiary' period as Archibald.[25] At first, Officer described the region's broader geological history, citing respected Australian geologists like Reverend Julian Edmund Tenison-Wood and Professor Ralph Tate, inaugural chair of Natural Science at the University of Adelaide. In his scholarship, Tate assigned a much greater antiquity to the 'AEolian' formations of Victoria's coastline, placing them in the Pleistocene or even late Pliocene era.[26] Officer agreed that a considerable amount of time must have passed to allow the limestone impressions to have formed, settled, and then been overgrown by the large coastal forests that occupied the area when European settlers arrived.[27] He reasoned, however, that once Tasmania had been separated from Victoria—a geological event thought to have taken place sometime *before* the late Pliocene—the Warrnambool coastline would have experienced significant and sometimes rapid geological change: 'A coast line, geologically speaking, may be said to be almost always in a state of unstable equilibrium, and an AEolian formation…will be, at best, a formation of a very transitory nature.'[28] Officer thus gave a more conservative estimate of the slab's antiquity, placing it in the very last 'recent age' of the post-tertiary period.[29]

Officer's calculation was well supported by his fellow FNCV members. John Dennant, a British born geologist and Inspector of Schools in Victoria, argued the AEolian rocks at Warrnambool could only have been deposited 'at the close of Pleistocene or at the

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[24] Officer, 35
[25] Officer, 36
[26] Tate, as quoted in Officer, 38
[27] 'When the first settlers arrived in the Warrnambool district the old consolidated dunes were covered with timber and scrub. Mr. Archibald states that when he first went there, in 1858, sheoaks, blackwoods, and gumtrees of great age were growing all over the present site of the town and quarries.' Officer, 37
[28] Officer, 37-38.
[29] 'So then, I think, there is no doubt that the AEolian formation at Warrnambool which we have been considering is of recent age.' Officer, 38

commencement of the recent period.'[30] Believing there was not enough reliable fossil evidence to decide between the two periods, Dennant was also inclined toward a 'recent age' for the slab. Despite being 'one of the most striking formations in Victoria,' Dennant thought it necessary to be 'very guarded in accepting any but the strongest evidence on such points.'[31] Officer's paper also caught the attention of the press, with reports appearing in newspapers throughout Victoria, New South Wales, and even the remote coastal town of Geraldton, in Western Australia.[32] Many of the reports brandished headlines like 'Prehistoric Man in Australia,' and all of them quoted Officer's belief that a 'considerable lapse of time' had occurred since the Warrnambool limestone was laid down.[33]

Although Officer and the colonial press supported Archibald's claim of a 'post tertiary' human antiquity for the Warrnambool slab, the curator sought even more recognition for the slab. In February 1893, Archibald sent a paper to the Victorian Branch of the Royal Geographical Society of Australasia. In it, he attempted to tap into the still lingering logic of Aboriginal antiquity to increase the significance of the slab, which he now positioned as proof of a vast antiquity for the entire 'Australian Aboriginal Race.'[34] Indeed, the slab was just one of several artefacts from his Museum collection that Archibald argued was proof of an extensive and distinctly Aboriginal antiquity for the Warrnambool region. He wrote at length of two axes—one of diorite, the other of grooved basalt—both of which

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[30] John Dennant, as quoted in 'The Field Naturalists' Club of Victoria - Papers,' *The Victorian Naturalist* 8:6 (1891), 83

[31] Dennant, 84

[32] At least eleven articles were published between February 1892 and March 1893 in Victoria: *Kilmore Free Press*, *The Gippsland Farmers' Journal, Traralgon Record, Hamilton Spectator, The McIcove Times and Rodney Advertiser, Portland Guardian, The Mildura Cultivator, Ovens and Murray Advertiser*; NSW: *The Corowa Free Press, Macleay Argus*; and WA: *Victorian Express.*

[33] For examples see *Kilmore Free Press,* "Recent Additions to our store of knowledge and general scientific notes," February 25, 1892, 2; *The Gippsland Farmers' Journal,* "Recent Additions to our store of knowledge and general scientific notes," March 1, 1892, 2; *Traralgon Record,* "Scientific Notes: Prehistoric Man in Australia," April 12, 1892, 1; *Hamilton Spectator,* "Scientific Notes: Prehistoric Man in Australia," April 19, 1892, 1; *The McIcove Times and Rodney Advertiser,* "Scientific Notes: Prehistoric Man in Australia," April 21, 1892, 1; *The Corowa Free Press,* "Scientific Notes: Prehistoric Man in Australia," May 6, 1892, 1; *Victorian Express,* "Scientific Notes: Prehistoric Man in Australia," June 3, 1892, 1.

[34] See Joseph Archibald, "Notes On The Antiquity Of The Australian Aboriginal Race, Founded Upon The Collection In The Warrnambool Public Museum," *Transactions of the Royal Geographical Society of Australasia (Victorian Branch)* 11 (1894): 22-25.

he described as 'very ancient' and 'doubtless of remote antiquity.'[35] Though neither bore 'distinct marks of antiquity,' Archibald claimed their age could be 'guessed at' by comparing them with other diorite and basalt quarries and implements discovered in Victoria.[36] To make these comparisons, Archibald drew on the work of local anthropologist Robert Brough Smyth, whose research on Victorian Aborigines apparently showed such axes had been 'worked for ages.'[37]

This conceptualisation of Aboriginal antiquity was merely comparative, and Archibald argued with more confidence on the 'post-tertiary' Aboriginal antiquity of the limestone slab. He claimed its human impressions had been so perfectly preserved in the 'ages since' their formation that a professional scientific assessment of them was entirely unnecessary: 'the palaeontologist or geologist is for once *de trop*.'[38] Archibald stated, 'thousands of these evidences' had been discovered in Warrnambool quarries over the last 35 years, only to be 'carelessly tossed aside, or built into the walls of the town.'[39] He was also certain Aboriginal stone implements had been found 'from time to time,' though they had 'escaped observation.' Thus, whenever he was asked for corroborating evidence of his claimed 'post-tertiary' Aboriginal antiquity, Archibald could only 'point hopelessly' at the exposed rock faces and answer, 'they are in there.'[40]

Unfortunately for Archibald, his more specific and explicit claim of Aboriginal antiquity did little to boost the slab's public or scientific profile. Despite its length and more formal tone, his paper received even less attention than his initial letter to *The Argus* in 1891. The Geographical Society's meeting was reported in all of Victoria's major

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[35] Archibald, "Notes On The Antiquity Of The Australian Aboriginal Race, Founded Upon The Collection In The Warrnambool Public Museum," 23
[36] Archibald, "Notes On The Antiquity Of The Australian Aboriginal Race, Founded Upon The Collection In The Warrnambool Public Museum," 22-23
[37] Here Archibald is quoting Smyth's, *The Aborigines of Victoria* (1878). See Archibald, "Notes On The Antiquity Of The Australian Aboriginal Race, Founded Upon The Collection In The Warrnambool Public Museum," 23
[38] Archibald, "Notes On The Antiquity Of The Australian Aboriginal Race, Founded Upon The Collection In The Warrnambool Public Museum," 24
[39] Archibald, "Notes On The Antiquity Of The Australian Aboriginal Race, Founded Upon The Collection In The Warrnambool Public Museum," 24
[40] Archibald, "Notes On The Antiquity Of The Australian Aboriginal Race, Founded Upon The Collection In The Warrnambool Public Museum," 24

newspapers—*The Age, The Argus* and *The Advocate*—as well as in newspapers in Queensland and Western Australia. The majority of the articles, however, recounted another paper from the same meeting, which stole the media spotlight with sensationalist claims of Aboriginal cannibalism.[41] Archibald's paper received only one sentence: 'Mr. Griffiths then read a paper by Mr. Archibald of Warrnambool, on the Antiquity of the Aboriginal Race, based on the relics preserved in the Warrnambool Museum.'[42] The impressions themselves were also still generating derision for Archibald, who regretted the close proximity of the posterior imprints carried 'great weight with certain frivolous young visitors to our Museum, who profess to derive comfort from the reflection that 'that sort of thing' has the sanction of remote antiquity.'[43]

Archibald attempted, one last time, to gain greater recognition for the Warrnambool slab. In 1898, he penned an entreaty to the Sydney-based Anthropological Society of Australasia, but when the editors wrote back to obtain more information, they found the curator beset by illness. After a 'long and exhaustive correspondence,' aided by Mrs. Archibald, the Society finally published the 'facts' of the Warrnambool slab.[44] Although subtitled as written by 'Mr. Archibald,' the article frequently referred to the curator in third person, suggesting an editor or Archibald's dutiful wife was the actual author. The article was unyielding in its praise of the limestone slab, and claimed its imprints were among the 'oldest relics of men in Australia'[45] and had 'all the appearance of having been buried for thousands of years.'[46] The article pushed Archibald's previous claim for a 'post-tertiary' Aboriginal antiquity and instead assigned the slab to the 'late tertiary'

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[41] The lecture claimed that certain tribes had such a love of the 'bunya nut as a food' that when its season closed 'they occasionally made up for it by eating a child or two.' See *The Argus,* "Royal Geographical Society," February 6, 1893, 3; *Advocate*, "Royal Geographical Society," February 11, 1893, 9; *The Age,* "The Aboriginals of Australia," February 4, 1893, 9

[42] See *The Argus,* "Royal Geographical Society," February 6, 1893, 3; *Advocate*, "Royal Geographical Society," February 11, 1893, 9; *The Age,* "The Aboriginals of Australia," February 4, 1893, 9

[43] Archibald, "Notes On The Antiquity Of The Australian Aboriginal Race, Founded Upon The Collection In The Warrnambool Public Museum," 24-25

[44] See Joseph Archibald, "The Discovery of the Most Ancient or Tertiary Men in Australia," *Science of Man* 1:2 (1898): 40-41.

[45] Archibald, "The Discovery of the Most Ancient or Tertiary Men in Australia," 40

[46] Archibald, "The Discovery of the Most Ancient or Tertiary Men in Australia," 41

period, a date 'far earlier than anything else found by any other discoverer.'[47] The discovery of these 'Most Ancient or Tertiary Men' was deemed to 'belong to Mr. Archibald,' whose name would be 'forever associated' with the 'important discovery that men were in Australia in those remote times.'[48] By its end, the article eulogised Archibald as an 'earnest worker for the advancement of science,' who had 'sacrificed himself' to 'hunting up the proofs' of Australia's human antiquity, which ought to satisfy 'unprejudiced scientists through the various countries of the world.'[49] While Archibald's previous papers on the Warrnambool slab had argued in favour of its human antiquity, he had not projected anywhere near the level of acclaim—or ancientness—as the article for the Anthropological Society of Australasia.[50] In his efforts to gain recognition for the slab, Archibald deepened and specified his description of its Aboriginal antiquity; pushing it from the 'post-tertiary' to the 'late tertiary' period, and applying it more explicitly to the 'Australian Aboriginal Race.'

These changing descriptions represent Archibald's attempts to tap into the logic of Aboriginal antiquity in order to paint the Warrnambool slab with a more professional, scientific brush. Yet Archibald's papers also reveal how fluid the concept of Aboriginal antiquity became as it was gradually being eroded from the paradigms of anthropology in the 1890s. Even while using the slab to argue for Aboriginal antiquity, Archibald used racialisations that reflected the warped evolutionism of the late nineteenth century, which in turn articulated ambiguous connections between the slab and the Aboriginal peoples it supposedly represented. For example, when describing the slab in his 1893 paper for the Victorian Geographical Society, Archibald claimed its imprints belonged to 'one of the most remarkable aboriginal races in the world, *now almost extinct*.'[51] Later in the same

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[47] Archibald, "The Discovery of the Most Ancient or Tertiary Men in Australia," 41
[48] Archibald, "The Discovery of the Most Ancient or Tertiary Men in Australia," 41
[49] Archibald, "The Discovery of the Most Ancient or Tertiary Men in Australia," 41
[50] Founded in 1895 through the enthusiasm of Dr Alan Carroll, the Anthropological Society of Australasia sat somewhat on the fringes of Australia's scientific community: although it would attain Vice-Regal patronage and a 'Royal' prefix in 1900, the Society produced 'semi-popular' work that was seen as 'hardly scientific' compared with Australia's other colonial learned societies. See A. P. Elkin, "A New Anthropological Society," *Oceania* 29:3 (1959), 227
[51] Emphasis added. Archibald, "Notes On The Antiquity Of The Australian Aboriginal Race, Founded Upon The Collection In The Warrnambool Public Museum," 24

paragraph, however, he described the impressions as being 'left by the ancestors of *this dead and gone race*.'[52] This subtle difference in description makes it unclear which Aboriginal 'race' Archibald was actually referring to. In the last decade of the nineteenth century, right as Archibald wrote his paper, the belief that Aboriginal Australians were 'doomed' to an ordained and unavoidable extinction reached its apogee in Australia.[53] The Tasmanian Aborigines, considered an altogether separate 'race' from mainland Australian Aboriginal peoples, were judged by scientists and the public as already extinct. Archibald's description of an Aboriginal race 'now almost extinct' would seem then, to refer to the Victorian Aboriginal peoples, while 'this dead and gone race' aligns with broader perceptions of Aboriginal Tasmanians.

C.G.W. Officer had made similar references to various Aboriginal 'races' in his paper on the Warrnambool slab. Officer cited the research of Scottish anthropologist John Mathew (1849-1929), whose popular scholarship argued 'the Australian blacks are not the true aboriginals, but are a mixture of the real aboriginals with Papuans and Malays,' who had 'invaded the country several times from the north.'[54] Tasmanian Aborigines—the 'true aboriginals'—had been spared this racial mixing by the geological separation of Tasmania from the mainland.[55] For Mathew, for Officer, and indeed, for Archibald, the antiquity of the 'true' Aborigines was indisputable. Officer stated bluntly that the racial differences between the two populations meant Tasmania 'must have been peopled long before' these northern invasions took place.[56] To support his argument Officer quoted the widely accepted opinion of anthropologist Walter Baldwin Spencer, who believed the separation of Tasmania from the Australian mainland could not have taken place any 'later than late

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[52] Emphasis added. Archibald, "Notes On The Antiquity Of The Australian Aboriginal Race, Founded Upon The Collection In The Warrnambool Public Museum," 24

[53] See Chapter Three, and Russell McGregor, *Imagined Destinies: Aboriginal Australians and the Doomed Race Theory, 1880-1939*, (Carlton South: Melbourne University Press, 1997), ix

[54] Officer, 37. Mathew migrated to Australia in 1864. After working as a gold-digger in Queensland, he moved to Victoria and studied theology at the University of Melbourne. He maintained a lifelong interest in ethnology and anthropology, publishing multiple books and journal articles on Australia's indigenous peoples. In 1889 he won the Royal Society of New South Wales' prize for his paper 'The Australian Aborigines, *Journals and Proceedings of the Royal Society of New South Wales* 23 (1899): 335-449. The extensive essay was the basis for Mathew's best-known monograph, *Eaglehawk and Crow* (1899).

[55] Officer argued that the 'Malay and Papuan influence' had been 'arrested by Bass' Straits.' Officer, 37

[56] Officer, 37

Pliocene times.'[57] Archibald and Officer therefore both acknowledged that 'true' Aborigines had existed across the continent of Australia since at least the late Pliocene, where a portion of them were then separated and preserved in Tasmania before suffering their ultimate extinction in 1876. Yet this antiquity fell short of encompassing mainland Aboriginal Australians, who instead took their racial lineage from 'Malayan and Papuan' invasions.

Archibald and Officer were localised reflections of a broader evolutionism whose discourse of racialisations contributed to a fluid concept of Aboriginal antiquity at the turn of the century. Officer wrote just the one paper on the Warrnambool slab, and by 1898, the indisposed Archibald seemed to have exhausted his attempts to gain further recognition for the artefact. The emergence of a fluid concept of Aboriginal antiquity can be seen more clearly, however, in the slab's next, more distinguished appraiser: John Walter Gregory, who used the slab as part of a state-wide investigation into the antiquity of Victorian Aborigines in 1904. A revered geologist, with a close professional relationship with some of Australia's most influential anthropologists, Gregory was much more heavily involved in scientific discussions on Aboriginal antiquity at the turn of the century. Eager to investigate human antiquity, but guided by his colleague's paradigmatic belief in Aboriginal recency, Gregory produced a confusing articulation of Aboriginal antiquity that encompassed a 'pre-Aboriginal race,' a 'true' Aboriginal race, but never Victorian Aborigines.

Authorising an ambiguous Aboriginal antiquity: John Walter Gregory

In May 1904, as his underfunded appointment with the University of Melbourne was shuddering to a stop, Professor John Walter Gregory (1864-1932) surveyed the western districts of Victoria with the hope of collecting evidence on the region's human antiquity. The Englishman had arrived in Australia in 1900 to replace the late Professor Frederick McCoy as the University's Chair in Geology and Mineralogy, and shortly afterwards, had

[57] 'Professor Spencer is of opinion, from a consideration and comparison of the present faunas of Tasmania and Australia, that separation could not have taken place later than late Pliocene times.' Officer, 37. For other sources demonstrating the consensus on the late Pliocene separation of Tasmania from Australia, see E. H. Eaton, "The Zoology of the Horn Expedition," *The American Naturalist* 34:397 (1900): 25-31; Kurt Lambeck and John Chappell, "Sea Level Change through the Last Glacial Cycle," *Science* 292:5517 (2001): 679-686.

also been appointed director of the Geological Survey of Victoria. Having previously conducted research across East Africa and North America, Gregory was well equipped for the research trips he conducted in Tasmania, South Australia and Victoria.[58] Having heard of Archibald's supposedly ancient limestone slab, he spent several days in Warrnambool to examine it. Gregory was suspicious of both the humanity and the antiquity of the slab even before he examined it, telling local media he was 'inclined to doubt' the impressions were 'caused by a human being, and especially by an aboriginal.'[59] When he read his report before the Royal Society of Victoria a month later, the Warrnambool slab was just one of many artefacts Gregory used to claim Aboriginal Australians had no proven antiquity in the colony of Victoria.

Gregory relied on his professional status, and that of his colleagues, to bolster this claim. Indeed, his paper from 1904 remained one of the most authoritative assessments of Australia's collective human antiquity for almost a century, despite being a Victorian case study. In the 1950s, archaeologist John Mulvaney used Gregory's paper to define Australia's entire scientific sentiment at the turn of the century. He argued Gregory's 'expert opinion' on Victoria's Aboriginal antiquity was so widely accepted that 'no one appears to have sought further evidence of antiquity.'[60] In the 1990s, Tom Griffiths more subtly argued Gregory's claims 'dampened' expectations of Aboriginal antiquity for decades, forcing frustrated scientists to wait for more 'convincing' evidence to be unearthed.[61] Historical narratives, whose lens of amateur versus professional emphasises the liberating development of radiocarbon dating techniques, have long ignored the layered and contradictory levels of recognition given to Aboriginal antiquity at the turn of the century. Yet Mulvaney and Griffiths' histories in particular have overlooked the way Gregory blended the paradigms of geology and anthropology in a convoluted, racialised framework

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[58] See J. F. Lovering, "Gregory, John Walter (1864–1932)," *Australian Dictionary of Biography* 9 (Melbourne University Press: Melbourne, 1983)

[59] *The Ballarat Star,* "Warrnambool: A Relic of Antiquity," May 12, 1904, 4; *The Age*, "Antiquity of Man," May 13, 1904, 7; *The Bendigo Independent*, "Antiquity of Man: Supposed Footprints at Warrnambool," May 14, 1904, 1; *Daily Telegraph*, "Wirth's Circus: Season in Launceston," May 17, 1904, 3; *Leader,* "Antiquity of Man," May 21, 1904, 33

[60] D. J. Mulvaney, "The Stone Age of Australia," *Proceedings of the Prehistoric Society* 27 (1961), 60

[61] See Tom Griffiths, *Hunters and Collectors: The Antiquarian Imagination in Australia,* (Melbourne: Cambridge University Press, 1996), 62-63

that did indeed assign a vast antiquity to some Aboriginal Australians, but not to *Victorian* Aborigines.

This subtle difference reveals the extent to which anthropology's erasure of Aboriginal antiquity influenced Australian science in the early twentieth century. Gregory was a trained and experienced geologist, yet when he assessed the evidence for Victorian Aboriginal antiquity in 1904, he frequently deferred to the expertise of his colleagues in anthropology; especially the imposing Walter Baldwin Spencer, and his lackey, Alfred Stephen Kenyon, whose scholarship epitomised anthropology's erasure of Aboriginal antiquity. Keen to investigate human antiquity, yet motivated to maintain anthropology's rationale of Aboriginal timelessness, this section argues Gregory produced a fluid and confusing articulation of Aboriginal antiquity that incorporated a variety of racialisations, but ultimately had no grounding in 'evidence' and no connection to living Aboriginal peoples.

At the core of Gregory's 1904 paper was the question of whether Aboriginal Australians had witnessed Victoria's most recent period of great volcanic upheaval. In 1901, Gregory published a meticulous assessment of Mount Macedon, an isolated mountain ridge to the north-west of Melbourne he believed marked the beginning of this volcanic period. Although its age was not fixed, Gregory argued it was 'certainly post-Ordovician, most probably post-Palaeozoic,' and no more recent than 'the upper Cainozoic.'[62] Given that 'volcanic activity' had been 'recorded in the legends of the Victorian aborigines,' Gregory suggested an Aboriginal antiquity for the region that, at the very least, went back to the Mesozoic.[63] In the opening lines of his 1904 report, however, Gregory stated he had been

[62] J. W. Gregory, "The Geology of Mount Macedon, Victoria," *Proceedings of the Royal Society of Victoria* 14 (1901-1902), 212

[63] Gregory, "The Geology of Mount Macedon, Victoria," 214. Gregory's understanding of (and former belief in) Aboriginal oral histories had come from the research of respected anthropologist Alfred William Howitt, and James Dawson, a Scottish pastoralist and businessman who published a record of his interactions with local Victorian Aborigines in 1881. See A. W. Howitt, "On the Origin of the Aborigines of Tasmania and Australia," *Report of the Australasian Association for the Advancement of Science* 7 (1898), 753; and James Dawson, *The Australian Aborigines: the languages and customs of several tribes in the Western District of Victoria, Australia*, (Melbourne: George Robertson, 1881), 101-102.

'forced to abandon the opinion,' and summarily pronounced the evidence for Victorian Aboriginal antiquity as 'doubtful.'[64]

Although Gregory did make geological assessments, his argument of a 'doubtful' antiquity was based primarily on an anthropological reading of stone artefacts. If Aborigines had 'lived long ago in Victoria,' Gregory reasoned, there ought to have been an 'abundance of their stone implements' in stratified deposits, yet even formations 'only 300 or 400 years old' were 'quite bare of human remains.'[65] Even when artefacts had been found—like the Maryborough Implement, a sharply pointed piece of human bone initially thought to belong to the Miocene period—Gregory instead claimed they were from modern gravels easily overturned and then reburied in older layers.[66] Of the opinion that 'no other country in the world' had been 'searched so thoroughly' as Victoria, Gregory saw the lack of implements as 'weighty evidence' Aborigines had not been present in Victoria in the volcanic period.[67]

Gregory was just as quick to dismiss the humanity and antiquity of the Warrnambool slab: 'This slab is not convincing.'[68] As there were no fossilised bones or human implements to help date the slab stratigraphically, it was the human nature of its imprints that were the most pertinent clue to its supposed human antiquity. For Gregory, the proportions and general appearance of the impressions did not resemble naked bodies or naked feet, and he labelled them 'a careless man's idea of what human footprints would be like.'[69] If the slab was evidence 'aboriginal man lived in Warrnambool at the time that the lower beds of the Warrnambool sandstone were being laid down,' Gregory quipped, then it was also evidence 'those people wore a modern type of boot.'[70] In that case, any

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[64] J. W. Gregory, "The Antiquity of Man in Victoria," *Proceedings of the Royal Society of Victoria* 17 (1904-1905), 121
[65] Gregory, "The Antiquity of Man in Victoria," 127-128
[66] Another example were Aboriginal kitchen middens, extending for kilometres along the coastal cliffs, in turn determined to be 'superficial,' with the older layers of strata beneath them showing 'no trace of man.' Gregory, "The Antiquity of Man in Victoria," 125-126.
[67] Gregory, "The Antiquity of Man in Victoria," 129-130.
[68] Gregory, "The Antiquity of Man in Victoria," 132
[69] Gregory, "The Antiquity of Man in Victoria," 132
[70] Gregory, "The Antiquity of Man in Victoria," 132-133

arguments that 'the Australian aborigines show no signs of degeneration will have to be seriously reconsidered.'[71]

Gregory supported this dismissal by appealing to the expertise of his colleagues. After listing the four people who supported the slab's human origin and antiquity—Archibald, Officer, the secretary of the Royal Geographical Society, and Archibald's successor, James McDowell—Gregory offered the distinguished list of those who 'discredited' the human origin 'hypothesis': Thomas Sergeant Hall, a lecturer at the University of Melbourne; Walter Howchin, prominent member of the Royal Society of South Australia and foundational South Australian geologist; Edward Fisher Pittman, Government Surveyor, lecturer at the School of Mines and Industries, and Chairman of the Prospecting Board; Robert Etheridge Jnr., a prolific geologist and director of the Australian Museum in Sydney; George Baxter Pritchard, lecturer in geology and mineralogy who, along with T. S. Hall, had joint-acted as professor of natural science after the death of Sir Frederick McCoy, and before Gregory's appointment; Thomas Stephen Hart, a lecturer in geology, mineralogy, and mining at the Ballarat School of Mines; James Stirling, Assistant Government Geological Surveyor; and John Dennant, Inspector of Schools and President of the Royal Society of Victoria who had in fact supported C.G.W. Officer's interpretation of the slab a decade earlier. This was the extent of Gregory's interpretation of the Warrnambool slab: a confident dismissal based on a shared 'professional' belief the impressions were created by modern human beings.

It is interesting to note that Gregory did not engage with the geology of Professor Ralph Tate, whose research on the AEolian coastal formations of Victoria had played a crucial role in Officer's assessment.[72] Despite naming geologists in his list of supporters against the slab, for the majority of his report Gregory relied on the expertise of his colleagues in anthropology. For example, when assessing the Buninyong Bone, a fragment from the rib of a 'giant marsupial' thought to have been marked by humans, Gregory claimed the geological evidence positioned the artefact as evidence of Victorian Aboriginal

[71] Gregory, "The Antiquity of Man in Victoria," 132-133
[72] Tate, as quoted in Officer, 38

antiquity: 'If this bone had been cut to its present form by man…then man must have been contemporary with some of the Victorian volcanic eruptions.'[73] He quickly dismissed his deductions, however, in favour of interpretations from his Melbourne University colleague, Walter Baldwin Spencer (1860-1929), and prominent Melbournian anthropologist Alfred Stephen Kenyon (1867-1943). By this time, Spencer was considered among the founding fathers of anthropology in Australia, and his scholarship epitomised anthropology's paradigm of Aboriginal timelessness.[74] Spencer's name conveyed so much authority that Gregory didn't include any of Spencer's comments in the report, but merely stated that after examining the Buninyong Bone, Spencer had 'discredit[ed] it as proof of the great antiquity of man in Victoria.'[75] Given Spencer's stance on antiquity, such a response is hardly surprising.

Kenyon, who was at the beginning of his career, had also earned Gregory's esteem. Gregory described him as 'the most experienced Victorian collector' whose knowledge of 'the stone and bone implements of the Victorian aborigines is probably unequalled.'[76] Kenyon dismissed the Buninyong Bone as 'unlike any Victorian stone or bone implement' he had ever seen, and argued its markings 'must have been cut by a sharper implement than any which the aborigines had.'[77] Kenyon's rigid belief in primitive Aboriginal material culture cast a dogmatic shadow over their antiquity, especially in his later scholarship.[78] Indeed, Kenyon became so intent on maintaining Aboriginal timelessness that he actively ignored sophisticated arguments for Aboriginal antiquity made in the 1930s and 1940s. Kenyon's influence on understandings of Aboriginal antiquity in this period will be explored in more depth in Chapter Six.

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[73] Gregory, "The Antiquity of Man in Victoria," 123
[74] See Chapter Three.
[75] Gregory, "The Antiquity of Man in Victoria," 123
[76] Gregory, "The Antiquity of Man in Victoria," 129, 123-124.
[77] Gregory, "The Antiquity of Man in Victoria," 124
[78] See A. S. Kenyon, D. J. Mahony and S. F. Mann, "Evidence of Outside Culture Inoculations," in L Keith Ward (ed.), *Report of the Seventeenth Meeting of the Australasian Association for the Advancement of Science: Adelaide Meeting, August, 1924* (Adelaide: R. E. E. Rogers, Government Printer, 1926), 464-466; A. S. Kenyon, D. J. Mahony and S. F. Mann, "Megalithic Culture in Australia," in L Keith Ward (ed.), *Report of the Seventeenth Meeting of the Australasian Association for the Advancement of Science: Adelaide Meeting, August, 1924* (Adelaide: R. E. E. Rogers, Government Printer, 1926), 469-470.

Of relevance to this chapter is the way Gregory blended his colleagues' rationale of Aboriginal timelessness into an increasingly racialised and fluid articulation of Aboriginal antiquity. Indeed, it was only three years earlier that Gregory's reading of Aboriginal oral histories led him to believe they had 'some knowledge of the eruptions from the now extinct volcanoes.'[79] Gregory's confidence in these sources had come from the anthropology of Alfred William Howitt, a highly esteemed anthropologist who had consistently argued for a vast antiquity for Aboriginal Australians in the 1880s.[80] After four years in Spencer's company, however, Gregory was suddenly unwilling to treat oral histories as markers of Aboriginal antiquity.[81] Gregory discussed various Aboriginal accounts of volcanic eruptions, as well as their names for extinct volcanic craters, but in step with Spencer's thinking, he made vague, unsupported claims their veracity was 'very uncertain' and 'easily explained without accepting them as historic.'[82]

Gregory expanded on the racial discourse glimpsed in Archibald and Officer's papers, and used various racialisations to attribute different depths of antiquity to different Aboriginal 'races.' Although their lack of implements and untrustworthy oral histories 'gave no certain support' Victorian Aborigines had witnessed volcanic eruptions, Gregory discussed the 'possible occupation of Victoria by a *pre-aboriginal race*,' which may have been contemporaneous with the volcanoes.[83] He repeated the now 'generally accepted' continental migration theory of a 'negroid race' that had become isolated in Tasmania after the enlargement of the Bass Strait; after which Australia was 'invaded' by a 'race of black Caucasians,' who 'intermixed' with and then 'replaced' the 'negroid occupants.'[84] Gregory

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[79] Gregory, "The Antiquity of Man in Victoria," 134.
[80] Gregory cited Howitt's "On the Origin of the Aborigines of Tasmania and Australia," *Report of the Australasian Association for the Advancement of Science* 7 (1898), 753. For Howitt's arguments on Aboriginal antiquity see Chapter Three. Gregory also cited James Dawson, a Scottish pastoralist and businessman who published a record of his interactions with local Victorian Aborigines: *The Australian Aborigines: the languages and customs of several tribes in the Western District of Victoria, Australia*, (Melbourne: George Robertson, 1881), 101-102.
[81] When Walter Baldwin Spencer was confronted with Aboriginal oral histories that corresponded with Australia's ancient geology, he dismissed these as 'a remarkable coincidence.' See Walter Baldwin Spencer and Francis Gillen, *The Native Tribes of Central Australia,* (London: Macmillan, 1899), 388. See also Chapter Three.
[82] Gregory, "The Antiquity of Man in Victoria," 134, 137
[83] Emphasis added. Gregory, "The Antiquity of Man in Victoria," 138
[84] Gregory, "The Antiquity of Man in Victoria," 139

used this theory to acknowledge the existence of some type of Aboriginal peoples in Victoria, stating that 'men of the *Tasmanian race* may have lived during the volcanic period.'[85] He also acknowledged the likely antiquity of *Victorian* Aborigines by reasoning that if the 'negroid' Tasmanian and 'black Caucasian' races had 'overlapped' in Victoria, then 'the few doubtful traditions previously quoted, might be regarded as the distorted fragments of information, which the present aborigines obtained from their predecessors.'[86]

Yet for all of this widely accepted theory, Gregory maintained there was no *evidence* to prove it. Implements of the 'rude' Tasmanian Aboriginal type had only been found in Tasmania and Western Australia, not in Victoria. The Buninyong Bone—the only artefact to potentially connect Aboriginal people to Victoria—was deemed too technologically advanced to belong to the 'true' Tasmanian Aborigines.[87] Thus, without any artefacts of material culture to prove the existence *in* Victoria of either a 'pre-Aboriginal race' of 'black Caucasians,' or the 'true' Aboriginal 'Tasmanian race,' Gregory concluded Aboriginal Australians had 'resided in Victoria for but a short period.'[88] Following this logic is difficult, not least because it is truly illogical. Gregory leaned into his racialisations, using them to acknowledge the ancient existence of various human races in Australia, and even the likely antiquity of some form of Aborigines in Victoria; but his racialisations never connected to or incorporated Victorian Aborigines themselves.

Gregory added a final, confusing layer to this racialised articulation of Aboriginal antiquity when he discussed tribal formation. He argued that while the existence and dispersal of so many different Aboriginal tribal groups 'at first suggests their long residence in the country,' it instead worked only to prove the 'antiquity of the tribes, and not their long residence in Victoria.'[89] Tribal divisions, Gregory claimed, were made *before* the

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[85] Emphasis added. Gregory, "The Antiquity of Man in Victoria," 139
[86] Gregory, "The Antiquity of Man in Victoria," 139
[87] The Tasmanians were widely known as having created implements 'of a ruder type than those of the Australians.' On this point, Gregory referenced the popular research of Edward B. Tylor on the 'Stone Age' culture of the Tasmanian Aborigines, described as being Palaeolithic in nature. See Chapter Three. See also Gregory, "The Antiquity of Man in Victoria," 139-140
[88] Gregory, "The Antiquity of Man in Victoria," 141
[89] Gregory, "The Antiquity of Man in Victoria," 141-142

Aborigines' arrival in Victoria, when they were still invading the northern parts of Australia. This lack of antiquity *in* Victoria was supported by the small numbers of both the past and present populations. No census data existed, of course, but Gregory cited early colonial accounts suggesting their population was between 3,000 and 7,500 at the time of British invasion.[90] This small population were also thought to have only occupied certain parts of the state, as no traces of them had been found in locations that 'would have made excellent camps.'[91] Victorian Aborigines were thus definitively portrayed as a sparse, recently settled population with no connection to the antiquity of the populations that had come before them: 'however ancient the Australian aborigines may be,' Gregory concluded, 'there is no evidence of the long occupation of Victoria by man.'[92]

Gregory's report has long been considered one of, if not *the* definitive text on Australia's human antiquity in the early twentieth century. John Mulvaney, the 'Father of Australian archaeology,' described Gregory's conclusion as that of a 'responsible geologist' who rejected 'wild claims' and instead 'subjected the relevant evidence to critical examination.'[93] After Gregory's 'balanced survey,' scientists were allegedly left to await more convincing evidence.[94] This is not an wholly unfair portrayal, as 'amateur' and 'professional' scientists alike were attempting to describe Aboriginal antiquity right as its logic was being erased from the paradigms of anthropology. For Gregory, a geologist grounding his arguments in anthropology, this was a particularly difficult task. In response to these difficulties, Gregory used racialisations to acknowledge the antiquity of humans in Australia, but in deference to the interpretations of his colleagues in anthropology, made the overall confusing conclusion there was 'no evidence of the long occupation of Victoria by *man*.'

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[90] Gregory refers to estimates made by prominent colonial explorer, Sir Thomas Mitchell, research conducted by anthropologist Robert Brough Smyth, and E. S. Parker, head of the Aboriginal Station at Mount Franklin, Victoria. Gregory, "The Antiquity of Man in Victoria," 142
[91] Gregory, "The Antiquity of Man in Victoria," 143
[92] Gregory, "The Antiquity of Man in Victoria," 143-144
[93] Mulvaney, "The Stone Age of Australia," 60
[94] See D. J. Mulvaney, "Research into the prehistory of Victoria: A criticism and a report on a field survey," *Historical Studies: Australia and New Zealand* 8:29 (1957): 32-43.

Historians have emphasised the earlier part of this statement, suggesting refined dating techniques and an advanced archaeological framework may have freed Gregory from a reliance on an anthropological paradigm incapable of positively proving Aboriginal antiquity.[95] Yet such a portrayal disregards the ways in which Gregory's fluid racial categories, bound by material culture and discrete geographic locations, worked to constantly shift the burden of proof for Aboriginal antiquity. Embedded in Gregory's report was a racialised manipulation of Aboriginality that would never have allowed an attribution of any antiquity to Victorian Aboriginal peoples; only to an abstracted Aboriginal ancestor, or even more broadly, some form of 'man.' Gregory certainly utilised a fluid combination of geology and anthropology in his empirical assessment, but overall, it was his fluid Aboriginality that ultimately left Aboriginal antiquity in doubt.

This fluidity did not go unnoticed at the time. Reverend John Mathew, the anthropologist Gregory credited for the theory Australian Aborigines were a separate 'race' to the 'true Aboriginal race' in Tasmania, picked up on the contradiction in Gregory's articulation of Aboriginal antiquity.[96] Overviews of Gregory's report had appeared in newspapers throughout Victoria, South Australia, Western Australia, Tasmania, and even in parts of central Queensland, with some articles claiming Gregory positioned the 'geological evidence' as 'strongly in favour of the view that man has not been resident in Victoria for more than, say, 1,000 years, plus or minus 50 per cent.'[97] These numerical calculations do not appear anywhere in Gregory's report, and it is unclear where the papers

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[95] See Griffiths, *Hunters and Collectors*, 63; Mulvaney, "The Stone Age of Australia," 60-61; D. J. Mulvaney, "The Pleistocene Colonization of Australia," *Antiquity* 38:152 (1964): 263-267.

[96] Mathew developed this idea in his prize-winning paper "The Australian Aborigines," *Journal and Proceedings of the Royal Society of New South Wales* 23 (1899): 335-449, and later in his monograph, *Eaglehawk and Crow* (1899). Gregory referred to Mathew's 'interesting suggestion' that certain oral traditions of mainland Australian Aborigines may have been based on the 'last Tasmanian survivors on the mainland.' See Gregory, "The Antiquity of Man in Victoria," 140

[97] *The Argus*, "Antiquity of Man in Victoria," June 11, 1904, 13; *Bendigo Advertiser*, "Antiquity of Man in Victoria," June 13, 1904, 2; *Examiner* (Launceston, Tasmania), "Antiquity of Man in Victoria," June 14, 1904, 6; *Border Watch* (Mount Gambier, SA), "Antiquity of Man in Victoria," July 6, 1904, 4; *The Capricornian* (Rockhampton, QLD) "Antiquity of Man in Victoria," July 23, 1904, 6; F. D. Johnson, "Antiquity of Man in Victoria: To the Editor of The Argus," *The Argus*, July 9, 1904, 16

obtained them.[98] Mathew wrote of his 'pleasant surprise' at Gregory's results, stating those who had 'given the most careful, independent study to problems in Australian anthropology' had not yet 'ventured to assign any date to the first settlement of Victoria, or any other part of Australia.'[99] Mathew agreed on the absence of geological evidence for Victorian Aboriginal antiquity, but he argued the 'silence of geology' would leave a 'much greater margin than 1,500 years from now for the date of man's arrival.'[100]

Of greater significance for Mathew, however, was the 'one department of evidence' he believed Gregory had overlooked: the 'settlement of the Tasmanians in their island, and their relation to the tribes on the mainland.'[101] Mathew argued that Gregory acknowledged a 'priority of occupation of Australia by congeners of the Tasmanians,' but appeared to 'lose sight of this' when presenting his conclusions on Victorian Aboriginal antiquity.[102] Mathew believed 'the date of the settlement of Tasmania' was 'part of the problem of the antiquity of man in Victoria,' and unsurprisingly put forward his own theory to 'insist[s] upon the occupation of Victoria by progenitors of the Tasmanians' as a solution to Gregory's lack of focus.[103]

Some newspaper correspondents requested further information on the 'condemned' evidence, or drew Gregory's attention to artefacts he may have overlooked.[104] Gregory, however, remained firm that no artefact or discovery could yet be considered 'evidence' of a lengthy Aboriginal antiquity in Victoria. He replied sharply to several critics, but as he resigned from the University of Melbourne around the same time, discussion soon dwindled.[105] His accepted geological authority dismissed the Warrnambool slab, and the antiquity of Victorian Aborigines, once and for all: as one article in the Hobart *Mercury*

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[98] Melbourne's *The Argus* was the first paper to print the figures. After appearing in Victoria's most popular newspaper, the details were reproduced in all of the subsequent articles on Gregory's report, cementing them as a factual component of the Professor's argument.
[99] John Mathew, "Antiquity of Man in Victoria: To the Editor of The Argus," *The Argus*, June 18, 1904, 17
[100] Mathew, "Antiquity of Man in Victoria: To the Editor of The Argus," 17
[101] Mathew, "Antiquity of Man in Victoria: To the Editor of The Argus," 17
[102] Mathew, "Antiquity of Man in Victoria: To the Editor of The Argus," 17
[103] Mathew, "Antiquity of Man in Victoria: To the Editor of The Argus," 17
[104] F. D. Johnson, "Antiquity of Man in Victoria: To the Editor of The Argus," *The Argus*, July 9, 1904, 16
[105] See *Mercury*, "Our Melbourne Letter: From Our Own Correspondent," June 28, 1904, 8; J. W. Gregory, "Antiquity of Man in Victoria: To the Editor of The Argus," *The Argus*, July 16, 1904, 17; J. W. Gregory, "Antiquity of Man in Victoria: To the Editor of The Argus," *The Argus*, August 3, 1904, 8

claimed, 'not a single Australian geologist' had supported the statement of the slab's antiquity, and almost 'everyone of any note' had repudiated Archibald's claims.[106] Just over a year later, however, the slab was once again making headlines across Australia. This time, the slab was appraised by a university scientist, equal in scientific esteem to Gregory, who not only saw the slab as evidence of a deep Aboriginal antiquity for Victoria, but also used it to argue for a human antiquity that extended for millions of years.

Overcoming abstraction through racial relation: Hermann Klaatsch

In March 1904, mere months before Gregory would make his survey of Victoria, German anatomist and physical anthropologist Hermann Klaatsch (1863-1916) arrived in Australia. After years teaching comparative anatomy at Heidelberg University, Klaatsch turned his attention towards anthropology and the complex questions surrounding the 'evolution of form.'[107] Between 1904 and 1907, he travelled throughout Australia and parts of Java to examine various living indigenous populations, as well as the collected artefacts and specimens of anthropologists. The purpose of Klaatsch's research trip was not just to investigate the evolution of human races, but to search for the origin of the human species. Both Klaatsch and his friend and colleague, Otto Schoetensack (1850-1912), believed in the popular theory that the human race had first begun in Asia.[108] Klaatsch and Schoetensack believed 'the Australian blacks' held particular importance for understanding 'the whole development of mankind,' and during his survey of the continent, Klaatsch intended to systematically 'attack the difficult problem of the[ir] origin.'[109] After only a few months,

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[106] *Mercury*, "Our Melbourne Letter: From Our Own Correspondent," June 28, 1904, 8

[107] Bruno Oetteking, "Hermann Klaatsch," *American Anthropologist* 18:3 (1916), 423

[108] See Corinna Erckenbrecht, "The Politics of Time: Hermann Klaatsch in the Wet Tropics and the fate of his ethnographic collection in Europe," *Memoirs of the Queensland Museum—Culture* 10 (2016): 93-106; Emily Kern, "Out of Asia: A Global History of the Scientific Search for the Origins of Humankind," (PhD Thesis, Princeton University, 2018); Peter J. Bowler, "Asia or Africa?" in his *Theories of Human Evolution: A Century of Debate, 1844-1944,* (Oxford: Basil Blackwell, 1987), 173-185.

[109] Hermann Klaatsch, "Some Notes on Scientific Travel Amongst the Black Population of Tropical Australia in 1904, 1905, 1906," *Proceedings of the Australasian Association for the Advancement of Science* 11 (1907), 577. For Otto Schoetensack's belief on the importance of Aboriginal Australians in human evolution, see Otto Schoetensack, "Die Bedeutung Australiens für die Heranbildung des Menschen aus einer niederen Form. (Vorgelegt in der Sitzung der Berliner Anthropologischen Gesell-schaft vom 27. Juli 1901)," *Zeitschrift für Ethnologie* 33 (1901): 127-154; and Otto Schoetensack, "Die Bedeutung Australiens für die Heranbildung

however, Klaatsch lamented the 'prehistoric fountain did not bubble' in Australia as he and Schoetensack had expected.[110] He had first travelled to Brisbane to study the collection of anthropologist Walter Edmund Roth, before continuing across Queensland and its offshore islands, and then, in 1905, turning to the south-east, analysing skulls, skeletons and 'the living body of the aboriginal' as he went.[111] On 6 September 1905, Klaatsch made a deliberate stop-over at the Warrnambool Museum to examine the 'celebrated' limestone slab, which immediately captured his attention.[112]

Klaatsch's visit to Warrnambool was highly publicised, and initial reports described him as being 'struck' by the slab and its 'genuine human imprints.'[113] A few days later, after deciding to extend his stay, Klaatsch gave a detailed statement to the press in which he framed the Warrnambool slab as part of the human evolutionary story he was in Australia to prove. He disagreed with 'Gregory's theory that man has only existed in Victoria for a period of from 500 to 1,000 years,' and instead argued the Warrnambool impressions had been created 'many thousands of years ago' by 'prehistoric man.'[114] Klaatsch argued 'the human race must be regarded as having existed for an enormous period of time' in Australia, as it had once 'formed part of a great continent which was the home of mankind.'[115] Klaatsch would go on to describe this extraordinary antiquity as explicitly Aboriginal, and one that connected directly to contemporary Aboriginal Australians. This section argues, however, that Klaatsch's interpretation of the Warrnambool slab had little

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des Menschen aus einer niederen Form," *Verhandlungen des naturhistorisch-medizinischen Vereins zu Heidelberg* 7 (1904): 105-130.

[110] Letter from Hermann Klaatsch to Otto Schoetensack, 17 June 1904, Private Archive of the Klaatsch Family, quoted in Erckenbrecht, "The Politics of Time," 95

[111] Klaatsch, "Some Notes on Scientific Travel Amongst the Black Population of Tropical Australia in 1904, 1905, 1906," 577

[112] *The Age*, "Prehistoric Man," September 8, 1905, 6

[113] *Evening News* (Sydney, NSW), "Prehistoric Man: Supposed Relics at Warrnambool," September 9, 1905, 4; *The Australasian* (Melbourne, VIC), "Notes and Notices," September 9, 1905, 37

[114] *The Express and Telegraph* (Adelaide, SA), "Australia in Prehistoric Times: Dr. Klaatsch's Theory," September 12, 1905, 4; *The Advertiser* (Adelaide, SA), "Australia In Prehistoric Times: Dr Klaatsch's Theory, The Home of Mankind," September 12, 1905, 8; *The Daily News* (Perth, WA), "Australia In Prehistoric Times: Dr Klaatsch's Theory, The Home of Mankind," September 25, 1905, 6

[115] *The Express and Telegraph* (Adelaide, SA), "Australia in Prehistoric Times: Dr. Klaatsch's Theory," September 12, 1905, 4; *The Advertiser* (Adelaide, SA), "Australia In Prehistoric Times: Dr Klaatsch's Theory, The Home of Mankind," September 12, 1905, 8; *The Daily News* (Perth, WA), "Australia In Prehistoric Times: Dr Klaatsch's Theory, The Home of Mankind," September 25, 1905, 6

to do with overturning or ignoring anthropology's paradigm of Aboriginal timelessness, and more to do with proving his predetermined theory of Australia as the birthplace of the entire human race. The need to prove this theory was also influenced by his trip's declining finances, which prompted Klaatsch to accept a request from the German Museum of Ethnology, in Leipzig, to procure Aboriginal artefacts for their ethnological collection. Although his claims made little impact on Australia's professional scientists—who hypocritically critiqued Klaatsch's anthropological lens and lack of geological evidence—they were well received by the broader Australian public, and Klaatsch used the local media to full effect in publicising his bold claims of the slab's Aboriginal antiquity and Australia's global evolutionary significance.

Klaatsch's assessment of the Warrnambool slab and his public claims for its vast Aboriginal antiquity far outstripped the news coverage Gregory had received the year before. Reports on his visit appeared in newspapers in every Australian state, with updates appearing regularly for at least two months.[116] Articles emphasised Australia's primordial status, claiming Klaatsch had 'abundant evidence' Australia was 'not a new land, only recently populated,' but one that had been 'peopled in the quaint old times that ante date the known history of the world.'[117] Klaatsch would not publish his Australian research for another two years, making these articles, and the 'exclusive' interviews he conducted with certain papers, an important platform in which he refined his arguments of the

[116] See *Newcastle Morning Herald and Miners' Advocate*, "Current News," September 11, 1905, 4; *The Mercury*, "Supposed Relics of Prehistoric Man, Warrnambool," September 12, 1905, 3; *The Age,* "Prehistoric Australians, German Scientist's Theory, Warrnambool," September 12, 1905, 6; *Northern Star* (Lismore, NSW), "Prehistoric Man, Supposed Relics at Warrnambool," September 13, 1905, 5; *Darling Downs Gazette* (QLD), "Prehistoric Man - Supposed Relics," September 13, 1905, 2; *Wagga Wagga Advertiser* (NSW), "Prehistoric Australians: German Scientist's Theory," September 14, 1905, 4; *The North Western Advocate and Emu Bay Times* (TAS), "Prehistoric Australians: German Scientist's Theory," September 15, 1905, 4; *Leader* (VIC), "Prehistoric Australians: German Scientist's Theory: Warrnambool," September 16, 1905, 23; *Evening News* (NSW), "Prehistoric Australia: Professor Klaatsch's Researches," September 16, 1905, 5; *Mount Alexander Mail* (VIC), "Prehistoric Man in Victoria: A German Scientist's Theory," September 19, 1905, 4; *The Daily News* (Perth, WA), "Australia In Prehistoric Times: Dr Klaatsch's Theory, The Home of Mankind," September 25, 1905, 6; *Kalgoorlie Miner* (WA), "The Age of Australia: Anthropological Investigations," September 30, 1905, 10; *The Maitland Daily Mercury* (NSW), "The Age of Australia: Anthropological Investigations," October 3, 1905, 2; *Morning Bulletin* (QLD), "The Age of Australia," October 14, 1905, 10; *Table Talk* (VIC), "Personal," December 21, 1905, 7.

[117] *Bairnsdale Advertiser and Tambo and Omeo Chronicle*, "Who were the first Australians? Dr Klaatsch and his discoveries," September 19, 1905, 3

Warrnambool slab, its Aboriginal antiquity, and the 'home of mankind' theory. In an interview with Adelaide's *The Advertiser*, for example, Klaatsch assigned the Warrnambool slab to the same 'post tertiary period' that Archibald and Officer had before him.[118] Klaatsch, however, was more emphatic in his claims that 'whole aeons have passed since first this country was inhabited,'[119] and much was made of his theory of a sunken supercontinent. Like anthropologist James Bonwick in the 1870s, Klaatsch argued that while 'prehistoric man' was making his mark on Warrnambool, Australia and Tasmania had formed part of 'a great Antarctic continent' that extended into the Indian Ocean and connected with Asia and Africa.[120] This was, of course, before Victoria's period of 'great volcanic upheaval,' and thus posited a greater antiquity than Gregory had supposed only twelve months prior.[121]

While some of his claims had familiar details, Klaatsch stood alone in his racialisation of Australia's human antiquity: he was convinced of the unity of the 'Australian blacks' as 'one primitive and prehistoric race.'[122] Rather than being a mixture of 'negroid' and 'black Caucasian' races, as Gregory, Mathew and Officer had argued, Klaatsch believed contemporary Aboriginal Australians were the 'relics' of the 'prehistoric race' that had inhabited not only Australia, but the supercontinent 'long submerged' in the Indian Ocean.[123] He accepted there may have been 'some admixture by immigration' in the northern parts of Australia, but not so much as to 'effect a change of the race.' In Klaatsch's opinion, the 'whole of the aboriginal people of Australia' were of the 'unmixed primitive

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[118] *The Advertiser*, "Prehistoric Man: Was Australia His Home? A Visiting Professor's Views," September 21, 1905, 9

[119] *Bairnsdale Advertiser and Tambo and Omeo Chronicle*, "Who were the first Australians? Dr Klaatsch and his discoveries," September 19, 1905, 3

[120] *The North Western Advocate and Emu Bay Times*, "Prehistoric Australians: German Scientist's Theory," September 15, 1905, 4

[121] *The North Western Advocate and Emu Bay Times*, "Prehistoric Australians: German Scientist's Theory," September 15, 1905, 4

[122] *The Argus,* "Prehistoric Australia: Professor Klaatsch's Researches," September 15, 1905, 4; *Evening News*, "Prehistoric Australia: Professor Klaatsch's Researches," September 16, 1905, 5; *Northern Star*, "Prehistoric Australia: Professor Klaatsch's Researches," September 23, 1905, 3; *Clarence and Richmond Examiner*, "Prehistoric Australia: Professor Klaatsch's Researches," October 10, 1905, 6

[123] *The Argus,* "Prehistoric Australia: Professor Klaatsch's Researches," September 15, 1905, 4; *Evening News*, "Prehistoric Australia: Professor Klaatsch's Researches," September 16, 1905, 5; *Northern Star*, "Prehistoric Australia: Professor Klaatsch's Researches," September 23, 1905, 3; *Clarence and Richmond Examiner*, "Prehistoric Australia: Professor Klaatsch's Researches," October 10, 1905, 6

type.'[124] This is an important distinction. Not only did Klaatsch believe in a vast human antiquity for Australia, but his theory of racial composition was one that drew an explicit connection between this antiquity and living Aboriginal peoples across Australia. For Klaatsch, Australia's extensive human antiquity *was* Aboriginal, and no amount of racial mixing could disconnect contemporary Aborigines from Australia's deep human past.

Klaatsch's proof of Australian Aboriginal racial unity, and subsequent antiquity, was purely anatomical, and revolved around the 'primitive characteristics of the skull and teeth' that were 'persistent in all the Australian types.'[125] One or two newspaper reports seized on this evidence and mobilised the geological authority of Gregory to critique it. For example, the same *Mercury* correspondent who had defended Gregory in 1904 wrote again in October 1905 to update readers on Klaatsch's theories. The author stated that Klaatsch, the latest 'savant' to revive 'the tertiary theory' for the Warrnambool slab, had determined 'an antiquity of millions of years' for Australia and provided 'this new continent with an old history as the home of the human family.'[126] Klaatsch, they alleged, had declared the Warrnambool impressions, 'undoubtedly of human origin,' were proof that 'millions of years ago Australia was a man-inhabited country.'[127] The correspondent bluntly reminded readers this theory was in direct conflict with the opinion of Gregory, 'an eminent geologist,' who considered the antiquity of 'Australian man' as no more 'than 500 or 600 years.'[128] For this correspondent, Gregory's legacy as a leading geological authority trumped Klaatsch's anthropology: 'while Professor Klaatsch may be a good ethnologist, anthropologist, and anatomist, he is an indifferent geologist.'[129] Thus Gregory's assessment

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[124] *The Argus,* "Prehistoric Australia: Professor Klaatsch's Researches," September 15, 1905, 4; *Evening News*, "Prehistoric Australia: Professor Klaatsch's Researches," September 16, 1905, 5; *Northern Star*, "Prehistoric Australia: Professor Klaatsch's Researches," September 23, 1905, 3; *Clarence and Richmond Examiner*, "Prehistoric Australia: Professor Klaatsch's Researches," October 10, 1905, 6
[125] *The Argus,* "Prehistoric Australia: Professor Klaatsch's Researches," September 15, 1905, 4; *Evening News*, "Prehistoric Australia: Professor Klaatsch's Researches," September 16, 1905, 5; *Northern Star*, "Prehistoric Australia: Professor Klaatsch's Researches," September 23, 1905, 3; *Clarence and Richmond Examiner*, "Prehistoric Australia: Professor Klaatsch's Researches," October 10, 1905, 6
[126] *Mercury*, "Our Melbourne Letter: From Our Own Correspondent," October 2, 1905, 7
[127] *Mercury*, "Our Melbourne Letter: From Our Own Correspondent," October 2, 1905, 7
[128] *Mercury*, "Our Melbourne Letter: From Our Own Correspondent," October 2, 1905, 7
[129] *Mercury*, "Our Melbourne Letter: From Our Own Correspondent," October 2, 1905, 7

of the Warrnambool slab as 'a comparatively recent limestone' was enough to sink the tertiary theory, and with it 'the millions of years.'[130]

There are two points of irony here: first, for all his geological status, Gregory had frequently deferred to his colleagues' anthropological expertise in his assessment of Victorian Aboriginal antiquity; and second, Australia's professional scientists would themselves go on to use anatomical evidence to make their own claims for an extensive human antiquity for Australia less than a decade after Klaatsch left Australia. The crucial difference in their arguments, however, was that Klaatsch did not attempt to ambiguously blend the definition of Australia's human antiquity and its Aboriginal antiquity, whereas scientists in the coming decades would.[131] Klaatsch remained firm in his articulation of an extensive Aboriginal antiquity for Australia, connected to contemporary Aboriginal peoples.

As a physical anthropologist, Klaatsch sat somewhat outside the paradigm shift that was, at this very moment, removing Aboriginal antiquity and the entire concept of time from the emerging framework of functionalist anthropology. His claims of the Warrnambool slab's extensive Aboriginal antiquity can be better explained, however, by his predetermined belief Australia was the birthplace of the human race, combined with his need to gain financial support for his research and artefact collection. Historians have noted that in the second half of the nineteenth century, the emergence of an urban, middle class in Germany led to an increased interest in science and culture, which in turn prompted the creation of more municipal museums.[132] In the relatively prosperous years before the First World War, these museums sought to fill their collections with artefacts

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[130] *Mercury*, "Our Melbourne Letter: From Our Own Correspondent," October 2, 1905, 7

[131] See Chapter Five.

[132] See Ulrike Felt, "The city as a condensed space for meeting between science and the public: Reflections on a comparison of the popularisation of science in Vienna and Berlin," in *Science and the public in Berlin, 1870-1930*, ed. Constantin Goschler, (Stuttgart: Franz Steiner Verlag, 2000): 185-219; Hubert Laitko, "Reflections on the Space of Science," in *Fixed points: Science in the city and the region, Festschrift for Hubert Laitko on his 65th birthday*, ed. Horst Kant, (Berlin, 1996): 313-340; Andrew D. Evans, "Race Made Visible: the Transformation of Museum Exhibits in Early-twentieth-century German Anthropology," *German Studies Review* 31:1 (2008): 87-108; Anja Laukötter, *From 'culture' to 'race' - from object to body? Ethnological museums and their sciences at the beginning of the 20th Century*, (Bielefeld: Verlag, 2007).

from Germany's own colonial outposts and others across the world.[133] Many museum directors, eager to elevate their institutions above others in the same city, became fiercely competitive in their procurement of artefacts, and created a kind of 'collecting mania."[134]

Cultural anthropologist Corinna Erckenbrecht notes that only a few days after Klaatsch left Germany for Australia, Hermann Obst, the director of the German Museum of Ethnology in Leipzig, wrote a letter asking Klaatsch to collect Aboriginal artefacts for his museum while in Australia.[135] The letter was forwarded to Australia, where Klaatsch received it months later in Townsville, Queensland. According to Erckenbrecht, Klaatsch received similar requests and inquiries from other museums, and across the course of his trip, he received funding from the Museum of Ethnology in Leipzig, the Museum of Ethnology in Hamburg, the Academy of Science in Berlin, and the Museum of Ethnology in Cologne.[136] While such funding was not uncommon, Klaatsch's finances would have been front of mind in the months leading up to his examination of the Warrnambool slab. Queensland Protector of Aborigines, Walter Edmund Roth, had been a major support for Klaatsch in the beginnings of his trip, giving him access to his own anthropological collection in Queensland, as well as the government sailboat *Melbidir* for Klaatsch's trip to the Gulf of Carpentaria in 1904.[137] After Roth became involved in a Royal Commission into the treatment and condition of Aborigines in Western Australia, and subsequently resigned amid the report's fallout and controversy in 1905, Klaatsch was a lot more dependent on resources he could source himself.[138] Several historians have also noted Klaatsch's penchant for 'salvage anthropology,' and his ruthless procurement of Aboriginal artefacts through

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[133] See H. Glenn Penny, O*bjects of culture: Ethnology and ethnographic museums in Imperial Germany*, (Chapel Hill: University of North Carolina Press, 2002); H. Glenn Penny and Mati Bunzl, *Worldly provincialism: German anthropology in the age of the Empire*, (Ann Arbor: University of Michigan Press: Ann Arbor, 2003).
[134] Laukötter, 159
[135] See Corinna Erckenbrecht, *In search of origins: The anthropologist and collector Hermann Klaatsch's trip to Australia, 1904-1907,* (Cologne: Wienand-Verlag, 2010), 67-69
[136] Erckenbrecht, "The Politics of Time," 96-97
[137] See Brigitte Stehlik, "Hermann Klaatsch and the Tiwi, 1906," *Aboriginal History* 10:1 (1986), 61; Erckenbrecht, "The Politics of Time," 96
[138] For more on Roth, see Barrie Reynolds, "Roth, Walter Edmund (1861-1933)," *Australian Dictionary of Biography* 11 (Melbourne: Melbourne University Press, 1988).

practices such as grave robbing.[139] One incident in which he stole Aboriginal remains from a grave in Normanton, Queensland, saw Klaatsch conduct a hasty retreat from the local Aboriginal community, who attempted to spear him as a 'Devil-Devil.'[140]

Klaatsch's claims for the extensive Aboriginal antiquity of the Warrnambool slab must, therefore, be read alongside his financial circumstances and collecting practices as well as the scientific theories he was attempting to prove. Klaatsch had already been told by scholars in Sydney and Melbourne his plan to view the Warrnambool slab was a 'waste of time and money.'[141] Positioning the slab as proof of the birthplace of humankind, and as an artefact representing the curious and soon-to-be-extinct Aboriginal population, had significant academic and financial consequences for Klaatsch. These priorities also explain the energy with which Klaatsch publicised his claims of the Warrnambool slab in 1905, when the artefact itself ended up occupying less than a paragraph in the highly anticipated report he published at the end of his travels. In it, Klaatsch wrote only that he found the formation 'more interesting than expected,' and concluded its impressions belonged to a 'juvenile human individual of the Tertiary period.'[142] His arguments of its extensive Aboriginal antiquity were not so much driven by an intention to overturn the anthropological paradigm of Aboriginal timelessness, but rather from his need to bolster the funding and results of his research trip.

Klaatsch's highly publicised assessment of the Warrnambool slab, and his claims of an Australian birthplace for humankind, have been described by the few contemporary historians to engage with his work as 'off-beat,' 'ludicrous' and the result of an 'uncritical

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[139] For more on salvage anthropology, see James J. Hester, "Pioneer Methods in Salvage Anthropology," *Anthropological Quarterly* 41:3 (1968): 132-146; Liana Chua, "A Cambridge anthropologist in Borneo: the A.C. Haddon Photographic Collection, 1898-1899," *Borneo Research Bulletin* 40:1 (2009): 129-146; Liam M. Brady, "Adding Value: Rethinking Late 19th-Century Torres Strait Islander Drawings in Anthropological Inquiry," *Visual Anthropology* 25:3 (2012): 167-188.

[140] Stehlik, 62

[141] Hermann Klaatsch, "Travel report of Professor Hermann Klaatsch from Surabaya, Java and Australia, from 1 May 1906," *Zeitschrift für Ethnologie* 28 (1906), 776

[142] Klaatsch, "Some Notes on Scientific Travel Amongst the Black Population of Tropical Australia in 1904, 1905, 1906," 579. See also *Evening Journal*, "Three Years Among Australian Blacks: German Scientific Enterprise: Professor Klaatsch's Researches," January 10, 1907, 2; *Daily Telegraph*, "Australian Aborigines: Notes by Dr Klaatsch at the science congress," January 18, 1907, 7

enthusiasm for evolutionary theory."[143] At the time, however, the majority of the Australian public supported and celebrated Klaatsch's opinion of an extensive antiquity for Australia. Critical articles like the *Mercury*'s were in the minority, and newspapers eagerly shared updates as Klaatsch's research trip continued after he left Warrnambool sometime in September 1905. By the end of his tour, Klaatsch's enthusiasm for the Warrnambool slab dissipated, and he spoke with more animation on whether it were possible to 'civilise' Aboriginal peoples and perhaps convert them to Christianity.[144] He travelled through South Australia and Western Australia, where he visited missions, took now-famous photographs of Aboriginal prisoners on Rottnest Island, and made paternalistic, humanitarian claims for greater protection of Aboriginal peoples.[145]

The extent of Klaatsch's research and science-backed humanitarianism is, regrettably, beyond the scope of this chapter, but much of his Australian analysis remained under-developed; having first been interrupted in 1907 by the discovery of an ancient human jawbone by his colleague, Otto Schoetensack, at Mauer, near Heidelberg; then delayed by the outbreak of the First World War in 1914; and later derailed by Klaatsch's unexpected death in 1916.[146] Yet at the core of his scientific claims remained a belief in Aboriginal racial unity. This belief developed over the years into an argument for the existence of an ancient 'Austral-Caucasian' race, which supposedly made up the 'common stem' for the contemporary 'Europeans, Hindus, and Australians.'[147] This idea was more

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[143] See John Collette, "Hermann Klaatsch's Views on the Significance of the Australian Aborigines," *Aboriginal History* 11:1 (1987): 98-99; and D. J. Mulvaney, "The Australian Aborigines 1606–1929: Opinion and Fieldwork, Part 2," *Australian Historical Studies* 8:31 (1958), 304

[144] *Morning Bulletin*, "The Age of Australia," October 14, 1905, 10; *Northern Star*, "Can the Australian Blacks Be Converted or Civilised?" October 25, 1905, 3

[145] See *The West Australian*, "West Australian Aborigines," January 16, 1906, 2; *The W.A. Record*, "West Australian Aborigines," January 20, 1906, 11; Hermann Klaatsch, "Some Notes on Scientific Travel Amongst the Black Population of Tropical Australia in 1904, 1905, 1906," *Proceedings of the Australasian Association for the Advancement of Science* 11 (1907): 577-591.

[146] Klaatsch had first prepared his manuscript on human evolution for publication in August 1914, just as the First World War broke out in Europe. Two editions were published in German posthumously, and the first English edition appeared in 1923. See Hermann Klaatsch, *The Evolution And Progress Of Mankind*, (London: T. Fisher Unwin, 1923).

[147] Klaatsch's views were informed by Thomas Henry Huxley's 1863 comparison of Neanderthal and Australian Aboriginal skulls. See Thomas H. Huxley, *Man's Place in Nature and other Anthropological Essays* (London, Kent, 1895), 23; Thomas H. Huxley, "Observations on the human skulls of Engis and Neanderthal," in *The geological evidences of the antiquity of man, 4th edition*, ed. Charles Lyell, (London: John Murray, 1873): 86-94. See also Klaatsch, *The Evolution And Progress Of Mankind*, 284

fully realised by Klaatsch's PhD student, South Australian-born Herbert Basedow, whose claims of the close racial relation between Aboriginal Australians and Europeans wound up providing scientific impetus for Australia's government policy of Aboriginal child removal.[148]

A lasting legacy of Klaatsch's use of the Warrnambool slab, however, was the demonstrated power of projecting Australia's human antiquity outwards and placing it in a story of global human evolution. The Australian press revived this framing device seven years later, when, in November 1912, another slab bearing a set of human footprints was excavated from a Warrnambool quarry. Immediately deemed 'much more distinct' than those on 'the famous stone' from 1891, local media assigned the footprints to a 'prehistoric man in early tertiary times."[149] Articles noted the discovery would no doubt be of interest to 'European scientists,' and remarkably assigned an age of '20,000 or 30,000 years' to the footprints.[150] The articles did not list who had made these estimates, but the figures featured in newspaper headlines across the country: 'After 20,000 Years: Footprints in the Rocks,' 'Foot-Prints in Stone: Link with Pre-Historic Times,' and 'Footprints 30,000 Years Old."[151] Several of the articles gave an explicit nod to Klaatsch, and claimed the new discovery 'confirmed the opinion of Dr. Klaatsch' that Australia was 'the cradle of the human race."[152]

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[148] Heidi Zogbaum, "Herbert Basedow and the Removal of Aboriginal Children of Mixed Descent from their Families," *Australian Historical Studies* 34:121 (2003): 122-138.
[149] *The Argus*, "Footprints in Stone: Link with Prehistoric Times," November 22, 1912, 14; *The Advertiser,* "After 20,000 years: Footprints in the rocks: A remarkable discovery," November 22, 1912, 10; *Queensland Times*, "Foot-Prints in Stone: Link with Pre-Historic Times: Discovery at Warrnambool," November 29, 1912, 6; *The Sun*, "Footprints 30,000 years old: Discovery in Victoria: Australia as the cradle of the human race," November 24, 1912, 1
[150] *The Argus*, "Footprints in Stone: Link with Prehistoric Times," November 22, 1912, 14; *The Advertiser,* "After 20,000 years: Footprints in the rocks: A remarkable discovery," November 22, 1912, 10; *Queensland Times*, "Foot-Prints in Stone: Link with Pre-Historic Times: Discovery at Warrnambool," November 29, 1912, 6; *The Sun*, "Footprints 30,000 years old: Discovery in Victoria: Australia as the cradle of the human race," November 24, 1912, 1
[151] *The Argus*, "Footprints in Stone: Link with Prehistoric Times," November 22, 1912, 14; *The Advertiser,* "After 20,000 years: Footprints in the rocks: A remarkable discovery," November 22, 1912, 10; *Queensland Times*, "Foot-Prints in Stone: Link with Pre-Historic Times: Discovery at Warrnambool," November 29, 1912, 6; *The Sun*, "Footprints 30,000 years old: Discovery in Victoria: Australia as the cradle of the human race," November 24, 1912, 1
[152] *Barrier Miner*, "Pre-Historic Imprints," November 23, 1912, 4; *The Sun*, "Footprints 30,000 years old: Discovery in Victoria: Australia as the cradle of the human race," November 24, 1912, 1; *Hamilton Spectator*,

Although articles claimed the new slab 'confirmed' Klaatsch's supercontinental theory, they had removed a crucial element of his argument: none of the articles on the 1912 discovery connected it in any way to Aboriginal Australians, ancient or contemporary. The Australian press blurred the lines between Australia's human antiquity and its Aboriginal antiquity, and only framed the artefact as representative of 'prehistoric man' and the 'cradle of the *human* race.'[153] Also absent was Gregory's revered opinion of a recent Victorian Aboriginal antiquity. The '30,000 year old' footprints did elicit opposition from a man who was literally and figuratively Gregory's replacement: British limestone expert Ernest Willington Skeats, now sitting as Gregory's successor in the chair of geology and mineralogy at the University of Melbourne.[154] Although he hadn't seen the imprints, Skeats believed they would turn out to be of 'much more recent origin' and was 'probably not older than the pleistocene epoch.'[155] The 'prehistoric' Warrnambool slabs, and the whole debate over Victorian antiquity was soon eclipsed by a more sensationalist artefact from Britain: the Piltdown skull, the supposed 'missing link' in human evolution. Unveiled at a meeting of the Geological Society of London on 18 December 1912, the discovery was reported in Australia within two days, consuming its media and signalling the dawn of a new age in Australia's relationship with human antiquity; one dominated by fossilised human crania.[156]

"Prehistoric Footprints," November 26, 1912, 4; *Casino and Kyogle Courier and North Coast Advertiser*, "Cradle of the Human Race," November 27, 1912, 5

[153] Emphasis added. *The Argus*, "Footprints in Stone: Link with Prehistoric Times," November 22, 1912, 14; *The Advertiser,* "After 20,000 years: Footprints in the rocks: A remarkable discovery," November 22, 1912, 10; *Queensland Times*, "Foot-Prints in Stone: Link with Pre-Historic Times: Discovery at Warrnambool," November 29, 1912, 6; *The Sun*, "Footprints 30,000 years old: Discovery in Victoria: Australia as the cradle of the human race," November 24, 1912, 1; *Barrier Miner*, "Pre-Historic Imprints," November 23, 1912, 4; *The Sun*, "Footprints 30,000 years old: Discovery in Victoria: Australia as the cradle of the human race," November 24, 1912, 1; *Hamilton Spectator*, "Prehistoric Footprints," November 26, 1912, 4; *Casino and Kyogle Courier and North Coast Advertiser*, "Cradle of the Human Race," November 27, 1912, 5

[154] Skeats served as Dean of the Faculty of Science from 1910 to 1915, and was later President of the University's Professorial Board from 1922 to 1924. See Thomas A. Darragh, "Skeats, Ernest Willington (1875–1953)," *Australian Dictionary of Biography* 11, (Melbourne University Press: Melbourne, 1988)

[155] *The Age*, "The Warrnambool Footprints: Professor Skeat's Views: Geologically Recent," November 23, 1912, 12; *The Daily Telegraph*, "Prehistoric Footprints," November 25, 1912, 6; *The Port Macquarie News and Hastings River Advocate*, "Local and General News: Prehistoric Footprints," November 30, 1912, 4

[156] For early examples of Australian reports on Piltdown, see *Evening News (Sydney),* "Missing Link: The Ape Man: Important Discovery: Evidence of Evolution: Our Prehistoric Ancestor," December 20, 1912, 10; *The Journal (Adelaide),* "Our Ancestor: Back to the Ape Days," December 20, 1912, 1; *The Telegraph (Brisbane),*

Conclusion

At first glance, the Warrnambool case study presents a powerful parable about the politics of professionalism, and the different disciplinary standards of evidence for human antiquity. Through a more thorough examination, however, this chapter has shown the Warrnambool case study demonstrates the emergence of a fluid concept of Aboriginal antiquity that was ambiguously applied to Aboriginal Australians at the turn of the century. The broad concept of human antiquity still had an enticing cultural capital, but as the logic of a distinctly Aboriginal antiquity was gradually erased from the paradigms of anthropology, scientists in other disciplines found it increasingly difficult to articulate Australia's human antiquity *as* Aboriginal. To overcome these articulation issues, scientists embraced a vernacular of racialisations born from the warped evolutionism of the late nineteenth century, which gave them the language to describe a human antiquity for Australia without overturning the solidifying paradigm of Aboriginal timelessness.

This chapter has argued that scientists used and manipulated these racial typologies to prove their chosen claims about human antiquity in Australia. Joseph Archibald, eager to gain greater scientific recognition for the Warrnambool slab, manipulated his racialisations in an attempt to tap into the lingering logic of Aboriginal antiquity in the 1890s. John Walter Gregory, intent on investigating Victorian antiquity but heavily influenced by his colleagues in anthropology, produced a confusing and at times contradictory articulation of Aboriginal antiquity that connected to humans, a 'pre-Aboriginal race,' a 'true' Aboriginal race, but never the 'race' of Victorian Aborigines. Hermann Klaatsch, whose Australian research trip was affected by belief and budget, used racialisations to overturn the idea of separate Aboriginal races and prove his claim about

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"Primitive Man: Old Skull Discussed," December 20, 1912, 2; *The Herald (Melbourne)*, "Prehistoric Man Ancient Skull: Views of Scientists: Missing Link Supplied," December 20, 1912, 1; *Geelong Advertiser (Victoria),* "Another 'Missing Link!' Jawbone of Prehistoric Man," December 21, 1912, 3; *The Border Morning Mail and Riverina Times (Albury, NSW)*, "Ancestor of Man: Discovery in Sussex: Pre-Historic Skull Found," December 21, 1912, 2; *Northern Star (Lismore, NSW)*, "Possibly Pliocene: Apeman's Skull in Sussex," December 21, 1912, 17; *Daily Post (Hobart),* "Prehistoric Find: Skull of Ape-Man," December 21, 1912, 7; *The West Australian (Perth)*, "The Origin of Man: An Interesting Discovery," December 21, 1912, 11; *The Bendigo Independent (Victoria)*, "Ancestor of Man: Pre-Historic Skull in Sussex," December 21, 1912, 5; *Queensland Times*, "Primitive Man: A Relic of Our Oldest Families," December 21, 1912, 13; *The Register (Adelaide),* "Interesting Relic: Back to the Ape Days," December 21, 1912, 16.

Australia's place in a broader evolutionary story. Historians are not ignorant of the role racial science and its bizarre typologies have played in Australian science more broadly at the turn of the century. They have not, however, historicised Australia's human antiquity and its Aboriginal antiquity as two separate concepts, and have thus overlooked the layered levels of recognition the concepts received; and especially the way scientists like Gregory constantly shifted the burden of proof for Aboriginal antiquity. This dissertation as a whole is critical of historical narratives that position the 'radiocarbon revolution' of the 1960s as liberating Aboriginal antiquity from the racist ambiguity of evolutionary paradigms.[157] This chapter in particular reveals that had a method of absolute dating existed at the turn of the century, the concept of Aboriginal antiquity would still have been tenuously subjected to racialised manipulation by scientists eager to prove their chosen claims about the past.

Australia's Aboriginal antiquity would become even more ambiguous in the Piltdown era, as geological evidence became a supplementary dataset to the more visually impressive anatomical evidence of human crania. Yet instead of manipulating racial typologies to assign antiquity to various races, Chapter Five reveals how Australian scientists ignored the complicated category of Aboriginality altogether, and instead framed Australia's antiquity as broadly and exclusively human. They used an approach similar to that of Hermann Klaatsch—projecting Australia's human antiquity outwards and into a global story of human evolution—but with none of Klaatsch's explicit connections to Aboriginal Australians, past or present. Through yet more legacies of warped evolutionism and racial science, Australian scientists continued to blur the lines between Aboriginality and humanity in order to position Aboriginal Australians outside of Australia's human antiquity.

[157] See Introduction and Chapter Six

Chapter Five

Anatomical antiquity and the suitability of skulls: Removing Aboriginality from a global human story, 1912-1931

In 1886, after days of torrential rain, the banks of Dalrymple Creek burst to flood the flats of Talgai Station, a homestead located some 150 kilometres southwest of Brisbane, Queensland.[1] Once the water had subsided, labourer William Naish was inspecting the creek when he dislodged a fossilised human skull from its walls. Naish took the skull to Talgai's owner, who eventually passed it on to his nephew-in-law, Mr E. Crawford. The incidental discovery would later be confirmed as the first fossil evidence of ancient human occupation in Queensland. It wasn't until 1896, however, that the artefact drew any serious scientific attention. Contemplating selling the skull, Crawford posted a report in his local newspaper, which in turn prompted a letter from Robert Etheridge Jnr., a leading palaeontologist and then Director of the Australian Museum in Sydney.[2] Etheridge was keen to examine the 'petrified skull,' and even suggested it be gifted to the Museum's collection, but Crawford had also sought the opinion of 'some friends' in England, and warned he would not part with the skull unless he received a 'very tempting offer.'[3] For two

[1] There are discrepancies in the Talgai Skull's reported date of discovery, with some sources quoting 1884 as the year it was discovered. Anthropologist Neil William Macintosh notes there was a severe drought affecting the area in question between 1880 and 1885, broken by heavy rainfall in 1886, making it the more likely date. See N. W. G. Macintosh, "Fossil man in Australia: with particular reference to the 1965 discovery at Green Gully near Keilor, Victoria," *Australian Journal of Science* 30:1 (1967): 86-98.

[2] The original report from the *Walcha Witness* has not been located, likely due to the fires that burnt out the offices of both the *Walcha Witness* and *Walcha News* in the late 1920s. Professor of anatomy and anthropologist Neil William Macintosh attempted to recover the article for his 1969 publication N. W. G. Macintosh, "The Talgai Cranium: The Value of Archives," *Australian Natural History* 16:6 (1969): 189-194. An article published in the *Sydney Mail* in October 1896, confirms Crawford's acquisition of the skull and his movements thereafter in attempting a valuation. *The Sydney Mail and New South Wales Advertiser,* "This Week," October 10, 1896, 744

[3] Letter from Robert Etheridge to E. H. K. Crawford, September 28, 1896, printed in Macintosh, "The Talgai Cranium: The Value of Archives," 193; and Letter from E. H. K. Crawford to Robert Etheridge, the Curator,

months, Etheridge and Crawford exchanged letters in an attempt to settle the skull's value. The Trustees of the Australian Museum analysed the skull on October 6, and wrote they would 'favourably consider' a purchase, but unfortunately for Etheridge, Crawford was not swayed from his belief the skull could be 'very valuable in England.'[4] The Trustees stressed the importance of having both the specimen and its first written description procured by Australian scientists, but by the end of November, all hope of a sale seemed lost.[5] In his final letter, Etheridge informed Crawford the skull had 'comparatively small' value as an artefact of geological history: 'Had it been found at any depth in alluvial deposits, or in a cave deposit the matter would have been very different.'[6] To this, Crawford made no reply, and the Talgai Skull was seemingly forgotten.

Eighteen years later, on 1 April 1914, Crawford sent a letter to Professor Tannatt William Edgeworth David (1858-1934), Chair of Geology and Palaeontology at the University of Sydney. Crawford was, once again, seeking a valuation of the Talgai Skull in order to sell it, and this time, negotiations went smoothly. David requested a photograph of the skull, which he showed to his colleague James Thomas Wilson (1861-1945), the Scottish anatomist heading the University of Sydney medical school. From the photo alone, Wilson 'immediately perceiv[ed] the possibilities' of the artefact and organised its transportation to Sydney.[7] A short time later, Wilson and David unveiled the skull at the annual meeting of the British Association for the Advancement of Science, held in Sydney. The meeting was the first ever hosted in Australia, the ninth outside of the United Kingdom, and only the fourth outside of Europe in the British Association's 83-year history. In front of a distinguished audience of international scientists, David and Wilson assigned

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Australian Museum, October 2, 1896, printed in Macintosh, "The Talgai Cranium: The Value of Archives," 193

[4] Record of Trustees meeting, Tuesday October 6, 1896, *Minute Book*, 40 Letters sent between October 7 and October 11, 1896. See also Letter from E. H. K. Crawford to Robert Etheridge, November 18, 1896, printed in Macintosh, "The Talgai Cranium: The Value of Archives," 194

[5] 'The specimen having been found in Australia, it is fitting that the first description of it should be published in the Colony.' Letter from Mr Sutherland Sinclair, Australian Museum Secretary, to E. H. K. Crawford, October 13, 1896, printed in Macintosh, "The Talgai Cranium: The Value of Archives," 193

[6] Letter from Robert Etheridge to E. H. K. Crawford, November 23, 1896, printed in Macintosh, "The Talgai Cranium: The Value of Archives," 194

[7] Stewart Arthur Smith, "The Fossil Human Skull Found at Talgai, Queensland," *Philosophical Transactions of the Royal Society of London* (1918), 351-352

the Talgai Skull to the 'Pleistocene Age,' and claimed that while an exact age could not be determined, it was 'far older' than any other skull 'obtained in Australasia' and proved that 'in Australia man attained to geological antiquity.'[8]

In two decades, the Talgai Skull had gone from having 'comparatively small' value 'from the Geological standpoint,' to proving humans had attained a 'geological antiquity' in Australia. While it's possible this new interpretation was prompted by a difference in opinion, there is no doubt the revival of the Talgai Skull was influenced by the miraculous discovery and fanatic reception of the Piltdown Skull two years earlier. Uncovered in England in 1912, the Piltdown Skull was lauded by British scientists as the 'missing link' in the human evolutionary chain, and influenced scientific interpretation for almost forty years before its forgery was exposed in 1953. This chapter examines a series of Australian skull discoveries unearthed in the excitement of the Piltdown era. It argues Australian scientists sought to directly align Aboriginal skulls with prominent international hominid fossils in an attempt to claim a uniquely Australian space in a global story of human evolution. After the discovery of the Piltdown Skull, the cultural capital of human antiquity was almost as high as when it was first established in 1859. By this time, however, anthropology's erasure of the logic of Aboriginal antiquity had been solidified in the framework of functionalist anthropology. Now more than ever, Australian scientists wanted to *prove* Australia's extensive human antiquity, but the difficulties they had with articulating that antiquity remained.

Rather than manipulating racial typologies to assign antiquity to various races, as we saw in Chapter Four, this chapter tracks how Australian scientists ignored the complicated category of Aboriginality altogether, and instead framed Australia's antiquity as broadly and exclusively human. Scientists relied on the evidence provided by Aboriginal bodies to evince this antiquity, but they never acknowledged or described it as Aboriginal. This was not the first time scientists had used Aboriginal artefacts or bodies to connect Australia to narratives of migration or species evolution, as many of the discussions

[8] T. W. Edgeworth David and J. T. Wilson, "Preliminary Communication on an Australian Cranium of probable Pleistocene Age," *Report of the 84th Meeting of the British Association for the Advancement of Science* (1914), 531

surveyed in this dissertation thus far attest. It was, however, the first time such claims had been made without an accompanying recognition of Aboriginal antiquity. The broad concept of human antiquity that existed in scientific epistemologies in the 1860s and 1870s had *encompassed* Aboriginal antiquity as a geographically distinct application of human antiquity. In the early twentieth century, after anthropology had eroded the logic of Aboriginal antiquity and decades of racial science had manipulated understandings of Aboriginality, Aboriginal antiquity was no longer encompassed by human antiquity, but elided and hidden by it.

This chapter argues this elision was more than just a semantic slight. Human skulls, used in the Piltdown era as markers of antiquity, had significant intellectual baggage from the warped evolutionism and racial science that culminated in Britain in the 1850s. Of particular significance was the scientific rupture of the concept of 'the human' that had occurred within polygenic frameworks through their assertion of innate human difference. Craniology provided support for these polygenic assumptions, and even though polygenism eventually declined, the idea of innate human differences, evidenced in cranial structure, did not. These polygenic legacies continued to affect conceptualisations of 'the human' as a being that could rise above nature and attain a state of 'civilisation.' Such ideas contributed to the widely held belief that Aboriginal Australians, incapable of being 'civilised,' were doomed to an inevitable extinction; and they lingered in craniology. It was therefore not just anthropology's erasure of Aboriginal antiquity that caused scientists to articulate an exclusive human antiquity in the early twentieth century, but also the latent idea Aboriginal Australians were not quite human; blurring the lines between Aboriginality and humanity, and ultimately allowing scientists to position Aboriginal Australians outside of a broadly human antiquity.

The first section of this chapter lays out this complex scientific belief system, as well as the international fossil record that took shape in the late nineteenth and early twentieth century. The rest of the chapter then examines several local skull discoveries that, through complex racial paradigms, Australian scientists used to connect to the international fossil record and claim an extensive human antiquity for Australia. Section two examines the

Talgai Skull, an artefact from Queensland whose significance was directly linked to the Piltdown Skull. This section argues that despite various commentators describing Talgai as being an Aboriginal skull, the antiquity it represented remained exclusively human, and was used to portray a kind of mythic Australian 'dawn man' akin to Piltdown Man. Sections three and four examine the Cohuna Skull and the Jervois Skull respectively, two discoveries the enthusiastic anatomist Colin MacKenzie tried to position as some of the oldest skulls known to science. This section argues that although each skull had similarities with contemporary Aboriginal crania, scientists used these similarities to affirm both artefacts' recency, rather than overturn the logic of Aboriginal timelessness. While the geological evidence for their antiquity was questionable, scientists were more critical of their anatomical features, and used them to affirm Cohuna as belonging to a vaguely 'primitive man' with a recent antiquity, and Jervois to a 'normal,' modern Aboriginal. This chapter argues then that the scientists seeking to secure an Australian place in a global evolutionary story engaged in a kind of intellectual dispossession of Aboriginal antiquity: they used Aboriginal artefacts and Aboriginal bodies to prove Australia's human antiquity, but simultaneously disconnected that antiquity from Aboriginal people in order to claim it more broadly for Australia.

Polygenist legacies and the revival of phrenology

That Australian scientists sought to claim a national space in a global evolutionary story in the early twentieth century neatly aligns with the period's distinct 'British-Australian' nationalism. The decades before and after Australia's Federation in 1901 have long been a focus for historians, who have interrogated the construction of a white, masculine national identity in which British ethnosymbolism was infused with uniquely Australian civic and territorial elements.[9] The emergence of a human antiquity based on

[9] See Russell McGregor, "The necessity of Britishness: ethno-cultural roots of Australian nationalism," *Nations and Nationalism* 12:3 (2006): 493-511; Mark Hearn, "Writing the nation in Australia: Australian historians and narrative myths of nation," in *Writing the Nation: A Global Perspective*, ed. Stefan Berger (Basingstoke: Palgrave Macmillan, 2007): 103-125; Anthony Moran, "White Australia, Settler Nationalism and Aboriginal Assimilation," *Australian Journal of Politics and History* 51:2 (2005): 168-193; Tim Rowse, *White Flour, White Power: From Rations to Citizenship in Central Australia* (Cambridge: Cambridge University Press, 1998); Luke Trainor, *British Imperialism and Australian Nationalism: Manipulation,*

Aboriginal evidence but simultaneously disconnected from Aboriginal Australians themselves, can and should be read as part of this nationalist project. Yet this chapter is more concerned with *how* racial science was used in the articulation of this exclusively human antiquity than with the nationalist outcomes of that articulation.

Australia's interest in human crania in the late nineteenth and early twentieth centuries was built on decades of racial science, warped evolutionism and the supposedly defunct discipline of phrenology. Historian Paul Turnbull notes that in the early nineteenth century, the idea that differences between human populations extended to differences in psychology was nothing new.[10] Indeed, Galen and Hippocrates' second century theories of 'humoralism' survived in western medicine as a conceptualisation of the connection between body and behaviour well into the nineteenth century.[11] What *was* new in the late eighteenth and early nineteenth century was the research of German physician Franz Joseph Gall, whose theories developed into the scientific discipline of phrenology. Gall believed the brain was an organ of the mind, comprised of multiple and distinct faculties that each had their own smaller cerebral organs responsible for different human behaviours and character traits.[12] As the skull took its shape from the brain, measuring and analysing

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Conflict and Compromise in the Late Nineteenth Century (Cambridge: Cambridge University Press, 1994); Richard White, *Inventing Australia: Images and Identity, 1688–1980,* (Crows Nest: Allen and Unwin, 1981); Helen Irving, *To Constitute a Nation: a Cultural History of Australia's Constitution,* (Cambridge: Cambridge University Press, 1999).

[10] Paul Turnbull, "The 'Aboriginal' Australian Brain in the Scientific Imagination, 1820–1880," *Somatechnics* 2.2 (2012), 173

[11] See Rebecca Earle, "Humoralism and the colonial body," in *The Body of the Conquistador: Food, Race and the Colonial Experience in Spanish America, 1492–1700* (Cambridge: Cambridge University Press, 2012): 19-53; Gary Alexander Puckrein, "Humoralism and Social Development in Colonial America," *JAMA* 245:17 (1981): 1755–1757; R.E. Siegal, *Galen's System of Physiology and Medicine*, (New York, S. Karger, 1968); Owsei Temkin, *Galenism*, (Ithaca: Cornell University Press, 1973).

[12] For more on Gall see F.J. Gall, "Schreiben über seinen bereits geendigten Prodromus über die Verichtungen des Gehirns der Menschen und der Thiere an Herrn Jos," *Fr. von Retzer. Neue Teutsche Merkur* 3 (1798): 311–323; F. J. Gall, *Sur les Fonctions du Cerveau et sur Celles de Chacune de ses Parties (6 vols),* (Paris: J.-B. Baillière, 1822–1825); F.J. Gall, *On the functions of the brain and each of its parts: with observations on the possibility of determining the instincts, propensities, and talents, or the moral and intellectual dispositions of men and animals, by the configuration of the brain and head (6 vols.),* ed. N. Capen, trans. W. Lewis, (Boston: Marsh, Capen and Lyon, 1835); Paul Eling and Stanley Finger, "Gall and phrenology: New perspectives," *Journal of the History of the Neurosciences*, 29:1 (2020): 1-4; Stanley Finger and Paul Eling, *Franz Joseph Gall: Naturalist of the mind, visionary of the brain*, (New York: Oxford University Press, 2019).

the surface of the skull could supposedly provide an accurate reading of one's aptitudes and tendencies.

Phrenology was popular in Britain until about the 1840s, when it came to be seen as an overzealous pseudo-science that pushed reasonable neurological concepts beyond the realm of empirical knowledge.[13] Despite this decline, many of phrenology's core paradigms lingered in British science, especially as anatomical evidence came under the new disciplinary umbrella of anthropology in the 1860s and 1870s. While there is no clear distinction between the two practices, the new term 'craniology' began to be used to refer to anthropology's supposedly more scientific practice of phrenology to study human difference.[14] Many historians have interrogated how ideas around measurable intellectual capacity were mobilised against the world's indigenous populations, and even the economically poorer classes within European societies.[15] In particular, Nancy Stepan, Paul Turnbull and Kay Anderson have shown how craniology and phrenology played a crucial role in the mid-nineteenth century evolutionary debates around monogenism, polygenism, and the capacity for a distinctly 'human' evolution. Chapter Four has already outlined Stepan's argument that in the late nineteenth century, the majority of British scientists interpreted evolution in such a way as to make natural selection 'no longer operative on physical man,' turning human evolution instead into a mental, cultural phenomenon.[16]

Of course, although nineteenth century scientists believed they had thrown off the shackles of natural selection, a myriad of historians have pointed out that naturalistic ideas

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[13] See Roger Cooter, *The cultural meaning of popular science: Phrenology and the organization of consent in nineteenth-century Britain*, (Cambridge: Cambridge University Press, 1984); Sherrie Lyons, "Science or Pseudoscience: Phrenology as a Cautionary Tale for Evolutionary Psychology," *Perspectives in Biology and Medicine* 41:4 (1998): 491-501; Donald Simpson, "Phrenology and the Neurosciences: Contributions of F. J. Gall and J. Spurzheim," *ANZ Journal of Surgery* 75:6 (2005): 475-482.
[14] Kay Anderson, *Race and the Crisis of Humanism*, (New York: Routledge, 2009), 124
[15] See in particular Paul Turnbull, "The 'Aboriginal' Australian Brain in the Scientific Imagination, 1820–1880," *Somatechnics* 2.2 (2012): 171–197; Andrew Bank, "Of 'native skulls' and 'noble caucasians': phrenology in colonial South Africa," *Journal of Southern African Studies* 22:3 (1996): 387-403; Kim A. Wagner, "Confessions of a Skull: Phrenology and Colonial Knowledge in Early Nineteenth-Century India," *History Workshop Journal* 69 (2010): 27-51; Susan Branson, "Phrenology and the Science of Race in Antebellum America," *Early American Studies: An Interdisciplinary Journal* 15:1 (2017): 164-193; Catherine E. Storey, "The promotion of phrenology in New South Wales, 1830–1850, at the Sydney Mechanics School of Arts," *Journal of the History of the Neurosciences* 29:1 (2020): 60-69.
[16] Nancy Stepan, *The Idea of Race in Science: Great Britain 1800-1960*, (London: The Macmillan Press Ltd., 1982), 85. See also Chapter Four.

about race, particularly the concept of innate biological differences within and between humans, became successfully integrated into evolutionary thinking by the end of the century.[17] Indeed, it was this kind of thinking that allowed the scientists in Chapter Four to assign various levels of antiquity to separate 'races.' Kay Anderson believes the leading explanations for both the rise and longevity of polygenist racial science in Britain are insufficient. She argues Stepan provides a 'distinctly vague' explanation for the shift from monogenism to polygenism between 1800 and 1850, while the comprehensive scholarship of George W. Stocking Jnr. has a 'lack of specificity' for 'so profound an intellectual shift."[18] Anderson argues that beyond the 'great expansion of cultural contact'[19] brought about by the expanding British empire, the rise of polygenism was prompted by British encounters with Aboriginal Australians, who problematised the Christian Enlightenment idea of the 'human' as a being that was separate, or 'civilised,' from nature. This induced a crisis of intelligibility in which British scientists failed to explain Aboriginal Australians' lack of 'civilisation' up until the point of invasion, and their apparent incapacity for 'civilisation' in the decades afterwards.[20]

Polygenism fit into this framework by articulating a defence of the 'human' as a being distinct from nature: scientists could explain Aboriginal Australians' apparent incapacity for civilisation by upholding the logic of some innate, biological difference within and between primitive Aborigines and their 'civilised' colonisers. Anderson argues this humanist lens offers a much more comprehensive explanation for the endurance of polygenist racial science than standard historical claims of some kind of racism, and its

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[17] See Nancy Stepan, "Race after Darwin: The World of the Physical Anthropologists," in *The Idea of Race in Science: Great Britain 1800-1960*, (London: The Macmillan Press Ltd., 1982): 83-110; Peter J. Bowler, *Theories of Human Evolution: A Century of Debate, 1844-1944*, (Oxford: Basil Blackwell, 1987); Ronald L. Numbers and John Stenhouse, *Disseminating Darwinism: The Role of Place, Race, Religion, and Gender,* (Cambridge: Cambridge University Press, 1999).

[18] Anderson, *Race and the Crisis of Humanism*, 109-110

[19] George W. Stocking Jnr., *Race, Culture and Evolution: Essays in the history of anthropology*, (New York: The Free Press, 1968), 39

[20] See Anderson, "Rethinking 'race' from Australia," in *Race and the Crisis of Humanism*, (New York: Routledge, 2009): 109-145. See also Kay Anderson and Colin Perrin, "How race became everything: Australia and polygenism," *Ethnic and Racial Studies* 31:5 (2008): 962-990; and Kay Anderson and Colin Perrin, "'The Miserablest People in the World': Race, Humanism and the Australian Aborigine," *The Australian Journal of Anthropology* 18:1 (2007): 18-39.

alignment with imperial power structures.[21] The polygenic idea of innate human difference certainly endured in Australia beyond the decline of polygenism itself, enshrined in the widely accepted 'doomed race theory.'[22]

Of relevance for this chapter is the way polygenist legacies blended with the science of craniology to affect articulations of Australia's 'human' antiquity in the early twentieth century. Like many scientific disciplines, craniology was transformed by the evolutionary debates of the 1860s and 1870s. As Turnbull argues, the brain came to be understood in a similar way to Earth's geology: the brain was thought to possess a 'primitive' core, over which layers of greater complexity had been laid down over tens of thousands of years by physical, chemical, and biological processes.[23] Much like the geologist, then, the anatomist could dissect the brain to examine its stratigraphic record of human evolution.[24] As a result, anatomists and physicians valued the brains of 'primitive' peoples as windows into the primitive core of humanity. Of course, as Turnbull notes, it was not the clinical scrutiny of the brain that actually fed these frameworks, but the appraisal of the skull in the brain's absence.[25] As scientists focused on filling gaps in the human evolutionary sequence in the latter half of the nineteenth century, skulls were valued not only for their data, but also as a striking illustration of the developmental sequence. Unlike layers of strata or sections of brain matter, crania could captivate and communicate in a single glance; and under the anatomist's prolonged gaze, convey their deepest meaning.

Anderson's humanist lens highlights the crucial effect craniology's connection to polygenism had on perceptions of Aboriginality: in the second half of the nineteenth century, the brain's size and shape were seen as an index of the innate capacity of distinct races to achieve the distinguished condition of humanity called civilisation.[26] Craniology

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[21] There is no question that an innatist concept of racial difference aided the dispossession and oppression of indigenous populations as part of imperial projects. Anderson's argument, however, is that this was not the underlying motivation for the maintenance of polygenist thinking. See Anderson, "Rethinking 'race' from Australia," in *Race and the Crisis of Humanism*, (New York: Routledge, 2009): 109-145.
[22] See Chapter Three, and Russell McGregor, *Imagined Destinies: Aboriginal Australians and the Doomed Race Theory, 1880-1939*, (Carlton South: Melbourne University Press, 1997)
[23] Turnbull, "The 'Aboriginal' Australian Brain in the Scientific Imagination, 1820–1880," 184
[24] Turnbull, "The 'Aboriginal' Australian Brain in the Scientific Imagination, 1820–1880," 184
[25] Turnbull, "The 'Aboriginal' Australian Brain in the Scientific Imagination, 1820–1880," 182-183
[26] Anderson, *Race and the Crisis of Humanism*, 140

could therefore 'measure' the civilised condition hominids achieved by transcending nature, turning skulls into artefacts that reflected a race's capability of actually *being* 'human.'[27] Here, Aboriginal Australians became trapped in yet another paradigmatic abstraction: their 'primitive' brain and crania were valuable comparative tools for scientists seeking to understand human antiquity and evolution, but their innate inability to become 'civilised' allowed scientists to position them outside the category of human, and thus the *human* antiquity their crania was used to represent. Aboriginal Australians had finally become the ultimate representational tool—a primitive indigene who sat outside the realms of temporality *and* humanity—that scientists could use to prove Australia's human antiquity without overturning either the rationale of Aboriginal timelessness or the 'doomed race' theory.

These ideas formed the intellectual background for the anatomists who, in the early twentieth century, connected Australian skulls to the emerging human fossil record in an attempt to gain international recognition for Australia's human antiquity. The discovery of Java Man in 1891, the Heidelberg Jaw in 1907, and the Piltdown Skull in 1912 invigorated interest in fossilised crania and provided evolutionary reference points for Australian scientists. Java Man was discovered by Dutch physician Eugène Dubois who, in 1891, excavated a fossilised skullcap, tooth and femur bone from the bank of the Solo River in Java. The unusual morphology of his finds convinced Dubois he had uncovered the evolution's missing human-ape ancestor, which he named *Pithecanthropus erectus*, or 'upright ape-man.'[28] Although scientists were not initially convinced of Dubois' claims, by the first decade of the twentieth century, Java Man was a fixed feature of the public imagination. The Netherlands in particular embraced the discoveries as a point of national scientific pride, and even erected a full-size sculpture of Java Man at the Dutch East Indies Pavilion at the Paris Exposition universelle in 1900.[29] Germany experienced similar

[27] Anderson, *Race and the Crisis of Humanism*, 140
[28] While working for the Dutch government in Java, Dubois had petitioned for funds to test his theory that the 'missing link" could be found in Asia. His discoveries in 1891 were the first hominid fossils to come not from a chance discovery, but a purposeful excavation. See Emily Kern, "Out of Asia: A global history of the scientific search for the origins of humankind, 1800-1965," (PhD thesis, Princeton University, 2018), 76-85
[29] Kern, 81

excitement in 1907, when a human mandible was found in a sand quarry at Mauer, southeast of Heidelberg. Quarry worker Daniel Hartmann reported the artefact to German anthropologist Otto Schoetensack, who was struck by its small, human-like teeth set in an unusually large and heavy-boned jaw. Schoetensack was convinced the jaw represented a new human species, which he classified as *Homo heidelbergensis*. For Schoetensack, there was no doubting the jawbone's antiquity. In his 1908 report on the discovery, he argued *Homo heidelbergensis* had existed deep in the Pliocene period.[30]

While Australians were aware of the national and international acclaim surrounding Java Man and the Heidelberg jaw, their response to the Piltdown Skull was more fanatic. The Piltdown Skull wielded a greater influence on Australia's own fossil record not least because it was discovered, and so highly valued, by the British scientific community. In February 1912, solicitor and natural history enthusiast Charles Dawson wrote a letter to his friend Arthur Smith Woodward, Keeper of Geology at the Natural History Museum in London.[31] Dawson claimed to have discovered fragments of a human-like skull and jaw bone at the bottom of a gravel pit in Piltdown, East Sussex, and believed it rivalled the antiquity of the Heidelberg jaw. Woodward quickly organised an excavation of the site, and from June to September, more fragments of bone were discovered. On 18 December, at a meeting of the Geological Society of London, Woodward and Dawson unveiled a reconstructed skull with the cranial brow of a man, and the savage, toothy jaw of an ape. Given the name *Eoanthropus dawsoni,* 'Dawson's dawn-man,' they proclaimed it the long-awaited 'missing link' between human and ape.

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[30] See Otto Schoetensack, *Der Unterkiefer des Homo Heidelbergensis aus den Sanden von Mauer bei Heidelberg,* (Leipzig: Verlag von Wilhelm Engelmann, 1908). Today, *Homo heidelbergensis* is known to have lived between 300,000 and 600,000 years ago, In 2010, the Heidelberg Jaw itself was dated for the first time to 609,000 ± 40,000 years. See Günther A. Wagner et al., "Radiometric dating of the type-site for Homo heidelbergensis at Mauer, Germany," *Proceedings of the National Academy of Sciences* 107:46 (2010): 19726–19730.

[31] The pair had maintained a friendly professional relationship for years, and Dawson had earned Woodward's respect as an archaeologist and palaeontologist by contributing various specimens to the Museum's collection. The most notable discovery Dawson made before the Piltdown skull, was that of a new species of dinosaur, *Iguanodon dawsoni*. Frank Spencer, *The Piltdown Papers 1908-1955: The correspondence and other documents relating to the Piltdown Forgery*, (London: Natural History Museum Publications, Oxford University Press, 1990), 1.

Thereafter known as Piltdown Man, *Eoanthropus dawsoni* was received as a complete revelation. Indeed, esteemed anatomist Arthur Keith likened its discovery to those of French archaeologist Boucher de Perthes, whose research from the 1840s evinced the long-denied 'antiquity of man' on earth.[32] Piltdown Man displayed the perfect combination of human and primate features, and had been found in the same gravels as crude flint tools and bones of extinct mammals, proving an antiquity of hundreds of thousands of years. The perfect combination of hominid and primate features was, of course, too good to be true. In 1953, after years of mounting speculation, the Piltdown skull was exposed as nothing more than the amalgamation of a modern human cranium and the jawbone of an orangutan. The crude tools and 'extinct' mammal remains found with it were also faked. The distinguished scientists who had spent years lauding and then defending Piltdown quickly and quietly distanced themselves from the entire affair. A shocked public, both in Europe and abroad, took some delight in the ambitious and persistent hoax, while the next generation of historians, archaeologists and palaeontologists spent decades interrogating the forgery and unravelling the mysteries of its inception.

Historians have bemoaned the legacy of the Piltdown hoax. The skull dominated thousands of hours of research, pages of publications, and served as the fossil foundation upon which several of Britain's most distinguished palaeontologists and anatomists built their careers. Its entry onto the scientific stage came just as the human fossil record had begun to accumulate, but before any solid conclusions had been drawn. As a result, Piltdown Man delayed and warped the scientific search for human origins and development for an entire academic generation. Yet it also provided a convenient comparative tool for Australian scientists seeking to contribute an Australian illustration to the ever-expanding fossil record of human evolution. As Australia's own fossil record began to emerge in the early twentieth century, scientists used all three of these international discoveries as evolutionary waymarks to emphasise Australia's extensive and distinctly human antiquity, and thus claim a space in a global evolutionary story.

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[32] Arthur Keith quoted in Phillip V. Tobias, "Piltdown: An Appraisal of the Case against Sir Arthur Keith," *Current Anthropology* 33:3 (1992), 246. See also Prologue.

The 'Dawn-Man of Talgai': Aligning Talgai with Piltdown

There is no doubt the discovery and fanatic affirmation of Piltdown Man influenced both the professional and public interpretations of the Talgai Skull. When Talgai was unveiled on 21 August 1914, Australian scientists immediately linked the artefact to the Piltdown Skull and other famous hominid discoveries in a global story of human evolution. Its antiquity was stated confidently by David and Wilson, and while its reception suffered some interruptions from the First World War, their early claims remained well supported by scientific professionals and the general public. At the time of its unveiling, and at various points thereafter, the Talgai Skull was described as being an Aboriginal skull, or as displaying Aboriginal characteristics. Yet the antiquity it evinced was consistently framed as exclusively human. By aligning Talgai with Piltdown, Australian scientists positioned it as a 'Proto-Australian' 'Dawn-Man,' whose representation of a geological human antiquity invited international recognition and prestige upon Australia's scientific community.

Although it was unveiled soon after the declaration of the First World War, the 'high antiquity'[33] of the Talgai skull was greeted with gusto by the media. David and Wilson's presentation was summarised in just one paragraph in the published *Report of the 84th Meeting of the British Association for the Advancement of Science*, but the press recounted their arguments in emphatic detail. Articles in Sydney's major newspapers, *The Sydney Morning Herald* and *The Daily Telegraph*, and Melbourne's popular daily paper, *The Age*, described the Talgai skull's 'considerable antiquity' as 'an epoch-marking discovery.'[34] They immediately argued the skull would 'rank in importance with the famous skulls of Neandertal and Spey, surpassing them in interest as far as Australia is concerned.'[35] *The Daily Telegraph* claimed the skull's revelation was the 'most outstanding event' of the entire conference: 'It is a discovery, not a theory, and it is an Australian discovery, which is also of the greatest importance to the whole scientific world.'[36] Articles reported the skull

[33] Edgeworth David and Wilson, "Preliminary Communication on an Australian Cranium of probable Pleistocene Age," 531
[34] The Talgai skull was originally labelled the 'Darling Downs Skull.' See *The Sydney Morning Herald*, "Primitive Man: Darling Downs Skull," August 22, 1914, 9
[35] *The Sydney Morning Herald*, "Primitive Man: Darling Downs Skull," August 22, 1914, 9
[36] *The Daily Telegraph*, "The Darling Downs Skull: Big Event of the Congress, "August 22, 1914, 11

belonged to 'the Pleistocene age, the Kosciusko age, the great ice age' some '25,000 years ago,' and demonstrated 'the existence of man in Australia at a time going back to the last glacial epoch.'[37] Referring to the famous question first posed by Robert Etheridge Jnr. in 1891, Edgeworth David was quoted as saying 'if we are asked, 'Is man a geological antiquity in Australia?' we can reply, 'Yes, he is.''[38] The article in *The Age* went one step further and described the skull as belonging to 'the earliest inhabitant of Australia yet discovered.'[39]

While some articles described the skull itself as a 'badly-damaged and party-fossilised aboriginal skull,'[40] or as displaying 'characteristics of the most primitive Australian aborigines,'[41] its antiquity was consistently framed as human, with no explicit connection to Aboriginal Australians. It proved that '*men* lived in this country…a good 25,000 years ago' and overturned the idea that '*man* came only comparatively recently' to Australia.[42] *The Age* claimed, 'It belong[ed] to *a type of man* infinitely older than any existing on the continent at present,'[43] while *The Daily Telegraph* argued the skull's ''Australianity,' if one may make a word,' related only to its 'primitiveness,' and not to its antiquity.[44] The media continued to report on Talgai's exclusive human antiquity through August and into September, when David visited Talgai Station to confirm details of the skull's discovery. After interviewing the 'much enfeebled' 76-year-old William Naish, David told the media the skull's location and mineralisation strongly suggested 'early geological man in Australia was contemporaneous with one of the last phases of the Plistocene [sic] Ice Age,' approximately '15,000 to 20,000 years ago.'[45]

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[37] *The Daily Telegraph*, "The Darling Downs Skull: Big Event of the Congress," August 22, 1914, 11; *The Age*, "Scientists in Sydney," August 22, 1914, 12
[38] See Robert Etheridge Junior, "Has Man A Geological History in Australia," *Proceedings of the Linnean Society of New South Wales* 5:2 (1891): 259-268. *The Daily Telegraph*, "The Scientists: The Darling Downs Skull: Big Event of the Congress," August 22, 1914, 11
[39] *The Age*, "Scientists in Sydney," August 22, 1914, 12
[40] *The Age*, "Scientists in Sydney," August 22, 1914, 12
[41] *The Sydney Morning Herald*, "Primitive Man: Darling Downs Skull," August 22, 1914, 9
[42] Emphasis added. *The Daily Telegraph*, "The Scientists: The Darling Downs Skull: Big Event of the Congress," August 22, 1914, 11
[43] Emphasis added. *The Age*, "Scientists in Sydney," August 22, 1914, 12
[44] *The Daily Telegraph*, "The Darling Downs Skull: Big Event of the Congress," August 22, 1914, 11
[45] *The Daily Telegraph*, "Talgai Skull: Location of Recent Find," September 3, 1914, 4

The professional scientists who had gathered for the British Association were equally excited by the Talgai Skull, and many were convinced of its antiquity from the moment of its debut. British botanist Sir Everard im Thurn congratulated David and Wilson on the 'enormous importance' of their discovery, while Austrian anthropologist Professor Felix von Luschan agreed the skull was indeed of 'a type extremely primitive.'[46] William Johnson Sollas, esteemed British geologist and author of the popular *Ancient Hunters and Their Modern Representatives* (1911), allegedly held the skull in his hands for so long that Sir Everard had to seize a moment of inattention to rescue the artefact back.[47] Apart from David and Wilson, Talgai's most vocal professional supporter was Grafton Elliot Smith (1871-1937), who had been one of Wilson's anatomy students at the University of Sydney. After graduating his Doctor of Medicine in 1895, Elliot Smith travelled to England to specialise in neuro-anatomy at Cambridge University, before taking positions as a Professor of Anatomy in Cairo, and later, Manchester.[48]

By the time he arrived for the British Association meeting in August 1914, Elliot Smith was an established authority in anatomy and neurological science. He sung Talgai's praises to the media, but saved the majority of his interpretations for a public lecture delivered at the Sydney Town Hall on the evening of the skull's debut. Elliot Smith had recently become interested in global human evolution and migration patterns, and he used his lecture to swiftly slot the Talgai Skull into a succession of skulls that demonstrated human development and 'man's antiquity.'[49] He positioned Talgai alongside artefacts like the 'Gibraltar skull' (1848), the 'Neanderthal skull' (1856), the skull of 'pithecanthropus erectus, in Java' (1891 and 1892), and of course, the 'Piltdown skull' (1912). Most of these skulls belonged to a 'race,' Elliot Smith argued, that had lived 'in the great Ice age, twenty

[46] *The Daily Telegraph*, "The Darling Downs Skull: Big Event of the Congress," August 22, 1914, 11
[47] *The Daily Telegraph*, "The Darling Downs Skull: Big Event of the Congress," August 22, 1914, 11
[48] See Michael J. Blunt, "Smith, Sir Grafton Elliot (1871–1937)," *Australian Dictionary of Biography*, Volume 11, (Melbourne: Melbourne University Press, 1988)
[49] *The Daily Telegraph*, "How Man Developed," August 22, 1914, 11; *The Richmond River Herald and Northern Districts Advertiser*, "How Man Developed," August 28, 1914, 2

or thirty thousand years ago,' and originated somewhere in Africa, before spreading east to Java, and west into Europe.[50]

Elliot Smith's support for the Piltdown Skull influenced his interpretation of Talgai. Indeed, Piltdown had been a popular topic at the conference, with 10 of the 28 papers in the Anthropology section discussing the find.[51] In his lecture, Elliot Smith not only linked Talgai with Piltdown in a story of global evolution, but also used Talgai to support Piltdown's remarkable combination of hominid and primate features. Some authorities, Elliot Smith noted, 'refused to believe' that the human 'brainpan' and the large canine teeth found at the Piltdown site belonged to the same skull—which of course, they did not, as revelations would later prove. In 1914, however, Elliot Smith argued the Talgai Skull, with its 'great dog teeth,' firmly settled Piltdown doubts.[52] Both Talgai and Piltdown confirmed, he argued, that the ancient human race to which they belonged had the jaw of an ape, a hairy, 'gorilla-like' body, and a brain 'between that of the higher apes and man.'[53]

Beyond this exchange of credibility, the clearest evidence of Piltdown's influence on the Australian fossil record was in the revival of the Talgai Skull itself. When David and Wilson revealed the Talgai Skull on August 21, they claimed to have first known about the specimen through a letter from Mr E. Crawford on 1 April 1914. The first—and only—scientific description of the skull, written in 1916 by Elliot Smith's brother, Stewart Arthur Smith, reiterated this narrative.[54] Yet both David and Wilson were members of the Australian Museums' Board of Trustees when the Talgai Skull was first examined in 1896, and were recorded in the Museum's minute books as present for its evaluation.[55] After 18

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[50] *The Daily Telegraph*, "How Man Developed," August 22, 1914, 11; *The Richmond River Herald and Northern Districts Advertiser*, "How Man Developed," August 28, 1914, 2
[51] Jim Allen, "The Curious History of the Talgai Skull," *Bulletin of the History of Archaeology* 20:2 (2010), 8
[52] *The Daily Telegraph*, "How Man Developed," August 22, 1914, 11; *The Richmond River Herald and Northern Districts Advertiser*, "How Man Developed," August 28, 1914, 2
[53] *The Daily Telegraph*, "How Man Developed," August 22, 1914, 11; *The Richmond River Herald and Northern Districts Advertiser*, "How Man Developed," August 28, 1914, 2
[54] Smith, "The Fossil Human Skull Found at Talgai, Queensland," 351-352
[55] '*Tuesday 6th October 1896.* Trustees' meeting. Present: The Crown Trustee (Dr. Cox) - The Auditor General (Mr. Rennie) - Dr. Belisario - Dr. Norton - Dr. Williams - Prof. David - Prof. Wilson - the Curator and the Secretary.' *Minute Book*, 40. These archival records were brought to light by the fastidious Macintosh, and Dr Alexander Ritchie, Curator of Fossils at the Australian Museum from 1968 to 1982/1983. See Macintosh, "The Talgai Cranium: The Value of Archives," 192-193.

years, and a steady flow of cranial purchases, it's possible David and Wilson had simply forgotten this earlier examination. This was apparently the case for former Museum Director Robert Etheridge Jnr. who, in 1915, uncovered his correspondence with Crawford from 1896, forwarded it to David, and confessed the 'whole affair had slipped my memory.'[56] In his reply, David claimed the same for himself, and that Crawford 'never let on to me that he had placed the skull under offer to the Australian Museum.'[57]

Historians are sceptical of these explanations. A clerical error of *two* names in the records of a Museum Board is unlikely; and if both David and Wilson had examined the skull in 1896—distinct and impressive enough to overturn Etheridge Junior's claim that 'man had no geological antiquity in Australia'—it seems strange they had no recollection when it was laid before them again in 1914. Some historians simply acknowledge the mysteries surrounding the Talgai Skull, while others have suggested more calculated, fraudulent motives. For many, Grafton Elliot Smith is a central and suspicious figure, closely associated to both the Talgai and Piltdown skulls, and the scientists who 'discovered' them.[58] As one of his students, Elliot Smith formed a close relationship with Wilson, and they maintained a lengthy correspondence after Elliot Smith left Sydney for Cambridge. Historian Ian Langham argues the likelihood of Wilson neglecting to mention *both* the 1896 and 1914 examinations of the Talgai skull to his pen-pal was slim.[59] Langham also notes Elliot Smith arrived in Australia almost two months before the British Association conference, giving him ample opportunity to view the Talgai Skull and prepare his off-the-cuff yet polished lecture for the day of its dramatic unveiling.[60]

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[56] Letter from Robert Etheridge Junior to Tannatt William Edgeworth David, July 5, 1915, printed in Macintosh, "The Talgai Cranium: The Value of Archives," 192

[57] Letter from Tannatt William Edgeworth David to Robert Etheridge Junior, July 6, 1915, printed in Macintosh, "The Talgai Cranium: The Value of Archives," 192

[58] Elliot Smith has been implicated in the forgery of the Piltdown Skull, most notably by historian Ronald Millar, whose accusations in the 1970s caused a stir among Piltdown sleuths. See Ronald Millar, *The Piltdown men,* (New York: St. Martin's Press, 1972); Lord Zuckerman, "The Piltdown men," Letter in the *Times Literary Supplement* (1972) 27; J. S. Weiner, "Grafton Elliot Smith and Piltdown," Lecture delivered at Commemorative *Symposium Zoological Society London* 1973; A. P. Elkin and N. W. C. Macintosh, *Grafton Elliot Smith: The Man and His Work*, (Sydney: Sydney University Press, 1975) for defence of Elliot Smith.

[59] See Ian Langham, "Talgai and Piltdown—the common context," *The Artefact* 3:4 (1978): 181-224.

[60] Langham argues Elliot Smith had a propensity for producing such apparent 'insights' where in fact he had prior knowledge. Langham, 181-224.

Collusion or not, the re-emergence of the Talgai Skull was opportune in cementing the authenticity of Piltdown, and vice versa. By virtue of its anatomical and geological features, and its repeated association with Piltdown, the Talgai Skull was framed as an artefact whose extensive human antiquity could claim an Australian space on the international scientific stage. The reception and interpretation of the Talgai Skull was somewhat disrupted by the First World War, as both Wilson and David side-lined their academic duties for active service.[61] While they were away, their preliminary notes were given to physician Stewart Arthur Smith (1880-1961), brother of Grafton Elliot Smith and lecturer in anatomy at the University of Sydney. Arthur Smith wrote Talgai's official scientific description and read it before the Royal Society of London in December 1916.

The detailed report affirmed the significance of the Talgai Skulls' human antiquity: 'The direct evidence of the antiquity of Man in Australia has been very imperfect, or, indeed, non-existent, prior to the discovery of this skull.'[62] While Arthur Smith maintained that 'further and more accurate investigations' were needed to confirm details of its discovery, the skull's Pleistocene antiquity was 'very strongly supported, and may indeed be regarded as established.'[63] Like his brother before him, Arthur Smith compared the Talgai Skull to a variety of international hominid fossils in an attempt to depict a story of global human evolution. He argued such comparisons supported the evolutionary theory that the development of 'a definitely human type of brain' was the 'primary and fundamental factor by which man was enabled to differentiate himself from the more unenterprising descendants of the common ancestral form.'[64] Talgai may have 'brute-like

[61] Already involved in the Australian Intelligence Corps, Wilson was called up immediately as Lieutenant-Colonel in the censor's office of the New South Wales 2nd Military District. See Patricia Morison, "Wilson, James Thomas (1861–1945)," *Australian Dictionary of Biography* 12 (Melbourne: Melbourne University Press, 1990). David enlisted in the Australian Imperial Force and became a commissioned Major in its Mining Battalion on the Western Front. See D. F. Branagan and T. G. Vallance, "David, Sir Tannatt William Edgeworth (1858–1934)," *Australian Dictionary of Biography* 8 (Melbourne: Melbourne University Press, 1981)

[62] Smith, "The Fossil Human Skull Found at Talgai, Queensland," 382

[63] Smith, "The Fossil Human Skull Found at Talgai, Queensland," 382

[64] Smith, "The Fossil Human Skull Found at Talgai, Queensland," 382

characters' in its lower face, but the cranium had 'long since become of the definitely human type.'[65]

Arthur Smith used Aboriginal Australians as comparative tools in his report, but they were never connected to the 'definitely human' antiquity and brain type evinced by the Talgai Skull. He compared measurements of Talgai's teeth, palate and cranium to those from the Piltdown Skull, the Heidelberg jaw, the Gibraltar Skull, skulls of Anthropoid apes, contemporary Aboriginal Australian skulls, a 'Large Tasmanian' skull, and those of a 'New Britain' and 'Modern English' races.[66] After his examination, Arthur Smith claimed the Talgai Skull belonged to a 'Proto-Australian,' whose primitive characteristics looked like some 'modern skulls,' but whose decidedly 'more ape-like' characters did not align with 'any living or extinct race of human beings, except *Eoanthropus* [Piltdown].'[67] In particular, he argued Talgai's face shared no 'Tasmanian traits,' and evidence that could be gained from its damaged cranium 'fail[ed] to reveal any Tasmanian affinities.'[68] The antiquity of the Talgai Skull, confidently assigned to the Pleistocene, was thus officially inscribed as exclusively human; belonging to a 'Proto-Australian' with no recognisable affinity with either living Australian or extinct Tasmanian Aborigines.

Arthur Smith's report was eventually published in April 1918, and in August the same year, he delivered a lecture on his findings to the Royal Geographical Society in Brisbane. In his lecture, Arthur Smith estimated the Talgai Skull's Pleistocene antiquity at a staggering 50,000 years.[69] This bold antiquity was still framed as exclusively human, with Arthur Smith describing Talgai as 'definite proof that a race *similar* to the present Australian aborigines, though still retaining traces of its ape-like origin, inhabited Australia about 50,000 years ago.'[70] Arthur Smith also continued to align Talgai with 'Dawson's Dawn-Man,' the Piltdown Skull, so much so that summaries of the lecture published in

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[65] Smith, "The Fossil Human Skull Found at Talgai, Queensland," 382
[66] Smith, "The Fossil Human Skull Found at Talgai, Queensland," 368
[67] Smith, "The Fossil Human Skull Found at Talgai, Queensland," 369, 382
[68] Smith, "The Fossil Human Skull Found at Talgai, Queensland," 383
[69] *The Daily Mail* (Brisbane), "Ancients of the Earth: Proof of Man's Antiquity: The Talgai Skull," August 31, 1918, 8
[70] Emphasis added. *The Daily Mail* (Brisbane), "Ancients of the Earth: Proof of Man's Antiquity: The Talgai Skull," August 31, 1918, 8

local newspapers described the Talgai Skull as 'The Dawn Man of Talgai' [Fig.1]. The media continued to emphasise Talgai's global evolutionary significance, claiming it had caused 'the attention of the scientists of the world' to be 'focussed on this country, and on the evidence of the antiquity of man, which have been furnished by this interesting fossil.'[71]

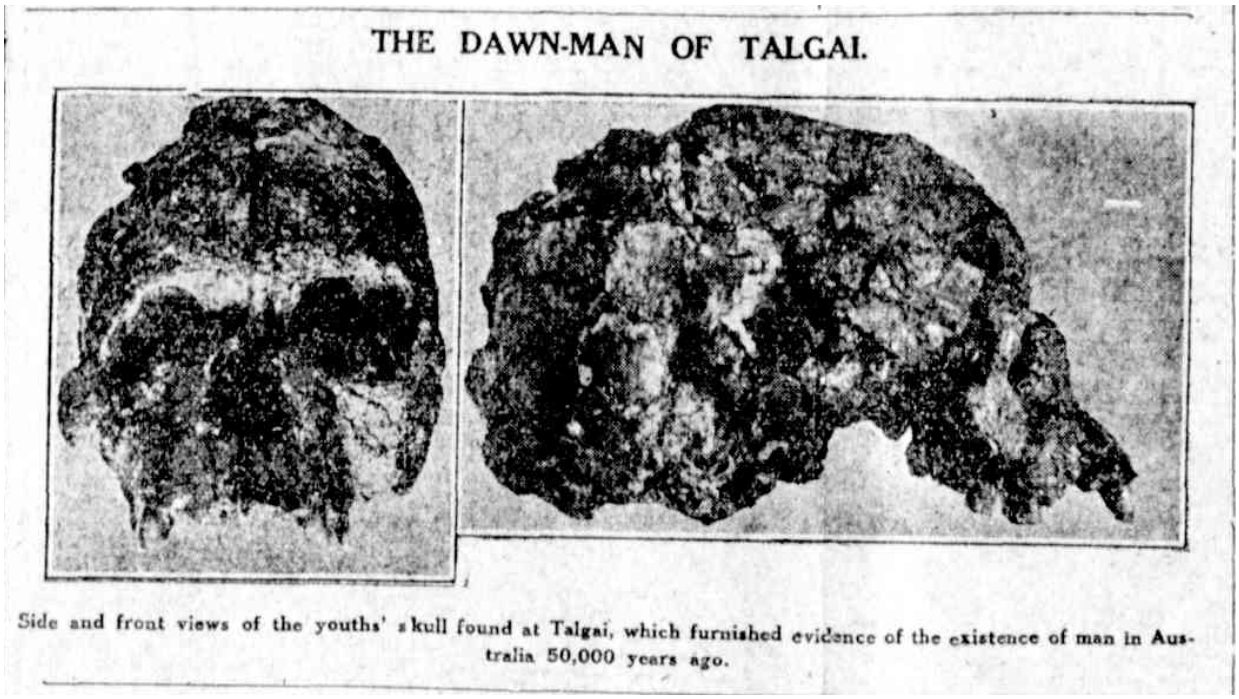

Fig 1. 'The Dawn-Man of Talgai.'
The Daily Mail (Brisbane), "Ancients of the Earth: Proof of Man's Antiquity: The Talgai Skull," August 31, 1918, p.8

The lecture revived public interest in the Talgai Skull in the final months of the war. Several newspaper correspondents questioned the legitimacy of the skull's 50,000 year antiquity, raising familiar critiques about its placement within the creek bed and apparent proximity to the extinct megafauna fossils uncovered elsewhere on the Talgai property. One correspondent argued that even if the skull had been found in the same strata as extinct mammals, it would not indicate antiquity: a cataclysmic flood might one day place the bones of Mr Longman, the Director of the Queensland Museum, beside the bones of the extinct Diprotodon, but this would by no means 'prove' the pair were

[71] *The Daily Mail* (Brisbane), "Ancients of the Earth: Proof of Man's Antiquity: The Talgai Skull," August 31, 1918, 8

'contemporaneous.'[72] Arthur Smith's report acknowledged the geological evidence for Talgai's antiquity, 'though more valuable than was thought at the time the skull first came under notice,' was 'admittedly imperfect.'[73] The 'anatomical facts,' however, especially when viewed alongside the hominid fossil record, outweighed any incomplete geology for Arthur Smith, as it had for David, Wilson and his brother Elliot Smith before him.[74]

The Talgai Skull received a smattering of attention from international and Australian scientists in the 1920s. Some of Arthur Smith's measurements were criticised by Australian anatomists Arthur Neville Burkitt and Thomas Draper Campbell, American orthodontist Milo Hellman, and famed Dutch anatomist Eugène Dubois; yet they all acknowledged Talgai was of a 'generalised primitive human type.'[75] Of Talgai's original champions, only David continued to argue for its extensive Pleistocene antiquity, and only in between working on his comprehensive account of the geology of Australia.[76] In 1923, David included the Talgai Skull in an enormous report on human antiquity in Australia, which he delivered to the Royal Society of Tasmania. The survey provided a much needed update to John Walter Gregory's paper from 1904, yet it still maintained some hallmarks of earlier interpretations, like the articulation of different antiquities for Aboriginal Australians and Aboriginal Tasmanians. David assigned an immense antiquity to the extinct Tasmanian Aborigines, who, it was commonly believed, had arrived in Tasmania

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[72] The Globe Trotter, "The Talgai Skull," *The Daily Mail* (Brisbane), July 20, 1918, 10

[73] Smith, "The Fossil Human Skull Found at Talgai, Queensland," 382

[74] *The Daily Mail* (Brisbane), "Ancients of the Earth: Proof of Man's Antiquity: The Talgai Skull," August 31, 1918, 8; Smith, "The Fossil Human Skull Found at Talgai, Queensland," 382

[75] See Eugène Dubois, "The Proto-Australian Fossil Man of Wadjak," *K. Akademie van Wetenschappen, Amsterdam* 23 (1920): 1013-1051; Milo Hellman, "The Form of the Talgai Palate (read in 1924)," *American Journal of Physical Anthropology* 19 (1934): 1-15; Thomas Draper Campbell, *Dentition and Palate of the Australian Aboriginal*, (Adelaide: Hassell Press, 1925); and A. N. Burkitt, "Further Observations upon the 'Talgai Skull, more especially with regard to the Teeth," *Report of the Australasian Association for the Advancement of Science*, Hobart meeting, (1928): 368-369. See also N.W.G. Macintosh, "The physical aspect of man in Australia," in *Aboriginal Man In Australia: Essays in Honour of Emeritus Professor A. P. Elkin*, ed. R. M. and C. H. Berndt (Sydney: Angus and Robertson Ltd, 1965): 27–70; and N.W.G. Macintosh, "The Talgai Cranium: The Value of Archives," *Australian Natural History* 16:6 (1969): 189-194.

[76] See D. F. Branagan and T. G. Vallance, "David, Sir Tannatt William Edgeworth (1858–1934)," *Australian Dictionary of Biography* 8 (Melbourne: Melbourne University Press, 1981). James Wilson, having retired from the army in August 1920, took up the Chair of Anatomy at the University of Cambridge where he spent the rest of his career. See Patricia Morison, "Wilson, James Thomas (1861–1945)," *Australian Dictionary of Biography* 12 (Melbourne: Melbourne University Press, 1990)

'between about twenty thousand and one hundred thousand years ago.'[77] This antiquity was distinct, however, from the antiquity of Aboriginal Australians.

Under the heading, 'the Antiquity of Aboriginal Man in Australia,' David discussed and dismissed a range of evidence, including oral histories reflecting actual geological events—classified as having been 'picked up earlier from some white people'—as well as bones and stone tools that 'cannot now be traced' or were of 'small value.'[78] The Talgai Skull was the only artefact David included in the 'human remains' section, and he described it, as he always had, as 'distinctly archaic.'[79] David was remarkably vague, however, when it came to connecting the skull's archaic antiquity to Aboriginal Australians, despite the fact this section of his report was entirely focused Aboriginal antiquity. Instead, the only mention David made of Talgai's Aboriginal antiquity was in a statement about its potential to further inform *Tasmanian* Aboriginal antiquity: 'If, therefore, this skull be that of an Australian aboriginal, a later immigrant than the Tasmanian,' he reasoned, 'the first coming of the Tasmanian into Australia must have been still more remote in time.'[80] The affirmed antiquity of the Talgai Skull thus remained ambiguously disconnected from Aboriginal Australians.

The revival of the Talgai Skull demonstrates the value human crania had as markers of antiquity and evolution in the Piltdown era. In both professional and public platforms, Australian scientists sought to align Talgai with a string of international hominid fossils that mapped out a story of global human evolution. These associations invited international recognition and prestige upon Australia's scientific community, and while the First World War interrupted the efforts of Talgai's early academic advocates, its status as the first reliable evidence of a geological human antiquity for Australia remained. Despite

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[77] T. W. Edgeworth David, "R. M. Johnston Memorial Lecture: Geological Evidence of the Antiquity of Man in the Commonwealth, with Special Reference to the Tasmanian Aborigines, Read on 8th October, 1923," *Papers and Proceedings of the Royal Society of Tasmania* (1924): 109-150; 142

[78] David, "R. M. Johnston Memorial Lecture: Geological Evidence of the Antiquity of Man in the Commonwealth, with Special Reference to the Tasmanian Aborigines, Read on 8th October, 1923," 132, 134.

[79] David, "R. M. Johnston Memorial Lecture: Geological Evidence of the Antiquity of Man in the Commonwealth, with Special Reference to the Tasmanian Aborigines, Read on 8th October, 1923," 136

[80] David, "R. M. Johnston Memorial Lecture: Geological Evidence of the Antiquity of Man in the Commonwealth, with Special Reference to the Tasmanian Aborigines, Read on 8th October, 1923," 136

various commentators describing Talgai as being an Aboriginal skull, the antiquity it represented remained exclusively human: a 'Proto-Australian' missing link, whose connection to Aboriginal Australians was either ambiguously comparative or entirely non-existent. The next human crania to be uncovered in Australia would not receive such a favourable interpretation. While they provided fodder for an ongoing media frenzy, the Cohuna and Jervois Skulls would never achieve the same level of professional scientific acceptance as the Talgai Skull. Their advocate and defender, anatomist William Colin MacKenzie, spent the last decade of his life championing their extensive human antiquity, and similarly seeking to align them with a global evolutionary story, but his insistent claims they were both older than the entire human fossil record lacked the necessary support.

The Cohuna Skull: the 'most archaic skull known to science'

In November 1925, George Gray was ploughing an irrigation channel on the edge of Kow Swamp, Victoria, when his plough became lodged, two feet below the surface, in a mineralised human skull.[81] Nearby, he discovered another unmineralised skull and several shattered skeletons. Gray took his discoveries to the nearest police station at Cohuna, where they were examined by George Terry, proprietor and editor of the *Cohuna Farmer's Weekly*. Terry soon published a story about the discoveries, and the mineralised 'Cohuna skull,'[82] caught the attention of local surgeon and comparative anatomist, William Colin MacKenzie (1877-1938). Born in Kilmore, MacKenzie had devoted his life to studying medicine and zoology, and even spent the First World War assisting eminent British anatomist Sir Arthur Keith in cataloguing war wounds.[83] When he read the 1925 report on the Cohuna Skull, MacKenzie eagerly arranged several research trips to examine the artefact and its discovery site. In January 1926, he was accompanied by Edward John Dunn, a retired English geologist who had been Director of the Victorian Geological survey from

[81] N. W. G. Macintosh, "The Cohuna Cranium: History and Commentary from November, 1925 to November, 1951," *Mankind* 4:8 (1952), 307
[82] Terry, and his *Cohuna Farmer's Weekly* report of November 13, 1925, was the first to recognise the possible importance of the Cohuna skull. Macintosh, "The Cohuna Cranium," 307
[83] Monica MacCallum, "MacKenzie, Sir William Colin (1877–1938)," *Australian Dictionary of Biography* 10, (Melbourne: Melbourne University Publishing, 1986)

1904 to 1912.[84] A few months later, MacKenzie visited Cohuna with Daniel James Mahony (1878-1944), a Melbourne-born geologist who had trained under John Walter Gregory and Ernest Willington Skeats at the University of Melbourne.[85] On one of his trips, MacKenzie purchased the Cohuna Skull from George Gray, and in April 1926, he presented it to the Victorian Branch of the British Medical Association (BMA) as the oldest human skull yet discovered in Australia.

Just like his peers had done with Talgai, MacKenzie immediately aligned the Cohuna Skull with international hominid fossils in an attempt to gain an Australian place in a story of global human evolution. He was convinced of its extensive human antiquity, and while he occasionally used Aboriginal Australians as comparative reference points in his analysis, he consistently described Cohuna's antiquity as exclusively human. MacKenzie was a respected authority on human anatomy, with institutional status and connections to the broader British scientific community. This status held sway with the media, who circulated MacKenzie's sensationalist claims. His attempts, however, to gain professional recognition for the Cohuna Skull were repeatedly unsuccessful. The majority of Australian scientists saw the Skull as a comparatively recent curio, and they subjected it to greater scrutiny than they had the Talgai Skull. Yet even when dismissing the Cohuna Skull as geologically recent, Australian scientists still kept this antiquity disconnected from Aboriginal Australians. Its primitive anatomical features did not denote antiquity, but nor did they denote Aboriginality.

MacKenzie's claim for an Australian place in a global evolutionary story was present in his very first lecture on the Cohuna Skull, which he positioned as more ancient than every other Australian and international fossil. He argued Cohuna antedated both the Piltdown and Talgai skulls 'by unknown ages,' and made European Neanderthal remains appear 'comparatively modern.'[86] MacKenzie based this sizeable argument on the skull's

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[84] A. W. Beasley, "Dunn, Edward John (1844–1937)," *Australian Dictionary of Biography* 8, (Melbourne: Melbourne University Publishing, 1981)
[85] For Gregory and Skeats, see Chapter Four. For Mahony, see Thomas A. Darragh, "Mahony, Daniel James (1878–1944)," *Australian Dictionary of Biography* 10, (Melbourne: Melbourne University Publishing, 1986)
[86] *The Argus*, "Man's Oldest Ancestor: Strange Cohuna Skull: Human Development Illustrated," April 20, 1926, 13

'prehistoric features', which either mirrored or exceeded those of the Talgai and Piltdown skulls: its low receding forehead, thick and prominent brow ridges, protruding upper jaw, and large palate and canines all evinced Cohuna was the 'most archaic skull known to science.'[87] As with Talgai, the Cohuna Skull's primitive features may have had similarities to those of Aboriginal Australians, but the skull and the extensive antiquity it represented was exclusively assigned to a broadly human race that no longer existed for study: 'How many things would we like to know about the race to which the Cohuna man belonged?'[88]

MacKenzie used the skull's primitive features to position it as the most likely candidate for the ancestor of the entire human race. Between modern humans and their ancient ancestor there was a gap both anatomical and geological, and while recently discovered crania helped to bridge that gap, none was more convincing than the Cohuna Skull: 'The archaic skull of the Cohuna man was evidence of far-reaching importance for the correct understanding of human development.'[89] This claim unsurprisingly drew more media attention, and many articles enthused over the 'world-wide significance' of the 'prehistoric skull.'[90] The skull, they argued, had placed 'a great responsibility' on 'the shoulders of Australians to unravel the mysteries of these primitive, archaic peoples, who in bygone ages inhabited their country.'[91] MacKenzie had also argued the Murray River region in which the skull had been found should be regarded as 'the greatest anthropological field in the world to-day,' and some articles pushed this into the (not unfamiliar) pronouncement that Australia was the 'cradle of the human race.'[92] Other

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[87] *The Argus*, "Man's Oldest Ancestor: Strange Cohuna Skull: Human Development Illustrated," April 20, 1926, 13
[88] *The Riverine Herald*, "The Cohuna Skull: Valuable Scientific Relic," April 21, 1926, 4
[89] *The Argus*, "Man's Oldest Ancestor: Strange Cohuna Skull: Human Development Illustrated," April 20, 1926, 13
[90] *The Riverine Herald*, "The Cohuna Skull: Valuable Scientific Relic," April 21, 1926, 4; *The Age*, "Prehistoric Man: The Cohuna Skull: Great Scientific Discovery Claimed," April 20, 1926, 11
[91] *The Riverine Herald*, "The Cohuna Skull: Valuable Scientific Relic," April 21, 1926, 4; *The Richmond River Herald and Northern Districts Advertiser*, "World's Oldest Skull," April 27, 1926, 4; *The Kyogle Examiner*, "World's Oldest Skull," April 30, 1926, 1
[92] *The Register*, "Professor MacKenzie's Lecture: Murray Valley As Cradle Of Race," April 22, 1926, 9; *Observer*, "Professor MacKenzie's Lecture: Murray Valley As Cradle Of Race," May 1, 1926, 46

articles pointed out that when the skull was eventually relocated to MacKenzie's museum in Canberra it would be 'the oldest skull specimen in the world in the newest city.'[93]

MacKenzie received an immediate and forceful rebuttal from his professional peers, and one of the first scientists to refute Cohuna's antiquity was none other than D. J. Mahony, the geologist who accompanied MacKenzie on his second research trip to the discovery site.[94] MacKenzie mentioned Mahony's geological report in his lecture, but he chose *not* to reveal Mahony had taken the opposite view of both the skull and the site's antiquity.[95] In his initial report, Mahony identified the red loam surrounding the skull as 'geologically recent,' and argued there were 'no adjacent older formations from which the skull could be derived by natural agencies.'[96] Mahony repeated these conclusions to various newspapers, stating while the skull may have been old in a 'historical sense,' all available evidence was 'against any theory of the geological antiquity of the skull.'[97] He emphasised his geological authority here: 'When a geologist says that a thing is geologically recent he is talking in terms not understood by the ordinary man.'[98] Yet not even this 'recent' geological antiquity would lead scientists to connect the Cohuna Skull with Aboriginal Australians. Although Mahony did not agree with the anatomical evidence for Cohuna's antiquity, he stated it was clear to all observers (see Fig 2) the skull was not of an anatomically modern 'Aboriginal type.'[99] Its 'geologically recent' antiquity was therefore

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[93] *The Age*, "Prehistoric Man: The Cohuna Skull: Great Scientific Discovery Claimed," April 20, 1926, 11
[94] *The Herald*, "Cohuna Skull: Petrologists' Report Suggests It Is Not Antique," April 22, 1926, 7
[95] E. J. Dunn also had doubts about the skull's antiquity. In an unpublished report, Dunn outlined his belief that the red loam the skull was found in was of Tertiary period (65-2 million years ago). The skull, however, was not: being found only two-feet into the creek bed, Dunn was not convinced that the cranium shared this Tertiary date. Large sections of Dunn's unpublished report are reproduced in Macintosh, "The Cohuna Cranium," 307-329.
[96] Mahony's initial report, "A Note on the Geological Age of the Human Skull found at Cohuna," written on March 23, 1926, remained unpublished for many years. The first full description was published a decade later, D. J. Mahony, W. Baragwanath, F. W. Jones, and A. S. Kenyon, "Fossil Man in the State of Victoria, Australia," *Report from the 16th International Geological Congress* 2 (1936): 1335-1342. Mahony's original opinions were quoted in newspaper reports on the Cohuna skull in the mid-1920s, and have also been quoted from the manuscript source in Macintosh, "The Cohuna Cranium," 311, and Phillip G. Macumber and Robert Thorne, "The Cohuna Cranium Site: A Re-appraisal," *Archaeology & Physical Anthropology in Oceania* 10:1 (1975), 67
[97] *The Argus*, "Cohuna Skull: Conclusions Of Geologist: Discovery Not Archaic," April 23, 1926, 9
[98] *The Argus*, "Cohuna Skull: Conclusions Of Geologist: Discovery Not Archaic," April 23, 1926, 9
[99] *The Argus*, "Cohuna Skull: Conclusions Of Geologist: Discovery Not Archaic," April 23, 1926, 9

assigned to an ambiguous, 'primitive man' who, it was suggested, had inhabited Australia 'in comparatively recent times.'[100] Such interpretations demonstrate the remarkable 'logic' scientists articulated in order to simultaneously maintain the rationale of timeless Aboriginality, and to avoid connecting primitive humans to contemporary Aboriginal Australians.

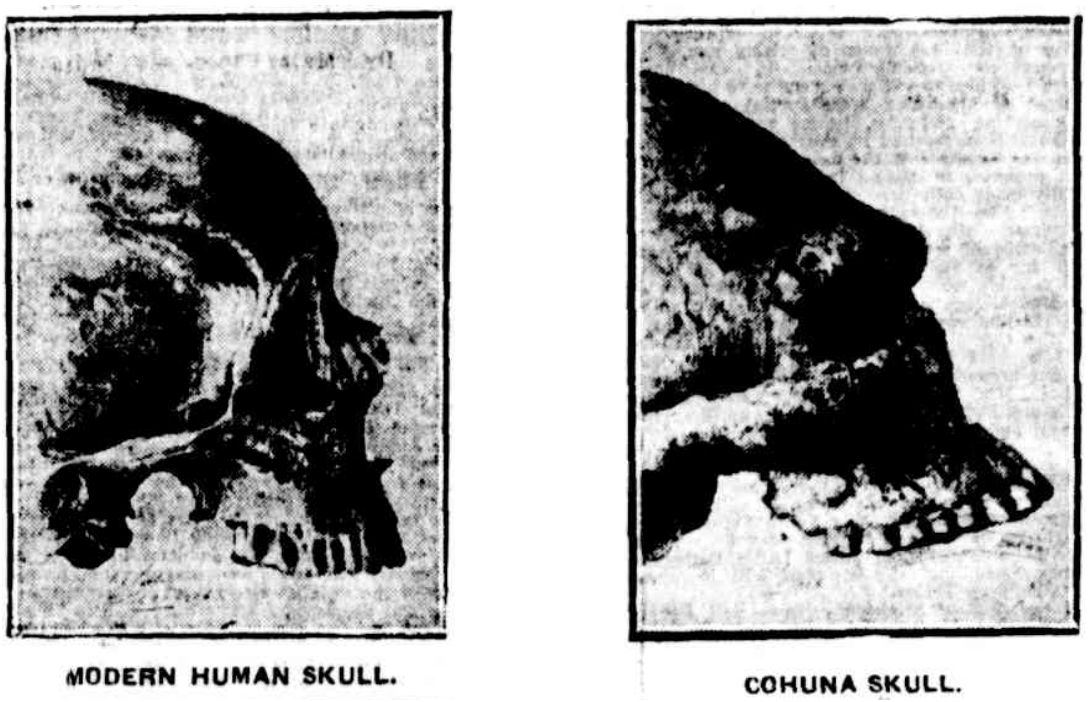

Fig 2.Images showing differences between the Cohuna Skull
and a 'Modern Human Skull' published in *The Argus*, April 20, 1926, p.13

MacKenzie's 'archaic' human antiquity also received opposition from abroad. Franz Boas, Professor of Anthropology at the University of Columbia and the 'father' of American anthropology, thought it 'unlikely' the 'type of fauna' being found in Australia was 'exceedingly ancient.'[101] Dr William Gregory, Curator of Comparative and Human Anatomy at the American Museum of Natural History, had a similar view, arguing that while the

[100] *The Argus*, "Cohuna Skull: Conclusions Of Geologist: Discovery Not Archaic," April 23, 1926, 9
[101] *The Maitland Daily Mercury*, "Cohuna Skull: American Scientists' Opinions: Australian Savants Praised," June 9, 1926, 5; *The Daily Telegraph*, "Early Man: The Cohuna Skull: Dr Gregory's Views," June 10, 1926, 1. See also *The Argus*, "The Cohuna Skull: Scientists Sceptical: Could Only Be 5000 Years Old!" April 22, 1926, 9 for commentary from Britain.

Cohuna Skull was undoubtedly primitive, its features did not necessarily indicate 'great age.'[102] A more outspoken opponent was Grafton Elliot Smith, who had been lecturing in the chair of anatomy at University College, London, since 1919. Still well respected in Australia, Elliot Smith's comments on the Cohuna Skull were widely circulated. Elliot Smith stated he was 'not inclined to think there was the remotest possibility of anything being found in Australia as old as the Piltdown Skull.'[103] As 'Piltdown man' had been living in Europe 'hundreds of thousands of years' before human beings even reached Australia, Elliot Smith thought it 'incredible' anything approaching the age of the Piltdown skull could be found there. Australia, Elliot Smith argued, was a country in which 'the oldest human remains were probably not more than 4000 or 5000 years old.'[104]

Elliot Smith's veneration of the Piltdown skull had not dampened, but his designation of a 4,000-5,000 year human antiquity for Australia marked a shocking change from his appraisal of the Talgai Skull. In 1914, Elliot Smith had confidently aligned Talgai with Piltdown, arguing both skulls represented a human race some 20,000 to 30,000 years old. While Elliot Smith's hefty praise of Talgai could be accounted for by a close friendship with Professor James Wilson, and a desire to bolster his claims about Piltdown, it's unclear why he did not restrict his criticism to just the Cohuna Skull, but instead condemned the entire human antiquity of Australia. Elliot Smith had apparent respect for MacKenzie, whom he called a 'highly competent scientist,' but whose claims were 'a rather large order to swallow.'[105] MacKenzie appeared to have little respect for Elliot Smith. In a series of

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[102] *The Maitland Daily Mercury*, "Cohuna Skull: American Scientists' Opinions: Australian Savants Praised," June 9, 1926, 5; *The Daily Telegraph*, "Early Man: The Cohuna Skull: Dr Gregory's Views," June 10, 1926, 1

[103] Elliot Smith's comments were reprinted in a myriad of newspapers across Australia in the days and weeks following MacKenzie's lecture. *Newcastle Morning Herald and Miners' Advocate*, "Ancient Skulls," April 22, 1926, 5; *Daily Telegraph*, "The Dark Ages: Prehistoric Man: The Murray River Skull," April 22, 1926, 4; *Daily Standard*, "Cohuna Skull: Details Lacking: Australian Cable Received," April 23, 1926, 6; *Observer,* "Murray River Skull: British Scientists Interested: Extreme Antiquity Doubted," May 1, 1926, 46.

[104] *Newcastle Morning Herald and Miners' Advocate*, "Ancient Skulls," April 22, 1926, 5; *Daily Telegraph*, "The Dark Ages: Prehistoric Man: The Murray River Skull," April 22, 1926, 4; *Daily Standard*, "Cohuna Skull: Details Lacking: Australian Cable Received," April 23, 1926, 6; *Observer,* "Murray River Skull: British Scientists Interested: Extreme Antiquity Doubted," May 1, 1926, 46.

[105] *Newcastle Morning Herald and Miners' Advocate*, "Ancient Skulls," April 22, 1926, 5; *Daily Telegraph*, "The Dark Ages: Prehistoric Man: The Murray River Skull," April 22, 1926, 4; *Daily Standard*, "Cohuna Skull: Details Lacking: Australian Cable Received," April 23, 1926, 6; *Observer,* "Murray River Skull: British Scientists Interested: Extreme Antiquity Doubted," May 1, 1926, 46.

newspaper interviews, MacKenzie rebuffed naysayers, and continued to place the Cohuna Skull on a level of global scientific significance. Elliot Smith, MacKenzie argued, was at a disadvantage as far as the Cohuna Skull was concerned: he had 'never even seen it.'[106] Indeed, MacKenzie labelled Elliot Smith's opinion that the oldest human remains in Australia were no more than 4,000 or 5,000 years old as 'entirely unwarranted.'[107] He then boldly stated there was 'no such thing as the Piltdown skull,' only fragments of bone reconstructed by five separate scientists, all of whom differed in their conclusions.[108] By comparison, MacKenzie argued, the Cohuna Skull had been found by one man, and was missing only its lower mandible.

The skull received some home-grown support from Tasmanian-born journalist Thomas Dunbabin (1883-1973), editor of Sydney's *The Sun*, who positioned Cohuna as one of several artefacts proving a human occupation of Australia 30,000 years 'before Cook.'[109] 'We are only now beginning to realise,' Dunbabin wrote, 'how many ages passed between the first human occupation of this part of the South Hemisphere and the coming of Captain Cook.'[110] While acknowledging the difficulties some had in accepting MacKenzie's claims, Dunbabin argued evidence had been steadily accumulating to prove humans had a vast geological antiquity in Australia. Among these he listed various Aboriginal artefacts—kitchen middens, stone implements, and chipped chalcedony flakes—but framed them as belonging to *Tasmanian* Aborigines. While Dunbabin is a rare example of measured, Australian support for the Cohuna Skull, his comments reflect the general belief in Australia's extensive *human* antiquity shared even by Cohuna's critics: 'The old idea that

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[106] *The Age*, "Cohuna Skull: English Scepticism Combated: Compared With Piltdown Specimen," April 23, 1926, 11

[107] *The Argus,* "Cohuna Skull: Criticism expected: Professor MacKenzie's Reply," April 23, 1926, 9; *Evening News*, "A Bone of Contention: Cohuna Skull: Antiquity Defended," April 23, 1926, 8

[108] *The Age*, "Cohuna Skull: English Scepticism Combated: Compared With Piltdown Specimen," April 23, 1926, 11; *The Argus,* "Cohuna Skull: Criticism expected: Professor MacKenzie's Reply," April 23, 1926, 9; *Evening News*, "A Bone of Contention: Cohuna Skull: Antiquity Defended," April 23, 1926, 8

[109] Thomas Dunbabin, "Before Cook: Australia's Early Men: Back 30,000 Years," *The Sun*, May 2, 1926, 3; Dunbabin's article was reprinted in several newspapers in New South Wales and South Australia. It also appeared two years later in a Tasmanian newspaper. Thomas Dunbabin, "Before Cook: Australia's Early Men: Back 30,000 Years," *Advocate*, January 21, 1928, 12

[110] Dunbabin, "Before Cook: Australia's Early Men: Back 30,000 Years," 1926, 3; Dunbabin, "Before Cook: Australia's Early Men: Back 30,000 Years," 1928, 12

man might have come to Australia within the last few thousand years has been disproved."[111] Except for Elliot Smith's strange about-face, even commentators who doubted the Cohuna Skull remained convinced by the Talgai Skull, and the exclusively human antiquity it represented.[112]

The Cohuna Skull continued to spark controversy as MacKenzie pursued its promotion as the 'most archaic skull known to science.' He revisited the discovery site, conducted additional geological surveys, and unearthed a variety of other skeletal remains—all the while promising a forthcoming publication that never eventuated. In 1927, he travelled to Europe to conduct 'private demonstrations' in London, Edinburgh and Paris, and to consult experts like Professor Marcellin Boule, Director of the Institute of Human Palaeontology in Paris, and his war-time colleague, Sir Arthur Keith.[113] It is unclear whether MacKenzie actually took the Cohuna specimen with him to Europe, or whether he just provided his audiences with notes on its measurements. Whatever was discussed, Keith was impressed enough to include the Cohuna Skull in his *New Discoveries Relating to the Antiquity of Man* (1931). Keith had also supported the vast human antiquity of the Talgai Skull, and his monograph positioned 'Cohuna man' as an adult version of the 'Talgai lad.'[114] Keith was perhaps the only professional scientist to directly connect both the Talgai and Cohuna Skulls, and their alleged Pleistocene antiquity, to contemporary Aboriginal Australians, who he described as 'descendants of these first primitive invaders.'[115] Keith was a monumental anatomical authority in Britain, and MacKenzie framed his support as a powerful refutation of the scepticism surrounding the Cohuna Skull.[116]

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[111] Dunbabin, "Before Cook: Australia's Early Men: Back 30,000 Years," 1926, 3; Dunbabin, "Before Cook: Australia's Early Men: Back 30,000 Years," 1928,.12

[112] *The Gundagai Independent and Pastoral, Agricultural and Mining Advocate,* "In Australia Ages Ago: Is Murray Skull Oldest Fossil?" April 26, 1926, 1; *The Maitland Daily Mercury*, "Cohuna Skull: American Scientists' Opinions: Australian Savants Praised," June 9, 1926, 5; *The Daily Telegraph*, "Early Man: The Cohuna Skull," June 10, 1926, 1

[113] Monica MacCallum, "MacKenzie, Sir William Colin (1877–1938)," *Australian Dictionary of Biography* 10, (Melbourne: Melbourne University Publishing, 1986)

[114] Arthur Keith, *New Discoveries Relating to the Antiquity of Man,* (London: Williams & Norgate, 1931), 28, 307-308

[115] Keith, *New Discoveries Relating to the Antiquity of Man,* 310

[116] *The Sydney Morning Herald*, "Skull Found In Australia: Prehistoric Man," June 16, 1931, 9. Shortly after returning to Australia in September 1927, MacKenzie received more mineralised skull fragments from Sergeant Grant of the Cohuna Police, which he publicly lauded as dissipating any notion the initial skull

For Australian scientists, however, the 'large order' of the Cohuna skull continued to be hard to swallow. A damning critique came early in 1928 from Arthur Neville Burkitt, Professor of Anatomy at the University of Sydney, around the same time he examined the Talgai Skull.[117] Burkitt had been critical of Arthur Smith's measurements of Talgai, but his appraisal of the 'badly damaged' Cohuna Skull produced measurements that were vastly different to those reported by MacKenzie.[118] After D. J. Mahony's attack on Cohuna's geological credentials, Burkitt's assassination of its anatomy left little ground for MacKenzie to stand on. While they remained unpublished at the time, Burkitt forwarded copies of his notes to Sir Arthur Keith and Frederic Wood Jones, a Melbourne based anatomist who later became one of MacKenzie's most outspoken antagonists.[119] In light of these discrepancies, Keith's endorsement of the Cohuna Skull, likely based on communications and drawings provided by MacKenzie, lost some of its potency, and may explain why the skull did not appear in any of Keith's subsequent publications. The Cohuna Skull might have faded from memory if it weren't for the discovery of another fossilised cranium, the Jervois Skull, late in 1929. Although its antiquity was even more questionable than Cohuna's, MacKenzie launched the same strategy in its defence, linking Jervois to the newly discovered and undoubtedly prehistoric Peking Man in an attempt to prove Australia's place in global human evolution.

The Jervois Skull: Australia's 'Link With Dawn Of Existence'

Towards the end of 1929, while inspecting the silver lead potential of land around the Jervois Ranges in Australia's Northern Territory, a group of men discovered a human

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had been a 'freak' aberration. See *The Argus*, "Aboriginal Skull: Found At Kow Swamp: Great Scientific Value," September 24, 1927, 33; *Border Watch*, "Another Skull Unearthed," September 27, 1927, 4; *Advocate*, "Another 'Cohuna Skull,'" September 29, 1927, 27; *The Australasian*, "Skull Found Near Cohuna," October 1, 1927, 72.

[117] Following the death of his mentor, John Irvine Hunter, Burkitt became Challis Professor in 1926 and held the position for thirty years. See Jonathan Stone, "Burkitt, Arthur Neville (1891–1959)," *Australian Dictionary of Biography* 13, (Melbourne: Melbourne University Press, 1993)

[118] Burkitt noted the skull had been badly damaged, either during the initial discovery or in the cast-making process, and was not fully 'developed' or 'cleaned.' See Arthur Neville Burkitt, "Unpolished notes dated January 27, 1928," as quoted in Macintosh, *The Cohuna Cranium*, 317

[119] Arthur Neville Burkitt, "Unpolished notes dated January 27, 1928," as quoted in Macintosh, *The Cohuna Cranium*, 317

skull in a mulga bush.[120] One of the men, mining geologist Charlie Gibson, brought the skull home to his friend, Gilbert Rigg. Rigg had a keen interest in anthropology, and believing Colin MacKenzie to be 'the leading expert in Australia in such matters,' he brought the skull to the Professor's attention.[121] MacKenzie was quick to declare the skull proved an extensive, internationally significant and distinctly human antiquity for Australia. As he had done with Cohuna, MacKenzie claimed the Jervois Skull belonged not to Aboriginal Australians, but 'a race of human beings long vanished from the earth, and away below the present aborigines.'[122] He never connected the skull's antiquity to Aboriginal Australians, instead projecting outwards to position the skull as 'a link in the upward chain of the evolution of the human race.'[123] To do this, MacKenzie used the Peking Skull, whose discovery in China within days of Jervois made international headlines as an 'entirely new genius of the human family' that was 'at least a million years old.'[124]

For the last seven years of his life, MacKenzie consistently aligned the Jervois Skull with the Peking Skull in an attempt to gain national and international recognition for Australia's human antiquity. What's more, he used the credibility of Peking to bolster his claims of both the Jervois *and* Cohuna skulls. Unfortunately for MacKenzie, the geological and anatomical conditions surrounding the Jervois Skull were even less convincing than

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[120] Initial newspaper reports listed the four men as Colin Fraser, George King, Charlie Gibson and Jim O'Neill. See *The Register News*, "Out Among The People," December 6, 1929, 6. It may be that the Colin Fraser referred to was Sir Colin Fraser (1875-1944), a New Zealand born geologist and mining company director who helped to expand Australia's silver-lead smelting operations in the interwar years. See John Kennett, "Fraser, Sir Colin (1875–1944)," *Australian Dictionary of Biography* Volume 8, (Melbourne: Melbourne University Press, 1981).

[121] *The Register News*, "Out Among The People," December 6, 1929, 6

[122] *The Register News*, "Out Among The People," December 6, 1929, 6; *Barrier Miner*, "Find In Jervois Range: Skull Thought To Be Link In Chain Of Evolution," December 6, 1929, 1; *The Register New-Pictorial*, "Link With Earliest Human Life: Skull Found On Jervois Ranges," December 6, 1929, 3; *Barrier Miner*, "Studying the Aborigines," December 23, 1929, 2

[123] *The Register News*, "Out Among The People," December 6, 1929, 6; *Barrier Miner*, "Find In Jervois Range: Skull Thought To Be Link In Chain Of Evolution," December 6, 1929, 1; *The Register New-Pictorial*, "Link With Earliest Human Life: Skull Found On Jervois Ranges," December 6, 1929, 3; *Barrier Miner*, "Studying the Aborigines," December 23, 1929, 2

[124] Peking was initially written as Pekin. *Barrier Miner*, "The Pekin Skull: New Chapter In History Of The Human Race," December 16, 1929, 1. A team of scientists from Sweden, the United States, Austria, Canada, and China had been steadily excavating the Zhoukoudian cave system since 1923, uncovering bones, partial crania, mandibles and molar teeth. Together, they depicted 'Peking Man,' a hominid that in 1927, received its own classification, *Sinanthropus pekinensis*.

Cohuna's, and his obstinate determination to have both skulls recognised did little to win the support of his colleagues. As an eager public watched on, the Cohuna and Jervois skulls became engulfed in a fiery debate that eroded much of their remaining credibility.

Although its discovery received local media attention, MacKenzie waited 18 months to reveal the Jervois Skull to a national audience. In June 1931, he went straight to the media and described the skull as evidence of a 'prehistoric man' whose features were similar to those of the Peking Skull.[125] While not every scientist believed Peking Man was the 'missing link'—Frederic Wood Jones was one vocal example—Australia's newspapers were saturated with discussions on Peking Man.[126] Even Grafton Elliot Smith championed the Peking Skull as 'the most impressive' and 'the most important' contribution to knowledge of early 'Pleistocene man' that had yet been made.[127] Amid the Peking pyrexia, MacKenzie's interview introducing the Jervois Skull was strategically published in all the major newspapers in New South Wales, Victoria and South Australia. In a curious move, however, MacKenzie used his interview to claim a place in the international fossil record not just for the Jervois Skull, but also the Cohuna Skull. In fact, after a brief introduction of his latest discovery, MacKenzie spent the majority of the interview rehashing his claims for the antiquity and significance of Cohuna.[128] Some newspapers published articles that focused more on the Jervois Skull itself, but many of these contrasted the story of its discovery against emerging rumours the 'prehistoric' skull belonged to an Aboriginal woman, who had worked and died on a nearby cattle property, and had been left in the scrub as a practical joke.[129]

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[125] *The Sydney Morning Herald*, "Skull Found In Australia: Prehistoric Man," June 16, 1931, 9

[126] *The Herald*, "Not Missing Link: Expert On Pekin Skulls," August 8, 1930, 7. Other scientists, such as English surgeon Sir John Bland Sutton, believed the Pekin skull was not even human, and instead belonged to a gorilla. *Barrier Miner*, "The Pekin Skull: That of a Gorilla says Sir John B. Sutton," November 22, 1930, 1

[127] *The Herald,* "Man's Ancestors: Importance of Pekin Skull: Affinity with Apes," April 19, 1930, 5; *The Age*, "Early Man in China: The Pekin Skull," June 10, 1930, 15; *Cairns Post,* "Early Man in China: The Pekin Skull," June 26, 1930, 14; *The Herald*, "'Pekin Man' Skulls: Scientist Going To China To Investigate," August 4, 1930, 7; *Barrier Miner*, "Study of 'Pekin Man': Professor to go to China," August 5, 1930, 3

[128] *The Sydney Morning Herald*, "Skull Found In Australia: Prehistoric Man," June 16, 1931, 9; *The Argus*, "Prehistoric Skull: Important Discovery Made In Central Australia," June 16, 1931, 7

[129] *News (Adelaide),* "Prehistoric Skull: Found in Central Australia: Great Discovery," June 16, 1931, 1; *The Herald*, "Prehistoric Skull Discovered: Central Australia Find: Said To Resemble Pekin Man," June 16, 1931, 1; *News (Adelaide)*, "Skull Thought Genuine: Authority and 'Hoax' Theory: Strange Rumors," June 18, 1931, 7;

As June turned to July, however, MacKenzie dominated public discussion and vowed to prove the Jervois Skull's antiquity in a lecture delivered to the Canberra Medical Society.[130] In his lecture, MacKenzie abandoned prior claims of a similarity to the Peking Skull and instead asserted the Jervois Skull was much older.[131] Throughout his lecture, he emphasised the Jervois Skull's extensive human antiquity, and while he didn't estimate its age, his repeated assertions that it was 'older' than Peking broadly positioned it as up to a million years old. Like his initial interview, MacKenzie used his lecture to link both the Jervois and Cohuna skulls to the international fossil record, arguing they were 'the most important of the lowest prehistoric documents in the world,'[132] and 'focused attention on Australia.'[133] The lecture caused another flurry of media attention, receiving circulation in at least 25 papers around the country, with headlines proclaiming the Jervois Skull as the 'World's Best Prehistoric Find,' and Australia's 'Link With Dawn Of Existence.'[134]

Perhaps anticipating criticisms similar to Cohuna's, MacKenzie argued the Jervois Skull was of 'anatomical and not geological interest.'[135] This was, MacKenzie reasoned, because of the light it shed on the human cranial response to altered muscular pull associated with humans' assumption of erect posture, and the resulting improved brain

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Recorder, "Is It Prehistoric? Mystery of a Skull: Rumors of Station Joke," June 19, 1931, 1; *Townsville Daily Bulletin*, "Jervois Range Skull: The Stockmen Laugh," June 20, 1931, 7

[130] *News (Adelaide),* "Age Of Jervois Skull: Anthropologist Will Tell Tonight," July 27, 1931, 3

[131] *Warwick Daily News*, "Jervois Skull: Older Than Pekin Discovery: Scientist Impressed," July 28, 1931, 1; *Tweed Daily*, "The Jervois Skull: Older Than Famous Pekin Specimen, Investigator's Claim," July 28, 1931, 2

[132] *The Brisbane Courier*, "Rare Find: The Jervois Skull: Value To Science," July 28, 1931, 10

[133] *The Canberra Times*, "The Jervois Skull: Valuable Find In Australia: Importance To Medical Science: Will Focus Attention On Australia," July 28, 1931, 1

[134] Reports were published in Queensland (*The Brisbane Courier, Maryborough Chronicle, Wide Bay and Burnett Advertiser, The Evening News (Rockhampton), The Telegraph, Daily Standard, Townsville Daily, Bulletin, Warwick Daily News, Daily Mercury (Mackay)*), the Australian Capital Territory (*The Canberra Times*), South Australia (*News (Adelaide), Advertiser and Register*), Victoria (*The Herald, The Argus*), New South Wales (*Northern Star, The Labor Daily, Tweed Daily, Newcastle Morning Herald and Miners' Advocate, The Sun, The Daily Telegraph, Daily Advertiser (Wagga Wagga), Daily Examiner (Grafton), The Sydney Morning Herald*), Tasmania (*Examiner, Advocate*) and the Northern Territory (*Northern Territory Times*). See particularly *The Labor Daily*, "Link With Dawn Of Existence," July 28, 1931, 4

[135] *The Canberra Times*, "The Jervois Skull: Valuable Find In Australia: Importance To Medical Science: Will Focus Attention On Australia," July 28, 1931, 1; *Northern Star,* "World's Best Prehistoric Find: The Jervois Skull: Aboriginal Woman," July 28, 1931, 5

development.[136] He gave fastidious descriptions of its 'prehistoric' features: its forehead, at 86mm, which was supposedly larger than *both* the Java and Peking Skulls; and its brain capacity, between 956 and 980 cubic centimetres, MacKenzie argued was the 'lowest known cubic capacity of any complete human skull.'[137] Unfortunately for MacKenzie, many scientists saw in the Jervois Skull features of Aboriginal Australians. Viewed through the paradigms of racial science and timeless Aboriginality, MacKenzie's critics could only interpret similarities between contemporary Aboriginal skulls and fossilised crania as proving the primitivity of the former, and not the antiquity of the latter. In several interviews with the press, for example, Grafton Elliot Smith rejected MacKenzie's claims of Jervois' vast antiquity with the blunt declaration, 'No anatomist would dare to make such remarks from such slender material.'[138] All that could be gathered, he argued, was MacKenzie had found the skull of 'a modern aboriginal Australian,' whose 'primitive characters' were 'not uncommon in the primitive race.'[139] For MacKenzie to describe them as 'prehistoric,' or to make any reference to the Peking Skull being *more* modern than Jervois, was 'unintelligible' to Elliot Smith.[140]

Frederic Wood Jones (1879-1954), the London-born Chair of Anatomy at the University of Melbourne, extended this logic even further. A lifelong friend of Sir Arthur Keith, Wood Jones was one of Australia's most distinguished anatomical experts in the early twentieth century.[141] In 1920, he became the Elder Chair of Anatomy at the University of

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[136] *The Canberra Times*, "The Jervois Skull: Valuable Find In Australia: Importance To Medical Science: Will Focus Attention On Australia," July 28, 1931, 1; *Northern Star,* "World's Best Prehistoric Find: The Jervois Skull: Aboriginal Woman," July 28, 1931, 5

[137] *The Brisbane Courier*, "Rare Find: The Jervois Skull: Value To Science," July 28, 1931, 10; *The Canberra Times*, "The Jervois Skull: Valuable Find In Australia: Importance To Medical Science: Will Focus Attention On Australia," July 28, 1931, 1

[138] *The Sun*, "Jervois Skull: Professor's Doubts: Daring Thesis," July 28, 1931, 6; *News (Adelaide)*, "Jervois Skull Lecture: Prof. Elliott [sic] Smith Critical," July 28, 1931, 1; *The Daily Telegraph,* "War Over Value of Jervois Skull," July 29, 1931, 8

[139] *Newcastle Morning Herald and Miners' Advocate*, "Jervois Skull 'Not Older Than Peking': Professor Smith's Views," July 29, 1931, 7

[140] *Newcastle Morning Herald and Miners' Advocate*, "Jervois Skull 'Not Older Than Peking': Professor Smith's Views," July 29, 1931, 7; *The Age*, "The Jervois Skull: Its Scientific Value Questioned," July 29, 1931, 7; *The Herald*, "The Jervois Skull: London Professor's Doubts," July 29, 1931, 1

[141] Sir Arthur Keith's friendship and encouragement was a strong influence on Wood Jones' decision to study and practice anatomy. See Monica MacCallum, "Jones, Frederic Wood (1879–1954)," *Australian Dictionary of Biography* 9, (Melbourne: Melbourne University Press, 1983)

Adelaide, and after a brief stint at the University of Hawaii, returned to Australia and the University of Melbourne in 1930. In July 1931, Wood Jones eviscerated the Jervois Skull. After obtaining a cast of the skull, he stated with 'no hesitation' that it was 'well within the limits of the normal, modern Australian aboriginal female.'[142] He refuted all of MacKenzie's claims that Jervois represented a primitive ancestor of the human race, that it ranked with the Peking and Java fossils as a 'primitive humanoid type,' and especially that it was smaller in cubic content than any other human skull known to science: 'There are in the public museums of Australia more than 30 skulls of modern normal Australian aboriginal women which are as small as or smaller than the Jervois skull.'[143] The claim that Jervois was 'the most important of prehistoric documents in the world today' was therefore 'frankly ridiculous.' Indeed, Wood Jones saw MacKenzie's enthusiasm for what was 'evidently a modern and not abnormal female aboriginal skull' as not only ridiculous, but damaging, for they rendered 'Australian science suspect' to scientists 'in other lands.'[144] So ingrained was the logic of Aboriginal timelessness, that any articulation of it was frankly 'ridiculous' and 'damaging' to science.

Wood Jones' critique was well-received by the Australian public, and indeed, received more media attention than the skull's initial announcement. Charles Fenner, Director of Technical Education in South Australia and 'an acknowledged authority on geology,' was particularly 'pleased' to hear Wood Jones speak 'so definitively on the relatively modern age of the Jervois skull.'[145] Fenner supported Wood Jones' anatomical critique with his own geological attack: when dealing with 'primitive skulls,' he stated, both 'anatomical and geological evidence were necessary' to determine antiquity. In 1927, as a

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[142] *Examiner (Launceston),* "Jervois Skull Claimed to be Modern: Another Opinion," July 29, 1931, 7; *Advertiser and Register*, "Age of Jervois Skull Disputed: Modern Aborigine, Says Prof. Wood Jones: Science Sensation," July 29, 1931, 15; *The Telegraph*, "Claim Disputed," July 29, 1931, 10; *The Argus*, "Jervois Skull: Is It Prehistoric?" July 29, 1931, 11

[143] *Examiner (Launceston),* "Jervois Skull Claimed to be Modern: Another Opinion," July 29, 1931, 7; *Advertiser and Register*, "Age of Jervois Skull Disputed: Modern Aborigine, Says Prof. Wood Jones: Science Sensation," July 29, 1931, 15; *The Telegraph*, "Claim Disputed," July 29, 1931, 10; *The Argus*, "Jervois Skull: Is It Prehistoric?" July 29, 1931, 11

[144] *Advertiser and Register*, "Age of Jervois Skull Disputed: Modern Aborigine, Says Prof. Wood Jones: Science Sensation," July 29, 1931, 15; *The Telegraph*, "Claim Disputed," July 29, 1931, 10; *The Argus*, "Jervois Skull: Is It Prehistoric?" July 29, 1931, 11

[145] *Advertiser and Register*, "Geological Evidence Missing," July 29, 1931, 15

science writer for *The Australasian*, Fenner had blasted the Cohuna Skull's lack of geological evidence; and he did the same for the Jervois Skull in 1931.[146] Fenner described both skulls as the kind of artefacts whose announcements 'flared up like the flame from dry flax, and died down as readily and as positively.'[147] MacKenzie certainly tried to keep the flame alive, claiming the negative commentary did not concern him 'in the remotest degree.'[148] He did lament that additional opinions of the skull kept being sought, especially from international scientists; which he read as a suggestion Australian scientists lacked the ability to sort out the 'scientific problems' of important artefacts.[149]

In an effort to cut through the laboured publicity, the Royal Society of Victoria organised a symposium to determine the skull's authenticity. Unsurprisingly, the opinions of D. J. Mahony and Frederic Wood Jones came out on top: Mahony continued to cite the lack of geological evidence—'the Jervois skull was found on the surface and was not fossilised'—while Wood Jones maintained his opinion of the skull's anatomy—'in its absolute features it was a very ordinary aboriginal skull."[150] The symposium, along with persistent rumours the skull belonged to an Aboriginal station worker, eroded most of the Jervois Skull's plausibility as an artefact of human antiquity.[151] While MacKenzie's enthusiasm rarely waned, both the Jervois and Cohuna Skulls suffered from his overly-confident public assertions and the lack of any official scientific publication. The Jervois

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[146] Fenner wrote under the pseudonym 'Tellurian.' Lynne Trethewey, "Fenner, Charles Albert (1884–1955)," *Australian Dictionary of Biography* 8, (Melbourne: Melbourne University Press, 1981). See Charles 'Tellurian' Fenner, "Science Notes," *The Australasian*, October 22, 1927, 72; and *Advertiser and Register*, "Geological Evidence Missing," July 29, 1931, 15

[147] Charles 'Tellurian' Fenner, "Science Notes," *The Australasian*, October 22, 1927, 72; and *Advertiser and Register*, "Geological Evidence Missing," July 29, 1931, 15

[148] *Daily Advertiser*, "Jervois Skull: Sir Colin MacKenzie Replies To Critics," July 30, 1931, 1; *The Sun*, "No Concern: Jervois Skull Comment: Sir Colin MacKenzie," July 29, 1931, 3

[149] *Daily Advertiser*, "Jervois Skull: Sir Colin MacKenzie Replies To Critics," July 30, 1931, 1; *The Sun*, "No Concern: Jervois Skull Comment: Sir Colin MacKenzie," July 29, 1931, 3; *The Herald*, "The Skull: Visiting Expert As Judge: University Suggestion," July 30, 1931, 12; *News (Adelaide),* "Scientists On Way Abroad: One Has Jervois Skull Data," August 3, 1931, 3; *Advertiser and Register*, "Jervois Skull Controversy: London Authority Here Makes Contribution: Man's Arrival By Sea," August 5, 1931, 9

[150] *The Argus*, "Jervois Skull: Royal Society Symposium: Professor Wright Cautious," August 10, 1931, 8; *Daily Standard*, "Skull Of Ordinary Abo: Professor's View of Jervois Find," August 14, 1931, 15; *The Argus*, "Jervois Skull: Is It Primitive? Scientists Reject Claims," August 14, 1931, 8; *The Mail*, "No Proof: Comment By Geologists," August 15, 1931, 2

[151] See *The Herald*, "Jervois Skull Only Three Years Old: Finder's Story: New Challenge To Sir Colin MacKenzie," August 14, 1931, 7

Skull, surrounded by sensationalist rumours of Aboriginal murder, was particularly unconvincing. Rather than providing support for his earlier claims around the Cohuna Skull, as MacKenzie had hoped, the Jervois Skull instead appeared to discredit them both as artefacts belonging to any ancient representatives of the human race.[152] After MacKenzie's death in 1938, few scientists saw any cause to examine them again until the early 1950s.

Conclusion

In the excitement of the Piltdown era, fossilised human skulls had renewed significance as markers of antiquity. Indeed, the cultural capital of human antiquity was almost as high as when it had first been established by British science in 1859: now more than ever, Australian scientists wanted to prove Australia's extensive human antiquity. This chapter has shown how, amid the excitement, Australian scientists sought to align local Aboriginal skulls with the international fossil record in an attempt to claim a uniquely Australian space in a global story of human evolution. Within their claims, however, lurked the lingering legacies of warped nineteenth century evolutionism and polygenist racial science, whose notion of innate human difference continued to affect conceptualisations of 'the human' as a being that could rise above nature and attain a state of 'civilisation.' By blurring the lines between Aboriginality and humanity, these polygenist legacies ultimately allowed scientists to position Aboriginal Australians outside of an exclusive human antiquity.

This was not just a semantic slight, but a type of intellectual dispossession in which Australian scientists used Aboriginal artefacts and bodies to prove an internationally significant human antiquity that they simultaneously disconnected from Aboriginal people. Skulls and crania were the key to this dispossession. The science of craniology, itself transformed by evolutionary theories, had provided crucial empirical support for the assumptions of polygenism; but when polygenism eventually declined, the idea of innate

[152] *Examiner (Launceston)*, "The Human Race: Australia Not Cradle: Jervois Skull Controversy," July 30, 1931, 3; *The Brisbane Courier*, "Not the Cradle of Humanity," August 1, 1931, 12; *Advertiser and Register*, "Jervois Skull Primitive, Not Prehistoric," August 8, 1931, 17

human difference, evidenced in cranial structure, did not. These ideas contributed to the widely held belief that Aboriginal Australians, incapable of being 'civilised,' were doomed to an inevitable extinction. They also allowed scientists to articulate an exclusive human antiquity from artefacts they themselves described as Aboriginal. Thus, in the early twentieth century, Aboriginal antiquity was no longer encompassed by human antiquity, but elided and hidden by it. Aboriginal Australians had finally become the ultimate representational tool—a primitive indigene who sat outside the realms of temporality *and* humanity—that scientists could use to prove Australia's human antiquity without overturning either the rationale of Aboriginal timelessness or their inevitable extinction.

These categories would eventually be brought back together in the decades before the radiocarbon 'revolution' and professionalisation of Australian archaeology in the 1960s. Not, however, from advanced dating techniques, but after a series of broader intellectual, social and political transitions induced scientists to recognise the Aboriginality of the antiquity they unearthed. Just as this chapter revealed how scientists used the ambiguity between humanity and Aboriginality to articulate an exclusive human antiquity from Aboriginal artefacts, Chapter Six reveals how, as that ambiguity was eroded, scientists found it less implausible to describe Australia's human antiquity as Aboriginal.

Chapter Six

Coming full Circle: Aboriginal antiquity in the 'great Australian silence,' 1930-1960

In 1968, Australian anthropologist W.E.H. Stanner gave his now famous Boyer Lectures for the Australian Broadcasting Corporation, which traced settler attitudes towards Aboriginal Australians from the early years of colonisation through to the 1950s. His second lecture, 'The Great Australian Silence,' is well remembered for its visceral condemnation of settler indifference to Aboriginal peoples, culture and history. For Stanner, this 'inattention' amounted to a structural dismissal practised on a national scale: 'a view from a window which has been carefully placed to exclude a whole quadrant of the landscape.'[1] What may have begun as 'a simple forgetting' had over time, he argued, turned into 'a cult of forgetfulness.'[2] Stanner's critique was felt with full force by Australian historians, many of whom pinpoint it as a moment of awakening—of breaking the silence—after which Aboriginal history began to rise and settler delusion declined.[3]

While the intervention was a powerful one, several historians have since interrogated the collective memory built around it. Ann Curthoys argues the lectures *were* a criticism of historians, but one that foreshadowed a silence already in the process of being

[1] W.E.H. Stanner, "The Great Australian Silence," in *The Dreaming and Other Essays*, (Collingwood: Black Inc., 2009), 188-189
[2] Stanner, "The Great Australian Silence," 188-189
[3] Many Australian historians cite Stanner's Boyer Lectures as marking personal and professional shifts away from historical understandings that excluded Aboriginal and Torres Strait Islander peoples, as well as the beginning of a revision of Australia's colonial history, particularly regarding frontier warfare. See for example Henry Reynolds, "The Breaking of the Great Australian Silence: Aborigines in Australian Historiography 1955-1983," The Trevor Reese Memorial Lecture, University of London, 30 January 1984; Bain Attwood, "The past as future: Aborigines, Australia and the (dis)course of history," *Australian Humanities Review* 1 (1996): 1-4; Anna Clark, "Friday essay: the 'great Australian silence' 50 years on," *The Conversation*, August 3, 2018.

broken.[4] Curthoys claims Stanner's iconic 'great Australian silence' has become an oversimplified descriptor for 'a much more complex process of social and cultural change,' driven as much by Aboriginal voices, of which Stanner was 'an important register and publicist' but not the 'sole originator.'[5] Indeed, Alison Holland argues there was no silence in 'the politics on the ground'—in the press, in parliament, at universities, churches and missions—where Aboriginal and non-Aboriginal Australians were loudly petitioning for rights and recognition.[6] Stanner's lecture spoke to this complex politics, but it is the criticism, rather than 'the suggestion of impending change,' that is most remembered.[7]

This chapter issues a similar critique of the supposed 'silence' of Aboriginal antiquity in the decades leading up to its 'scientific discovery' in the 1960s. While this entire dissertation argues the concept of human antiquity has a deeper and more complex history in Australia than current narratives allow, this chapter draws particular attention to the decades before the 'radiocarbon revolution.' The few histories that address Australia's understanding of its human antiquity portray the 1930s, 1940s and 1950s as largely devoid of meaningful discoveries; as a period caught in the intellectual grips of the Victorian 'Stone Circle,' a phrase coined by historian Tom Griffiths for a group of stone tool collectors whose materialist belief in timeless Aboriginality silenced Australia's collective understanding of its deep Aboriginal past. In contrast, this chapter argues Australia's Aboriginal antiquity did not fall victim to a structural cult of forgetfulness that was finally and dramatically liberated by radiocarbon dating. As was the case with the 'great Australian silence,' the reality for conceptualisations of Aboriginal antiquity was much more complicated.

From 1930 to 1960, there were several moments in which Australian scientists, for the first time in years, clearly articulated an Aboriginal antiquity that connected to contemporary Aboriginal peoples: the 1929 Devon Downs excavation by Herbert Hale and Norman B. Tindale; the discovery of the ancient Keilor Skull in 1940; and the post-war

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[4] Ann Curthoys, "WEH Stanner and the historians," in *An Appreciation of Difference: WEH Stanner and Aboriginal Australia*, eds. Melinda Hickson and Jeremy Beckett, (Canberra: Aboriginal Studies Press, 2008), 236

[5] Curthoys, "WEH Stanner and the historians," 235

[6] See Alison Holland, *Breaking The Silence: Aboriginal Defenders and the Settler State, 1905-1939*, (Carlton: Melbourne University Press, 2019)

[7] Curthoys, "WEH Stanner and the historians," 236

archaeology of Edmund D. Gill. Each of these moments also represented key methodological advancements in dating the deep past. This chapter argues, however, that these advancements did for Aboriginal antiquity what Stanner did for Aboriginal history: they were important registers and publicists of Aboriginal antiquity, but they were not the sole originators of it. In other words, refining scientific techniques did not suddenly 'prove' Aboriginal antiquity. Instead, new techniques were interwoven with broader intellectual, social and political transitions, which ultimately induced scientists to recognise the Aboriginality of the antiquity that lay before them. These moments did not cause a total and immediate demolition of the rationale of Aboriginal timelessness, but they reflected, and were part of, a gradual coming together of the concepts of Aboriginality and humanity. Chapter Five explored how scientists used the ambiguity between 'the human' and 'the Aboriginal' to articulate an exclusive human antiquity from Aboriginal artefacts; this chapter reveals that when that ambiguity began to disappear, scientists found it less implausible to describe Australian's human antiquity as an Aboriginal antiquity.

To negotiate this complex period of extended transition, the first part of this chapter outlines the provincial paradigms of the Victorian 'Stone Circle,' the historical narratives that maintain their scientific supremacy, and the broader intellectual and political transitions that were bringing the concepts of humanity and Aboriginality back together. This section argues there was no single moment of disruption or change that allowed Aboriginal people to be recognised as human, but rather a steady accumulation of activism and rights claiming, coupled with the reality of Aboriginal survival. The rest of the chapter then unpacks the three scientific moments that articulated a clear Aboriginal antiquity, disrupting previous paradigms and laying the foundations of change. The first was the 1929 excavation of Herbert Hale and Norman B. Tindale at Devon Downs and Tartanga, in South Australia. Widely considered Australia's first 'professional' archaeological excavation, Hale and Tindale used their systematic methodology to argue for a Pleistocene Aboriginal antiquity with a continuous connection to contemporary Aboriginal peoples. This section argues that while their measured tone did not excite a media frenzy, the excavation and its Aboriginal antiquity were received and accepted by intellectuals outside of the 'Stone

Circle.' The second moment came in 1940 with the discovery of the Keilor Skull by D. J. Mahony, a 'Stone Circle' insider. This section argues Mahony used the skull's anatomical *and* geological features to evince a Pleistocene Aboriginal antiquity, bringing Aboriginal antiquity to its most certain point. The third moment was the post-war archaeology of Edmund D. Gill. An early proponent of radiocarbon dating in Australia, Gill also used more traditional archaeological methods to argue for a Pleistocene antiquity and continuous Aboriginal occupation of Lake Colongulac in Victoria. Gill, however, was also wary of the new technology, and this section argues his research demonstrates the articulation of Aboriginal antiquity was not a by-product of the 'radiocarbon revolution.' Ultimately, this chapter argues that in a manner similar to Stanner's 'Great Australian Silence,' the 'radiocarbon revolution' has become a locution with a simplistic narrative too often substituted for a much more complex process of intellectual, social and political change.

Inside the 'Stone Circle': Silencing history

After the excitement of the various skull discoveries of the 1910s and 1920s, the decades before the advent of professional archaeology and radiocarbon dating in Australia appear somewhat devoid of memorable discoveries. Historians have argued this is due in part to the power and influence of the stone tool collectors working in Melbourne's scientific institutions, or as Tom Griffiths calls them, the 'Stone Circle.'[8] Griffiths uses this narrative device to group together men like geologist D. J. Mahony, ethnologist Stanley Mitchell, dentist Thomas Draper Campbell, anthropologist Harry Balfour, grazier Samuel F. Mann, public servant Robert Henderson Croll, and anthropologist Alfred S. Kenyon. It is a useful device for discussing a group of scientists with varying levels of institutional and personal connection, but a shared understanding of stone tool typology. It's important to note, however, that while some of the collectors referred to their correspondence as 'stone gossip,' they did not refer to themselves as the 'Stone Circle.'[9] Griffiths' label is a characteristic of many of the late twentieth century narratives surrounding Australian

[8] See Tom Griffiths, "Chapter 3: The Stone Age," *Hunters and Collectors: The Antiquarian Imagination in Australia,* (Cambridge: Cambridge University Press, 1996), 55-85.
[9] For 'stone gossip,' see Griffiths, *Hunters and Collectors*, 79, 89

archaeology that, while discursively useful and evocative, risks placing firmer organisational boundaries around past practitioners, paradigms and perceptions.

While the 'Stone Circle's' belief in Aboriginal timelessness certainly prevented their own engagement with deeper methods of investigating the past, their provincialisation of Aboriginal antiquity has been somewhat over-emphasised in scholarship that frequently foregrounds Victorian perspectives.[10] Indeed, the 'Stone Circle' epithet itself continues to exert an influence in the history of archaeology and human antiquity in Australia.[11] The third chapter of Griffiths' most recent work, titled 'Entering the Stone Circle,' positions the group's skewed paradigms as an entrenched obstacle John Mulvaney, the 'father of Australian archaeology,' overcame in the 1950s and 1960s through professional archaeological excavation and radiocarbon dating.[12] This chapter acknowledges the lingering influence of the 'Stone Circle' over conceptualisations of Aboriginal antiquity in Australia, but it also reveals the rigorous, investigative efforts that went on outside of it. Both Griffiths and Mulvaney explore many of these efforts in their scholarship, yet they are frequently positioned on the edge of a 'Circle' centric narrative, whose denial of Aboriginal antiquity is taken as representative of a broader Australian perspective. This chapter argues that in a period of apparent silence, claims for a distinctly Aboriginal antiquity were received and accepted by various intellectuals and the Australian public.

The University of Melbourne and the National Museum of Victoria were indeed bastions of Australian science in the nineteenth century, and their scholarly reputation only increased in the early twentieth century through the famous Walter Baldwin Spencer, who became the University's foundation Chair of Biology in 1887, and the Museum's Director in 1899. Chapter Three has already shown that despite his belief in progressive

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[10] See D. J. Mulvaney, "Research into the prehistory of Victoria: A criticism and a report on a field survey," *Australian Historical Studies* 8:29 (1957): 32-43; and D. J. Mulvaney, "The Stone Age of Australia," *Proceedings of the Prehistoric Society* 27 (1961): 56-107.

[11] Rebe Taylor argues Spencer, Kenyon and Mitchell 'dominated' the 'interpretation of Aboriginal culture in Victoria for over sixty years, and formed the centre of what Tom Griffiths named the 'stone circle.'' See Rebe Taylor, *Into the heart of Tasmania: a search for human antiquity*, (Carlton: Melbourne University Press, 2017), 51. See also Tom Griffiths, *The Art of Time Travel: Historians and Their Craft,* (Carlton: Black Inc., 2016), 62, 65.

[12] Griffiths, *The Art of Time Travel,* 62

evolution, Aboriginal antiquity was never a major focus for Spencer: his scholarship with Francis Gillen epitomised anthropology's paradigm shift to the methods of structural functionalism, and worked to solidify the discipline's erasure of Aboriginal antiquity. Spencer was a hugely influential figure in Victorian science, and his energetic leadership at the Museum and the University fostered a group of disciples who echoed his theories on Aboriginal culture and antiquity long after his death. Spencer's most dedicated intellectual heir was Alfred Stephen Kenyon (1867-1943), an engineer and budding anthropologist who embalmed Spencer's doctrine of timeless Aboriginality in his own collection of stone artefacts. By 1904, Kenyon had earned a reputation as 'the most experienced Victorian collector,' whose knowledge of 'the stone and bone implements of the Victorian aborigines' was 'unequalled.'[13] Kenyon's collection was just one of many that contributed to the National Museum of Victoria's store of implements, which became so immense in the first half of the twentieth century that 'truckloads' of artefacts had to be relocated offsite to clear museum space.[14] These tools, Griffiths argues, were 'more eloquent memorials to this circle of collectors' than to the people who made and used them.[15]

In the early years of his collecting, Kenyon searched the south-east Australian coast for tools thought to represent the primitive culture of Aboriginal Tasmanians, which in turn could provide a clue to Aboriginal antiquity in Victoria and Australia more broadly. Kenyon, however, found little to impress, and he grew firmer in his belief that Aboriginal Australians were recent arrivals on the continent. Kenyon's confidence in this conclusion came from his typological interpretation of stone artefacts, his generalisations about the intellectual and material capabilities of Aboriginal peoples, and the entrenched paradigms of functionalist anthropology. Like Spencer, Kenyon and the other members of the 'Stone Circle' believed differences in implement type were not an indication of cultural development, but merely a reflection of the local geology and its available raw materials.[16]

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[13] J. W. Gregory, "The Antiquity of Man in Victoria," *Proceedings of the Royal Society of Victoria* 17 (1904-1905), 129, 123-124. See also Chapter Four.
[14] D. J. Mulvaney, *Prehistory and Heritage: The Writings of John Mulvaney*, (Canberra: Department of Prehistory, Australian National University, 1990), 149
[15] Griffiths, *The Art of Time Travel,* 65
[16] See Introduction, see also D. J. Mulvaney, "Research into the prehistory of Victoria: A criticism and a report on a field survey," *Australian Historical Studies* 8:29 (1957), 35

This skewed understanding of seriation led to an inattention to stratigraphy: if stone artefacts communicated nothing more than just the material from which they were made, there was no need for the collector to dig deeper than the surface. Such ideas, coupled with generalisations about nomadic tribes and primitive technological skills, created a self-fulfilling prophecy denying Aboriginal antiquity. As recent arrivals, with a transient occupation of the land and no capacity for cultural development, Kenyon expected implements would only be found on the surface; he thus never made more than a surface collection, and only found implements which he interpreted as being of 'recent' typology.[17]

Kenyon's perception of a homogenous Aboriginal Australian, who had no antiquity, no material creativity, and thus experienced no cultural change, became a fixed feature of his research in the 1920s and 1930s.[18] At the same time, his energy and strength of opinion began to exert a stronger influence over the 'Stone Circle.' Unlike Spencer, who had at least developed his evolutionary ideas in discussion with international scholars, Kenyon became increasingly isolationist, suspicious of 'armchair theorists,' and defensive of his methods against the 'rising power of the academy."[19] Mulvaney has argued Kenyon's disdain for European theorists encouraged a 'bleak nationalism' in the Circles' typology.[20] In 1924, for example, Kenyon, Mahony and Mann all argued the classifications 'so confidently relied upon by the European archaeologist' were 'quite inapplicable' in Australia, and that 'the use of terms implying a geological age as well as a stage of culture' could not be sustained.[21] Although there were several members of the Victorian intellectual scene who continued to

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[17] Griffiths, *Hunters and Collectors,* 77; see also D. J. Mulvaney and J. H. Calaby, *'So Much That Is New' Baldwin Spencer, 1860-1929: A Biography*, (Carlton: The University of Melbourne Press, 1985), 250-251; D. J. Mulvaney, "Classification and Typology in Australia: The First 340 Years," in *Stone Tools as Cultural Markers: Change, Evolution and Complexity*, ed. Richard V.S. Wright, (Canberra: AIAS & Humanities Press, 1977): 263–268.

[18] See A. S. Kenyon, D. J. Mahony and S. F. Mann, "Evidence of Outside Culture Inoculations," in L Keith Ward (ed.), *Report of the Seventeenth Meeting of the Australasian Association for the Advancement of Science: Adelaide Meeting, August, 1924* (Adelaide: R. E. E. Rogers, Government Printer, 1926), 464-466; A. S. Kenyon, D. J. Mahony and S. F. Mann, "Megalithic Culture in Australia," in L Keith Ward (ed.), *Report of the Seventeenth Meeting of the Australasian Association for the Advancement of Science: Adelaide Meeting, August, 1924* (Adelaide: R. E. E. Rogers, Government Printer, 1926), 469-470.

[19] Griffiths, *Hunters and Collectors,* 78

[20] Mulvaney, "Classification and Typology in Australia: The First 340 Years," 264

[21] See A. S. Kenyon, D. J. Mahony, and S. F. Mann, "Evidence of outside culture inoculations," *Australian Association for the Advancement of Science* 17 (1924): 464-467, specifically 464-465.

search for evidence of Aboriginal antiquity beyond the confines of anthropology and ethnology—D. J. Mahony, for example—the influence of Kenyon and his own coterie of collectors proved a formidable force against new interpretations in Victoria.

While the 'Stone Circle' provincialised Aboriginal antiquity, broader social and political changes were beginning to slowly harmonise the categories of Aboriginality and humanity. Chapter Five revealed how various scientists used a conceptual ambiguity between Aboriginality and humanity to articulate an exclusive human antiquity for Australia, entirely from Aboriginal artefacts. They never completely severed the concepts, but the legacies of polygenist racial science continued to affect conceptualisations of 'the human' as a being that could rise above nature and attain a state of 'civilisation.' Such ideas contributed to the widely held belief that Aboriginal Australians, incapable of being 'civilised,' were doomed to an inevitable extinction. In the early decades of the twentieth century, however, the reality of Aboriginal survival forced scientific and political commentators to reconfigure the 'doomed race theory' into one of cultural, rather than racial, extinction: Aboriginal people may not have fulfilled their destiny of a physical disappearance, but the survival of their 'primitive' culture was still thought to be impossible.[22] In the interwar years, anthropologists, politicians and policymakers grappled with this 'Aboriginal problem.'[23] Of particular concern was the rising number of 'half-caste' children born of miscegenation. Policies towards Aboriginal peoples began to centre on cultural assimilation and biological absorption, implementing education and employment programs promoting a 'white' way of life, while removing 'half-caste' children from their own communities.[24]

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[22] See Russell McGregor, "Chapter 3: Anthropology Renovated, Optimism Revived and Problems Renewed," in *Imagined Destinies: Aboriginal Australians and the Doomed Race Theory, 1880-1939*, (Carlton South: Melbourne University Press, 1997), 100-141.

[23] See *Yass Evening Tribune*, "The Aboriginal Problem," January 8, 1903, 2; *The Herald*, "Aboriginal Problem," July 9, 1912, 5; *Northern Territory Times and Gazette*, "Aboriginal Problem," July 10, 1923, 3; *The West Australian*, "The Aboriginal Problem," March 12, 1928, 8; *Recorder*, "Aboriginal Problem: Australia's Responsibility," June 4, 1929, 2; *Transcontinental*, "Aboriginal Problem Discussed," July 6, 1934, 3; A. P. Elkin, "Aboriginal Problem: Commissioner's Report," *The Sydney Morning Herald*, April 5, 1935, 12; *The Age*, "Aboriginal Problem: Medical Investigation Urged," March 12, 1935, 11; *The Age*, "Aboriginal Problem," November 25, 1939, 30.

[24] See Commonwealth of Australia, Aboriginal Welfare: Initial Conference of Commonwealth and State Aboriginal Authorities, Held at Canberra, 21st to 23rd April, 1937, (Canberra: L. P. Johnston, Commonwealth

Amid this changing perception of extinction and suggested solutions to the 'Aboriginal problem,' several commentators adopted a distinctly humanist perspective. Settler Australians may have maintained their belief in Aboriginal primitivity, but many non-Aboriginal defenders and campaigners appealed to a notion of Aboriginal humanity in an effort to ensure 'humane' policies towards Aboriginal people.[25] Some defenders found it easy to articulate a notion of Aboriginal humanity after the horrors and brutality of the First World War. As one humanitarian pamphlet put it in 1929, 'the more we learn the less truth we find in the comparison 'wild native', 'civilised whites.''[26] Others based their belief in Aboriginal humanity on the idea Aboriginal Australians and non-Aboriginal Australians were racially related. While musings on the racial affinity of Aboriginal and Caucasian 'types' had long been a feature of British and Australian science, such theories received renewed attention in the interwar years, and featured in the research of some of the era's most active scientific authorities; like South Australian anthropologists Herbert Basedow and Norman B. Tindale, and the ever-present Frederic Wood Jones.[27] Although some used the idea of racial affinity to support the biological absorption of Aboriginal Australians, just

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Government Printer, 1937), 3-36; Katherine Ellinghaus, "Absorbing the 'Aboriginal problem': controlling interracial marriage in Australia in the late 19th and early 20th centuries," *Aboriginal History* 27 (2003): 183-207; Katherine Ellinghaus, "Biological Absorption and Genocide: A Comparison of Indigenous Assimilation Policies in the United States and Australia," *Genocide Studies and Prevention: An International Journal* 4:1 (2009): 59-79; Leigh Boucher and Lynette Russell, "Introduction: Colonial history, postcolonial theory and the 'Aboriginal problem' in colonial Victoria," in *Settler Colonial Governance in Nineteenth-Century Victoria*, ed. Leigh Boucher and Lynette Russell, (Canberra: ANU Press, 2015): 1-25; Peter Read, *The stolen generations: the removal of Aboriginal children in New South Wales 1883 to 1969*, (Sydney: Government Printer, 1982); Geoffrey Gray, "'Mr Neville Did All in [His] Power to Assist Me': A. P. Elkin, A. O. Neville and Anthropological Research in Northwest Western Australia, 1927-1928," *Oceania* 68:1 (1997): 27-46; and Gillian Cowlishaw, "Colour, Culture and the Aboriginalists," *Man* 22:2 (1987): 221-237.

[25] For example, teacher and rights advocate Mary Montgomerie Bennett, Adelaide-based anthropologist Dr Herbert Basedow, and various feminist civil rights groups. See Alison Holland, *Just Relations: the story of Mary Bennett's crusade for Aboriginal rights*, (Crawley: Western Australia UWA Publishing, 2015); Fiona Paisley, "Citizens of their world: Australian feminism and indigenous rights in the international context, 1920s and 1930s," *Feminist Review* 58 (1998): 66-84

[26] Charles Genders, "Australian Aboriginals. A Statement by the Aborigines' Protection League explaining its basic principles and proposals and discussing statements in the public press and recent reports and recommendations," as quoted in Holland, *Breaking the Silence*, 53

[27] See Herbert Basedow, *The Australian Aboriginal*, (F. W. Pearce and Sons: Adelaide, 1925); Frederic Wood Jones, *Australia's Vanishing Race*, (Sydney: Angus & Robertson, 1934); Norman B. Tindale, "Survey of the Half-caste Problem in South Australia," *Proceedings of the Royal Geographical Society of Australasia* (South Australian Branch) 42 (1940-1941): 66-161.

as many sought to fend off what was now viewed as a preventable extinction.[28] Regardless of their opinion on absorption, historians argue the interwar years saw the distinct revival of a Christian humanism in Aboriginal affairs.[29]

At the same time, Aboriginal people were making their own demands for land rights and civil recognition. In Australia's south-eastern states in particular, communities mobilised in an attempt to stave off the encroaching powers of the Aboriginal Protection Board.[30] The 1930s brought with it a worsening drought and economic depression, intensifying the pressures already being placed on Aboriginal communities living on reserves and rural agricultural stations. Prominent Aboriginal activists established organisations such as the Australian Aborigines' League (1934) and the Aborigines Progressive Association (1937), and the decade culminated in two conspicuous protests: the 'Day of Mourning' that marked the sesquicentenary of British invasion on Australia Day, 1938, and the 'walk-off' of 200 residents protesting ill-treatment at the Cummeragunja Mission Station in 1939.

All of these interwoven intellectual, political and social changes contributed to the gradual disruption of the paradigm of Aboriginal timelessness by removing the ambiguity

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[28] Herbert Basedow's research on the 'Austral-Caucasian' was seized by A. O. Neville, Chief Protector of Aborigines in Western Australia, who used Basedow's claims of shallow skin pigmentation to legitimise his administration's systematic removal of mixed-race Aboriginal children. See Heidi Zogbaum, "Herbert Basedow and the Removal of Aboriginal Children of Mixed Descent from their Families," *Australian Historical Studies* 34:121 (2003), 122-138; Russell McGregor, "'Breed out the colour' or the importance of being white," *Australian Historical Studies* 33:120 (2002), 286-302; Russell McGregor, "An aboriginal Caucasian: Some uses for racial kinship in early twentieth century Australia," *Australian Aboriginal Studies* 1 (1996): 11-20; and Alison Holland, "The Weight of Responsibility: Repaying a Debt and Saving a Race," in *Breaking The Silence: Aboriginal Defenders and the Settler State, 1905-1939*, (Carlton: Melbourne University Press, 2019): 46-78.

[29] See Alison Holland, "To Eliminate Colour Prejudice: The WCTU and Decolonisation in Australia," *Journal of Religious History* 32:2 (2008): 256-276; Christine Weir, "'White Man's Burden', 'White Man's Privilege': Christian humanism and racial determinism in Oceania, 1890-1930," in *Foreign Bodies: Oceania and the Science of Race 1750-1940*, ed. Bronwen Douglas and Chris Ballard, (Canberra: ANU Press, 2008): 283-304; Patricia Grimshaw, "Gender, Citizenship and Race in the Woman's Christian Temperance Union of Australia, 1890 to the 1930s," *Australian Feminist Studies* 13:28 (1998): 199-214.

[30] See Heather Goodall, *Invasion to Embassy: Land in Aboriginal Politics in New South Wales, 1770-1972*, (St Leonards: Allen & Unwin, 1996); Bain Attwood, *Rights for Aborigines*, (Crows Nest: Allen & Unwin, 2003); John Chesterman, "Defending Australia's Reputation: How Indigenous Australians Won Civil Rights, Part 1," *Australian Historical Studies* 116 (2001): 20–39 and "Part 2," *Australian Historical Studies* 117 (2001): 201–21; John Maynard, *For Liberty and Freedom: Fred Maynard and the Australian Aboriginal Progressive Association* (Canberra: Aboriginal Studies Press, 2007); Jack Horner, *Seeking Racial Justice: An Insider's Memoir of the Movement for Aboriginal Advancement, 1938–1978* (Canberra: Aboriginal Studies Press, 2004).

between the concepts of humanity and Aboriginality. There was no single moment of change that allowed Aboriginal people to suddenly be recognised as human, but rather an accumulated synthesis of activism, rights claiming, and the reality of Aboriginal survival. As the rest of this chapter will demonstrate, the sparse but powerful moments in which scientists asserted an extensive Aboriginal antiquity, connected to contemporary Aboriginal peoples, were both constituents and reflections of this changing atmosphere. Historians Robert Forster and Alison Holland both highlight the prominence and vivacity of the South Australian community in Aboriginal affairs and politics in this period.[31] It is not surprising, then, that such an environment produced the era's earliest and most methodical articulation of Aboriginal antiquity: the excavation of South Australian scientists Herbert Hale and Norman B. Tindale at Devon Downs and Tartanga. While it would not yet break through the 'Stone Circle,' Hale and Tindale's excavation issued a powerful challenge to the paradigm of timeless Aboriginality.

Outside the 'Circle': Aboriginal antiquity in the field

Early in January 1928, on the New Devon Downs Station south of Nildottie, South Australia, station owner W. R. Roy discovered a human skeleton embedded in the sandy-rock of the riverbank. Roy removed the top section of the skeleton's exposed cranium and gave it to Edgar R. Waite, Director of the South Australian Museum. Unfortunately, Waite died shortly thereafter, and no record of the cranium's donor or discovery site were recorded.[32] It wasn't until April 1929, when Roy enquired after his donation, that Museum staff finally filled in the blanks on its provenance. The mineralised skull caught the attention of head Curator Herbert M. Hale, and the Curator of Anthropology, Norman B. Tindale, who had already exhibited the artefact at a meeting of the Royal Society of South Australia.[33] Eager to learn more, the duo conducted a two-day preliminary survey that

[31] See Robert Foster, "Contested destinies: Aboriginal advocacy in South Australia's interwar years," *Aboriginal History* 42 (2018): 73-95; and Alison Holland, "The Weight of Responsibility: Repaying a Debt and Saving a Race," in *Breaking The Silence: Aboriginal Defenders and the Settler State, 1905-1939*, (Carlton: Melbourne University Press, 2019): 46-78.
[32] Waite died on 19 January. See Herbert M. Hale and Norman B. Tindale, "Notes on Some Human Remains in the Lower Murray Valley, South Australia," *Records of the South Australian Museum* 4:2 (1930), 146
[33] Exhibited in August 1928. See *Transactions of the Royal Society of South Australia* 52 (1928), 248

revealed two sites of significance: deposits on a long, narrow island between the Murray River and Tartanga Lagoon; and a small, nearby cliff-shelter, named Devon Downs.[34] Three weeks later, Hale and Tindale returned with a team of assistants and began a detailed, methodical excavation.

Hale and Tindale's rigorous excavation methods challenged the shallow surface collection of the 'Stone Circle,' and would come to represent the beginnings of 'professional' archaeology in Australia. The duo used their meticulous classification of stratigraphy to argue for a lengthy history of cultural change and development for Aboriginal Australians, which in turn evinced their Pleistocene human antiquity. While their advanced methods helped demonstrate this antiquity, Hale and Tindale were explicit in the language they used to describe the site, its antiquity, and its connection to contemporary Aboriginal peoples. Their categorical identification of Aboriginal antiquity was a major scientific intervention, but it did not cause an immediate or widespread collapse of the paradigm of Aboriginal timelessness. The 'Stone Circle' maintained their perspective by ridiculing the excavation and ignoring its findings, and the duo's careful tone failed to snag the same kind of media attention concurrently being heaped on the Jervois Skull. The excavation was, however, well-received by scientists in their own and other intellectual communities. Thus, it sat outside the 'Stone Circle' as an early reassertion of the logic of Aboriginal antiquity, a reflection of the growing unification of Aboriginality and humanity, and a foundation for future critique.

Both Hale and Tindale were giants in South Australia's scientific community, and were therefore well-positioned to assert the logic of Aboriginal antiquity in an era still grappling with the legacies of racial science. Born in North Adelaide, Herbert Mathew Hale (1895-1963) became a 'science cadet' at the South Australian Museum at age 19. For thirteen years, Hale was assistant to Museum Director and ichthyologist Edgar R. Waite, who

[34] In 1982, Tindale asserted that the correct name of the Devon Downs rock shelter is Ngautngaut, the original Aboriginal name, known to the local Ngangaruku people, for the area of land on the western side of the Murray River. For the sake of consistency with Tindale and Hale's original archaeological accounts and subsequent scientific papers, this chapter will refer to the site as the Devon Downs rock shelter. See Norman B. Tindale, "A South Australian Looks At Some Beginnings Of Archaeological Research In Australia," *Aboriginal History* 6:2 (1982): 92-110.

encouraged his specialised study of crustaceans.[35] Hale was promoted to Museum Zoologist in 1925, and after the death of Waite in 1928, took on the role of Curator and eventually Director in 1931. Hale was Director for 30 years, and held a myriad of other positions in South Australia's scientific institutions, including the Government Flora and Fauna Advisory Committee, the National Parks and Wildlife Services, and the Royal Society of South Australia.[36] Over the course of his career, Hale developed an interest in anthropology and the life and culture of Aboriginal Australians. His curiosity arose from an engagement with the Museum's substantial ethnographic collection, but also from his relationship with his colleague, Norman Barnett Tindale (1900-1993). Born in Western Australia to missionary parents, Tindale spent his youth in Japan, where his father worked as a Salvation Army officer.[37] After returning to Australia in 1915, Tindale joined the South Australian Museum as an Assistant Entomologist in 1919, where he would spend the next 49 years of his scientific career.

While both were highly respected, Tindale's legacy outshines Hale's mostly because of the sheer breadth of his expertise, which crossed the disciplines of entomology, geology, anthropology, ethnology, and, in the crucial decades before the introduction of radiocarbon dating, laid the foundations for a unique and distinctly Australian form of archaeological practice.[38] Tindale developed his anthropological skills early on. In 1921, he took leave from the Museum and travelled to the island of Groote Eylandt, in the Gulf of

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[35] Hale published extensively on Australian crustaceans and sea life throughout his career, with 94 papers appearing in the *South Australian Naturalist*, the *Records of the South Australian Museum*, and the *Transactions of the Royal Society of South Australia*. Perhaps his most memorable publication was *The Crustaceans of South Australia: Parts I & II* (1927-1929), published as part of a handbook series on the flora and fauna of South Australia. See F. J. Mitchell, "Obituary and Bibliography of Herbert Mathew Hale," *Records of the South Australian Museum* 15:1 (1965), 1

[36] Hale served as the Royal Society of South Australia's President from 1936-1937, Vice-President from 1934-1936 and 1937-1938, and Treasurer from 1938-1950 and 1953-1956. F. J. Mitchell, "Obituary: Herbert Mathew Hale, O.B.E. 1895-1963," *Transactions of the Royal Society of South Australia*, 87 (1963), 254

[37] See Phillip G. Jones, "Obituary: Norman B. Tindale - 12 October 1900 – 19 November 1993," *Records of the South Australian Museum* 28 (1995), 159; and Philip G. Jones, "Tindale, Norman Barnett (1900–1993)," *Australian Dictionary of Biography,* National Centre of Biography, Australian National University, published online 2020: http://adb.anu.edu.au/biography/tindale-norman-barnett-29608

[38] In 1980, when receiving an honorary doctorate from the Australian National University, Tindale was described as the consummate prehistorian: a 'nationally significant' figure whose broad interdisciplinary approach positioned him as a pioneer of all of prehistory's 'disparate fields.' See D. J. Mulvaney, "Two Remarkably Parallel Careers," *Australian Archaeology* 10 (1980), 96

Carpentaria, to assist the Church Missionary Society of Australia and Tasmania in the establishment of a home for 'half-caste' Aboriginal children. Having been briefed for the trip by Walter Baldwin Spencer, Australia's most respected anthropologist, Tindale also used the trip to collect artefacts for the Museum.[39] After 12 months of fieldwork, the longest any Australian scientist had yet spent in the company of Aboriginal peoples, Tindale amassed a staggering collection of artefacts and filled notebooks with ethnographic data.[40] It's important to note Tindale's Christian upbringing and family connections had qualified him for the trip to Groote Eylandt, which, in addition to his extended contact with Aboriginal people, would undoubtedly have helped develop his perception of their humanity. By 1928, Tindale was the Museum's Curator of Anthropology, a prestigious position he held until 1962. He also developed skills in stratigraphy, geology and geography at the University of Adelaide, training under geologist and explorer Sir Douglas Mawson, and Adelaide-born geographer Archibald Grenfell Price. As the 1920s drew to a close, Tindale's varied skill set prepared him for Australia's first 'truly scientific'[41] archaeological excavation at Devon Downs and Tartanga.

Both Hale and Tindale believed Australia had thus far seen 'little research' carried out by 'systematic methods,' particularly regarding sites occupied by Aboriginal Australians.[42] Their excavation marked a newfound attention to methodology, demonstrated a sophisticated understanding of stratigraphy, and produced a detailed, 73-page excavation report with 192 photographs, and 139 maps, graphs and drawings. Perhaps anticipating comment or critique of their unfamiliar approach, the pair noted that throughout the whole of the work, 'no unskilled labour was requisitioned.'[43] 'All excavations,' they declared, were made 'by the authors personally,' or with the help of 'three

[39] Phillip G. Jones, "Obituary: Norman B. Tindale," 160
[40] Tindale collected '7000 insects, 164 bird skins, 487 ethnological objects, word lists, songs, myths and ceremonies, tracings of rock art, hunting techniques and dietary details' from Groote Eylandt. Mulvaney, "Two Remarkably Parallel Careers," 97
[41] Phillip G. Jones, "Obituary: Norman B. Tindale," 167
[42] Hale and Tindale, 145
[43] Hale and Tindale, 148

trained scientific assistants' who were also 'permanent officers of the South Australian Museum staff.'[44]

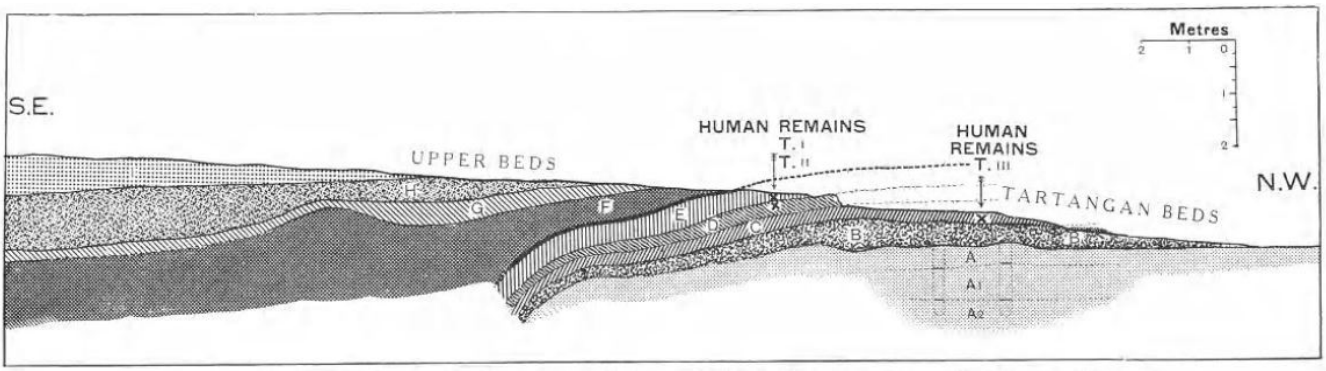

Fig 1. Section of the Tartangan and Upper Beds at Tartanga, upon which the relative positions of the human remains have been projected.[45]

Hale and Tindale's desire for careful, professional methodology was secondary, however, to their 'chief interest' in the 'antiquity of man in South Australia.'[46] They were not disappointed: both Tartanga and Devon Downs provided an array of evidence for human occupation that Hale and Tindale used to argue for an extensive and distinctly Aboriginal antiquity for Australia. At Tartanga, they identified nine stratigraphic layers labelled with letters A through to I: the more recently deposited 'Upper Beds' of F, G, H and I, overlaid the older, lower deposits of layers A to E (Fig 1). Layers B to E represented successive surfaces of an old, eroded island, while layer A, comprising three distinct types of sand, was the oldest of them all. With the exception of layers F and G, Hale and Tindale argued each layer of strata at Tartanga contained 'evidence of *aboriginal* occupation.'[47] This included fish bones, fossilised mussels, burnt stones, the ashy remains of hearths, unidentifiable mammal remains, and several human skeletons. While evidence was scattered throughout the layers, it was the older deposit layers of A to E that held the majority of the human remains and chipped, stone tools. Down-river, the Devon Downs Rock Shelter revealed similar signs of human occupation. Within the partially eroded

[44] Hale and Tindale, 148
[45] Taken from Hale and Tindale, 149
[46] Hale and Tindale, 145
[47] Emphasis added. Hale and Tindale, 154

portion of the large limestone cliff, Hale and Tindale excavated and identified twelve distinct layers of strata (Fig 2). From these layers, they uncovered remnants of shellfish, mussels, snakes, lizards, kangaroos, bandicoots, dingoes, wombats, and fossilised plants, as well as mineralised stone implements, intact skulls, sets of human teeth, and several gravesites.[48]

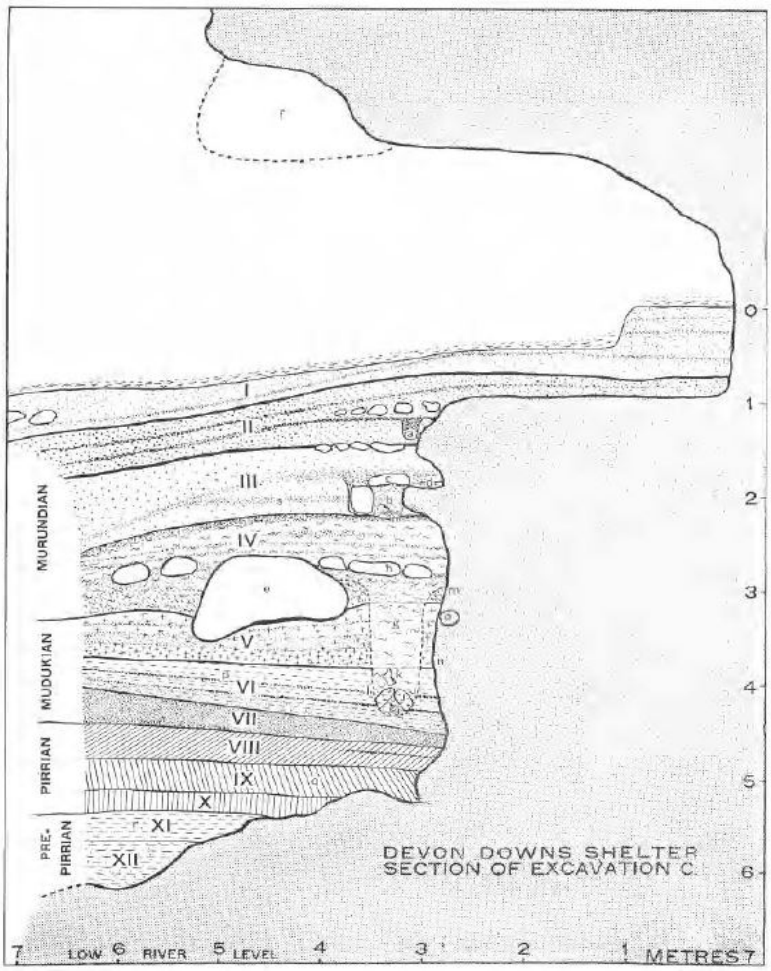

Fig 2. Section of the deposits in the Devon Downs Shelter.[49]

From this wealth of data, Hale and Tindale made their most significant contribution to Australian science: a 'sequence of cultural phases' that mapped across the stratigraphy and artefacts found at both Tartanga and Devon Downs (Fig 3). The five phases were listed in ascending order of cultural sophistication: Tartangan, Pre-Pirrian, Pirrian, Mudukian,

[48] See Hale and Tindale, 177-203
[49] Taken from Hale and Tindale, 176

and Murundian. Hale and Tindale chose to weave a recognition of Aboriginality into this framework. The terms 'Mudukian' and 'Pirrian' were derived from the Aboriginal names of the 'typical' implements found in those layers, while 'Murundian' was from the 'local sub-tribal name' of the most recent Aboriginal occupants of the district.[50] Tartangan, the most primitive cultural phase that aligned with the oldest stratigraphic deposits, was derived from the local Aboriginal name for the site itself.[51]

204 RECORDS OF THE S.A. MUSEUM

CULTURE-PHASES.	SITE.	SALIENT FAUNA.	INDUSTRIES.
Tartangan	Tartanga beds A–E	*Unio protovittatus*	Stone and bone industry. Large patinated discoidal scrapers, coarsely retouched; coarse bone implements.
Pre-pirrian	Devon Downs XI–XII	*Bulinus* much more abundant than *Melania*. *Unio vittatus*	Scant bone industry; stone chippings, but no implements recovered. [Not well known.]
Pirrian	Devon Downs VIII to X	Large mammals common. *Sarcophilus cf. harrissi*. *Chelodina cf. expansa*. *Unio vittatus*	Rich stone and bone industry. *Tula* rare in upper and absent from lower layers. Leaf points *(pirri)* abundant; double-pointed bones *(muduk)* absent.
Mudukian	Devon Downs layers V to VII	Small mammals numerous. *Sarcophilus cf. harrissi*. *Unio vittatus*	Rich stone and bone industries including *tula* and double-pointed bones *(muduk)*. Rock markings, Type A.
Early Murundian	Devon Downs layers II to IV	All are existing species of animals. *Unio vittatus*	Degenerating stone industries; adze stones *(tula)* common only at beginning; bone artefacts very rare. Rock markings, Type B.
Late Murundian	Devon Downs layer I	All are existing species. *Unio vittatus*. *Melania* much more abundant than *Bulinus*	Degenerate stone culture. Rock markings, Type C.

Fig 3. Table of cultural phases at Tartanga and Devon Downs.[52]

[50] Hale and Tindale, 203
[51] Hale and Tindale, 147
[52] Taken from Hale and Tindale, 204

Hale and Tindale used their cultural sequence to demonstrate a history of cultural change and thus both sites' extensive Aboriginal antiquity. They repeatedly positioned the Tartangan layer as the lowest and oldest, arguing it represented a culture 'more primitive than the Pirrian and succeeding cultures,' and one that was separated from the other layers 'by a time lapse of unknown duration.'[53] They also argued that while the Devon Downs layers evinced a human occupation 'more recent than that of Tartangan beds,' evidence of this occupation had been deposited 'over a period sufficiently long' for there to be 'notable changes' in culture.[54] For example, several of the 'leaf-point' stone artefacts found in the Pirrian layers (Devon Downs VIII to X) had apparently been 'known from old camp-sites in many parts of southern Australia,' but had not been used by contemporary Aboriginal tribes.[55] Here, Hale and Tindale cited the work of local anthropologists George Aiston, a policeman from South Australia, and Dr. George Horne, a surgeon from Victoria, whose *Savage Life in Central Australia* (1924) argued the present-day Wonkanguru and Dieri peoples of the eastern Lake Eyre district seemed to have 'lost' the art of making the 'leaf-point' implements. For Hale and Tindale, this indicated the Devon Downs tools were an older style of Aboriginal technology, 'unknown among living Wonkanguru natives' but a 'forerunner of a simple flake' they currently used.[56]

Hale and Tindale also hinted at the excavation's potential to prove Aboriginal antiquity across Australia. They noted, for example, that some of the bone implements from the Pirrian layers (Devon Downs VIII to X) were similar to tools found in Victoria, by anthropologist Robert Brough Smyth, in the late nineteenth century. The similarities, they argued, suggested some sort of migration and absorption of tribal groups across South Australia and Victoria took place before the Murundian phase (Devon Downs I to VII). Indeed, Hale and Tindale even argued 'local native legends' and 'tribal memory' confirmed

[53] Hale and Tindale, 203-204
[54] Hale and Tindale, 152
[55] Hale and Tindale, 205
[56] See George Aiston and George A. Horne, *Savage Life in Central Australia*, (London: Macmillan, 1924), 90-91

a 'southward movement of peoples from further upriver.'[57] They qualified, however, that additional evidence was necessary before the theory could be 'definitely advanced.'[58]

Hale and Tindale not only argued for a distinct Aboriginal antiquity, but connected this antiquity to contemporary Aboriginal peoples. They were certain the late-Murundian phase (Devon Downs I) encompassed the Aboriginal tribes who had occupied their country right up until 'the advent of the white man.'[59] The sites' human remains also demonstrated a continuous Aboriginal antiquity, particularly those at Tartanga. While a 'full dissection' of the remains would have to 'await detailed study,' they described the Tartanga skeletons as 'an early form of the Australian race.'[60] Hale and Tindale placed these early Australians in between Australia's earliest known hominid fossil, the Talgai Skull, and contemporary Aboriginal Australians, arguing Tartanga could serve to 'link the problematical Talgai remains (of supposed Pleistocene Age) with the present-day natives of the south coast of South Australia.'[61] The remains at Tartanga therefore represented an Aboriginal antiquity of up to 15,000 to 20,000 years old, the generally accepted Pleistocene age of the Talgai Skull.[62]

After pages of analysis and scrupulous detail, Hale and Tindale summarised the sites' Aboriginal antiquity in a brief, four-sentence conclusion. At Tartanga, where the human remains and food debris were associated with 'an old culture,' Hale and Tindale argued both the 'geological and physiographical features' proved its 'occupational records were at least of some antiquity.'[63] Such a steady assessment appears somewhat anticlimactic; and yet the entirety of their report was embedded with the logic of Aboriginal antiquity. This was not the hesitant theory of scientists self-consciously sitting on the fringe of a dominant coterie of stone collectors; nor was it a sensational claim designed to grab

[57] Hale and Tindale, 205
[58] Hale and Tindale, 205-206
[59] Hale and Tindale, 206
[60] Hale and Tindale, 215
[61] Although they attempted to draw more specific comparisons between Tartanga and Talgai, due to Talgai's incomplete cranium, Hale and Tindale claimed these could not go beyond broad comparisons. Hale and Tindale, 215
[62] For more on the Talgai Skull, see Chapter Five.
[63] Hale and Tindale, 218

headlines and promote their public profiles. Rather, it was the balanced conclusion to an extensive report made by scientists sensitive to the originality of their intervention. While their language may have been restrained, their overall articulation of an Aboriginal antiquity, connected to contemporary Aboriginal Australians, was not. Indeed, their considered tone and method helped establish the excavation's positive legacy. In the second half of the twentieth century, the dig developed a reverence in step with Australian archaeology itself. In 1980, John Mulvaney claimed Hale and Tindale accomplished what 'every prehistorian today' acknowledged as 'the classic dig': a forerunner of modern excavation and analytical techniques.[64] By the time Tindale died in 1993, it was seen as the inception of the entire discipline: 'Before Devon Downs,' remarked Phillip Jones, then Curator of Anthropology at the South Australian Museum, 'Australian archaeology did not exist as a discipline.'[65]

Historians also claim Hale and Tindale's discipline-defining dig was largely ignored by their contemporaries, who 'failed to appreciate the significance of their archaeological excavations.'[66] Such a claim, however, is part of a 'Stone Circle' centric narrative. Mulvaney, for example, argues Tindale's outward looking, diffusionist approach was at odds with the 'stoutly isolationist' perception of the 'small interested band of stone tool collectors'—'Australia's closest approximation to prehistorians'—who saw Aboriginal Australians as unchanging peoples in an unchanging environment.[67] The 'Stone Circle' certainly paid little attention to the excavation. Walter Baldwin Spencer had died before the excavation's report was published, but it bore all the paradigmatic hallmarks that displeased Alfred S. Kenyon. Beyond the level of historical change Hale and Tindale suggested—which flew straight in the face of Kenyon's belief in a static and homogenous Aboriginal culture—the extensive sequence of 'cultural phases' strayed too close to the interpretative frameworks of the European armchair theorists Kenyon despised. The excavation, with its potential

[64] Mulvaney, "Two Remarkably Parallel Careers," 99
[65] Phillip G. Jones, "Obituary: Norman B. Tindale," 167
[66] Mulvaney, "Two Remarkably Parallel Careers," 99; see also Griffiths, *Hunters and Collectors,* 79; Isabel McBryde, "Archaeology in Australia—Some Recent Developments," *The Record (University of New England Union)* 6:1 (1964): 5-7; Iain Davidson, "Beating About The Bush? Aspects of the history of Australian archaeology," *Australian Archaeology* 17:1 (1983): 136-144.
[67] Mulvaney, "Two Remarkably Parallel Careers," 99

correlation to Aboriginal antiquity in Victoria, made such a minor impact that when the 'Stone Circle' delivered a submission of Victorian evidence for 'fossil man' to the 16th International Geological Congress in Washington D.C., in 1933, they confidently reiterated John Walter Gregory's conclusions from 1904: 'No discovery made since Gregory's paper was published calls for any addition to or amendment of his conclusion that man has not a geologic history in Victoria.'[68]

The 'Stone Circle' may have dominated the Victorian scientific community, but Hale and Tindale's excavation was well-received beyond it. Yet among the scientists and media outlets who supported the excavation and its antiquity, there was a mixed recognition of the Aboriginality of that antiquity. Given the excavation came early in a period of sustained debate and rights claiming for Aboriginal Australians, there remained an ambiguity between the categories of humanity and Aboriginality that allowed commentators to acknowledge an exclusive human antiquity. The media in particular favoured this framing. After Hale and Tindale presented their report to the Royal Society of South Australia in July 1930, summaries were published in newspapers in South Australia, Victoria and Queensland.[69] Early articles claimed the site proved the existence of '*Ancient Man* in Australia,' the 'antiquity of *man* in South Australia,' and '*fossil man* in the Murray Valley.'[70] Apart from one article that erroneously claimed the excavation had been conducted in

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[68] D. J. Mahony, W. Baragwanath, F. Wood Jones, and A. S. Kenyon, "Fossil Man In The State of Victoria," *Report of XVI International Geological Congress Washington, 1933* (Washington, D.C.: International Geological Congress, 1936) 1341. For more on John Walter Gregory's 1904 report, see Chapter Four.

[69] See *The Advertiser*, "Royal Society: Fossil Man in Murray Valley," July 11, 1930, 9; *Chronicle*, "Royal Society: Fossil Man In Murray Valley?" July 17, 1930, 45; *The Herald,* "Ancient Man in Australia," July 18, 1930, 2; *The Register News-Pictorial*, "Discovery By Young S.A. Scientists Will Be World Famous," July 21, 1930, 21; *Observer*, "Discovery By Young S.A. Scientists Will Be World Famous: River Murray Banks Yield Notable Scientific Relics," July 24, 1930, 56; *The Western Champion*, "Barcaldine and General Budget," July 26, 1930, 12; *The Telegraph (Brisbane)*, "Ancient Man: Relics on Murray River," September 17, 1930, 19; *The Beaudesert Times*, "Ancient Man" Relics Found In Australia," October 17, 1930, 3

[70] Emphasis added. See *The Advertiser*, "Royal Society: Fossil Man in Murray Valley," July 11, 1930, 9; *Chronicle*, "Royal Society: Fossil Man In Murray Valley?" July 17, 1930, 45; *The Herald,* "Ancient Man in Australia," July 18, 1930, 2; *The Register News-Pictorial*, "Discovery By Young S.A. Scientists Will Be World Famous," July 21, 1930, 21; *Observer*, "Discovery By Young S.A. Scientists Will Be World Famous: River Murray Banks Yield Notable Scientific Relics," July 24, 1930, 56; *The Telegraph (Brisbane)*, "Ancient Man: Relics on Murray River," September 17, 1930, 19; *The Beaudesert Times*, "Ancient Man" Relics Found In Australia," October 17, 1930, 3

Victoria,[71] the media consistently praised the South Australians for the international recognition they would undoubtedly receive. One article in Melbourne's *The Herald,* by veteran journalist Charles Leslie Barrett, summarised the general admiration: 'Without any flourish of trumpets, two young Australian scientists have recorded a discovery which tends strongly to prove the great antiquity of man in this age-old land of 'living fossils.''[72] Barrett framed the Tartanga remains as the most notable Australian archaeological discoveries since the Talgai Skull, and argued 'Tartanga Man' would 'take his place in the ever growing Gallery of Prehistoric Portraits.'[73] Barrett believed Hale and Tindale's research would be 'discussed the world over,' alongside other monographs on 'ancient' societies, and described it as 'the opening chapter of the Romance of Excavation in Australia.'[74] Barrett's detailed summary included maps of the site and sketches of artefacts, yet lacked the explicit Aboriginal antiquity outlined in the excavation report: 'We are surely well on the trail of *Ancient Man* in Australia.'[75]

Charles Albert Fenner, Director of Technical Education in South Australia and science writer for Melbourne's *The Australasian*, also reported on the dig, emphasising its professionality and downplaying its Aboriginality. A trained geographer, Fenner had actually been called in to inspect the Tartanga site in May 1929, and provided Hale and Tindale with a detailed physiography of the Lower Murray Valley.[76] Although Fenner was not as emphatic as Barrett, he was pleased the excavation represented a turn away from the 'arm-chair speculation' that had thus far dominated 'the story of primitive man in

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[71] See *Queensland Times*, "Fossil Remains: Discovery in Victoria," July 19, 1930, 9

[72] Charles Barrett, "Ancient Man In Australia: Relics Found In Rocks: Tartanga Fossils Will Be World Famous," *The Herald*, July 18, 1930, 2

[73] Barrett, 2

[74] This is a reference to the 1923 book *The Romance of Excavation: A Record of the Amazing Discoveries in Egypt, Assyria, Troy, Crete, Etc.; With Twenty-Nine Illustrations* by English author Charles Edwin Brand (1883-1965), better known under the pen-name David Masters. See Barrett, 2

[75] Barrett, 2

[76] According to two brief newspaper articles that reported Hale and Tindale's presentation to the Royal Society of South Australia, Fenner also presented on 'physiographic aspects' of the excavation site, but no record of his 'physiographic' presentation exists in the records of the Royal Society. Fenner's contributions are acknowledged in Hale and Tindale, 217. See also *The Advertiser*, "Royal Society: Fossil Man in Murray Valley," July 11, 1930, 9; and *Chronicle*, "Royal Society: Fossil Man In Murray Valley?" July 17, 1930, 45.

Australia.'[77] Fenner was less than impressed with the functional anthropologists occupying the 'Commonwealth School of Anthropology at Sydney,' who appeared to concern themselves 'more with what our aborigines said and thought than with what they did.'[78] These were interesting topics, Fenner admitted, but not ones that helped discover 'the earlier history of primitive man in Australia.'[79] To combat these armchair anthropologists and provide new insight into Australia's ancient past, Fenner appealed for a new type of scientist: men of 'adequate training and ability who would roll up their shirt sleeves, spit on their hands,' and carry out 'patient, long-continued labour in the minute sifting of numerical results.'[80] For Fenner, Hale and Tindale's 'remarkably fine series of investigations' fit the bill, and were similar to those upon which 'knowledge of primitive *man* in Western Europe has been built.'[81] Like Barrett, he too believed that Hale and Tindale's research had opened up a 'new chapter' in the story of 'primitive *man*' in Australia.[82]

One of the only newspaper articles to promote the Aboriginal antiquity of the excavation was from Ernest Whitington, the journalist behind the popular 'Out Among the People' column in Adelaide's *The Register News-Pictorial*.[83] Having actually been invited to the South Australian Museum by Hale, who then introduced him to Tindale, Whitington described the excavated human remains as both the 'fossil remains of our aborigines' and as belonging to 'the ancestors of our aborigines.'[84] As Whitington was examining the artefacts, two Aboriginal Australians—derogatorily described as 'a real live lubra and half-

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[77] Tellurian, a.k.a. Charles Fenner, "Nature and Science notes," *The Australasian*, August 9, 1930, 42. Fenner also wrote under this pseudonym when examining the Cohuna and Jervois Skulls. See Chapter Five.
[78] Fenner, 42
[79] Fenner, 42
[80] This is a reference to William Thomas (1824-1907), or Lord Kelvin, the eminent Irish physicist, President of the Royal Society (1890-1895), and Baron in the House of Lords, who is most often remembered for his work determining the exact measurement of 'absolute zero,' in both Celsius and Fahrenheit. Fenner, 42
[81] Emphasis added. Fenner, 42
[82] Emphasis added. Fenner, 42
[83] The popular 'Out Among the People' column ran under Whitington and his successor, Maurice Fisher until the 1960s, appearing daily in the *Register*, with a longer version in the weekly *Observer*. Whitington compiled the column until his death in April 1934. See "Whitington, Ernest (1873-1934)," *SA Newspapers: Journalists, SA Memory, State Library of South Australia,* accessed online at https://www.samemory.sa.gov.au/site/page.cfm?u=1548
[84] Ernest 'Rufus' Whitington, 'Out Among the People: Ancestors of Aboriginals," *The Register News-Pictorial*, July 22, 1930, 6

caste'—arrived to sell 'rush mats and baskets,' prompting a philosophical reflection from Whitington: 'I thought it was an extraordinary coincidence. Who could say if there were any relationship between the fossilised bones of thousands of years ago and the modern gin?'[85] Whitington, known for his love of theatre, was so struck by the skull from Tartanga that he longed to hold it in his hands, say 'Alas, poor Tartanganite, I knew him well,' and then 'write the life story of our aborigines of tens of thousands of years ago.'[86] The excavation continued to receive publicity in the latter half of 1930.[87] Barrett's article was republished multiple times in Queensland, and in February 1931, he included the excavation in an article summarising the accumulating evidence for 'the antiquity of man in Australia.'[88] The dig, however, was quickly outstripped by the frenetic debate that surrounded the announcement of the Jervois Skull in June 1931, which revived its controversial predecessor, the Cohuna Skull. Not only were the claims surrounding the Jervois and Cohuna Skulls more sensationalist than Hale and Tindale's measured conclusions, the debate on their supposed human antiquity became centred once again on Victorian experts.[89]

Hale and Tindale's reputation was firmly established within their own intellectual communities, and the excavation was included in the South Australian report on 'fossil man' for the 16th International Geological Congress in Washington D.C. in 1933. The report noted that while a more detailed investigation of the sites' human remains was required, they 'may prove to be representatives of Australian aborigines, perhaps intermediate between the Talgai type and those alive today.'[90] Tindale and Hale went on to collaborate

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[85] The term 'lubra' is a derogatory Australian colloquialism used in the nineteenth and twentieth century to describe an Aboriginal Australian woman. See Whitington, 6; see also Liz Conor, "The 'Lubra' Type in Australian Imaginings of the Aboriginal Woman from 1836–1973," *Gender & History* 25:2 (2013): 230-251.
[86] Here Whitington references the oft-quoted scene from William Shakespeare's *Hamlet*, in which Hamlet examines the skull of the court jester, Yorick, and cries 'Alas, poor Yorick! I knew him.' See Whitington, 6
[87] See *The Telegraph*, "Ancient Man: Relics Found in Australia," September 4, 1930, 19; *The Telegraph*, "Ancient Man: Relics on Murray River," September 17, 1930, 19; *The Kyogle Examiner,* "Prehistoric Australians: What The Sandstone Tells," September 19, 1930, 7
[88] Charles Barrett, "Ancient Man In Australia," *The Herald*, February 28, 1931, 13
[89] See Chapter Five.
[90] See Keith L. Ward, Norman B. Tindale, Thomas D. Campbell, and Herbert M. Hale, "Fossil Man in the State of South Australia," *Report of XVI International Geological Congress Washington, 1933* (Washington, D.C.: International Geological Congress, 1936): 1271-1273.

on a two-part volume of anthropology on the Aboriginal tribes of Princess Charlotte Bay, in North Queensland, published in 1933 and 1934.[91] For the most part, however, Hale returned his focus to zoology in the 1930s, while Tindale's expertise in anthropology earned him a Carnegie fellowship to travel to the United States in 1936.[92] This then led to an important research collaboration between Harvard and Adelaide universities; a year-long expedition from 1938 to 1939 that conducted a demographic history of the Aboriginal population since British invasion.[93] Tindale returned his attention to the Tartanga human remains later in his career, but for the rest of 1930s and 1940s, his research on Aboriginal Australians failed to express the same depth of antiquity that the 1929 excavations had.

Hale and Tindale had used their systematic excavation to argue for a Pleistocene Aboriginal antiquity with a continuous connection to contemporary Aboriginal peoples. Yet their choice to recognise the Aboriginality of that antiquity also reflected the broader intellectual and political changes that were beginning to harmonise the concepts of Aboriginality and humanity. There was a remaining ambiguity between the categories of humanity and Aboriginality that allowed some commentators to champion an exclusive human antiquity, but others accepted Hale and Tindale's reassertion of the logic of Aboriginal antiquity. The excavation was felt and accepted by scientists outside of the 'Stone Circle,' whose influence in their own context did not succeed in silencing arguments for Aboriginal antiquity across Australia. To break their deluded dogma, however, change had to come from one of their own. In the early 1940s, it finally did.

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[91] See Herbert M. Hale and Norman B. Tindale, "Aborigines of Princess Charlotte Bay, North Queensland," *Records of the South Australian Museum* 5:1 (1933): 64-116; and "Aborigines of Princess Charlotte Bay, North Queensland. Part II," *Records of the South Australian Museum* 5:2 (1934): 117-172.

[92] Philip Jones, "Tindale, Norman Barnett (1900–1993)," *Australian Dictionary of Biography,* National Centre of Biography, Australian National University, published online 2020: http://adb.anu.edu.au/biography/tindale-norman-barnett-29608/text36487

[93] Tindale's collaborator on this project, American anthropologist Joseph Birdsell, became a lifelong friend. See Jones, "Tindale, Norman Barnett (1900–1993)," *Australian Dictionary of Biography*; Norman B. Tindale, "Results of the Harvard-Adelaide Universities Anthropological Expedition, 1938-1939: a distribution of Australian aboriginal tribes: a field survey," *Transactions of the Royal Society of South Australia* 64:1 (1940): 140-231; Norman B. Tindale and Joseph B. Birdsell, "Tasmanoid Tribes in North Queensland," *Records of the South Australian Museum* 7:1 (1940): 140-231; Joseph B. Birdsell, "Preliminary Data on the Trihybrid Origin of the Australian Aborigines," *Archaeology & Physical Anthropology in Oceania* 2:2 (1967): 100-155; Russell McGregor, "Making the rainforest Aboriginal: Tindale and Birdsell's foray into deep time," *Memoirs of the Queensland Museum, Culture* 10 (2016): 9-21.

Breaking the 'Circle': The Keilor Skull

In October 1940, while working in a sandpit on the banks of the Maribyrnong River about a mile north of the highway-village of Keilor, Victoria, local labourer James White struck something with his pick-axe. Fifteen feet below the surface, his pick had cracked a fossilised skull.[94] Despite missing its mandible, the cranium was undeniably human. Under the watchful eye of the site's contractor, Mr Hughes, the three pieces of broken skull were cleaned, and on 4 November, taken to the staff at the National Museum of Victoria in Melbourne.[95] A few weeks later, Hughes was pointing out the discovery site to Museum Director and geologist D. J. Mahony, staff palaeontologist Alexander Robert Keble, and mammalogist Charles Walter Brazenor. The discovery was reported in several local newspapers, but it wasn't until three years later that the artefact was properly introduced into Australia's scientific and public spheres.[96] In September 1943, the National Museum of Victoria released their annual volume of *Memoirs*, which contained three detailed papers on the Keilor Skull: an anatomical description by National Museum craniologist James Wunderly, a dentition study by dentist William Adam, and a geological report by D. J. Mahony.

The Keilor Skull surpassed every other artefact thus far uncovered in Australia. Its anatomical *and* geological features, appraised by scientists with impeccable professional credentials, brought human antiquity to a new level of certainty even the 'Stone Circle' could not deny. Alfred S. Kenyon died four months before the Museum's reports were published, but the artefact convinced 'Stone Circle' insider D. J. Mahony and the formidable Frederic Wood Jones of a substantial geological human antiquity for Australia. What's more, the Keilor Skull forced Australian scientists to confront the barriers they had constructed around Aboriginal antiquity. Hale and Tindale's explicit declaration of Aboriginal antiquity had come early in the twentieth century's changing discourse around

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[94] Letter from R. Hughes to D. J. Mahony, Director of the National Museum of Victoria, August 22, 1942, reprinted in D. J. Mahony, "The Problem Of Antiquity Of Man In Australia," *Memoirs of the National Museum Victoria* 13 (1943), 31-32

[95] Letter from R. Hughes to D. J. Mahony, Director of the National Museum of Victoria, August 22, 1942, reprinted in Mahony, "The Problem Of Antiquity Of Man In Australia," 31-32

[96] See *Sunshine Advocate*, "Discovery at Keilor: Prehistoric Aborigine's Skull," November 8, 1940, 7; *Weekly Times*, "What's Happened Since Last Week," November 16, 1940, 5

Aboriginal humanity; but by 1943, the reality of Aboriginal survival had extinguished the 'doomed race' theory, while years of rights-claiming and humanitarianism had removed any lingering ambiguity between concepts of Aboriginality and humanity. The Keilor Skull bespoke Aboriginality through its combination of 'Australoid' and 'Tasmanoid' anatomical features, and a commanding geological antiquity through its position in datable strata. After decades of elision and allusive racialisations ascribing Australia's human antiquity exclusively to 'extinct' Tasmanians, to a 'true' Aboriginal race, or to some biologically recondite 'Proto-Australian' or human type, the Keilor Skull was described by both professional scientists and the public as an ancestor of both the Australian and Tasmanians Aborigines.

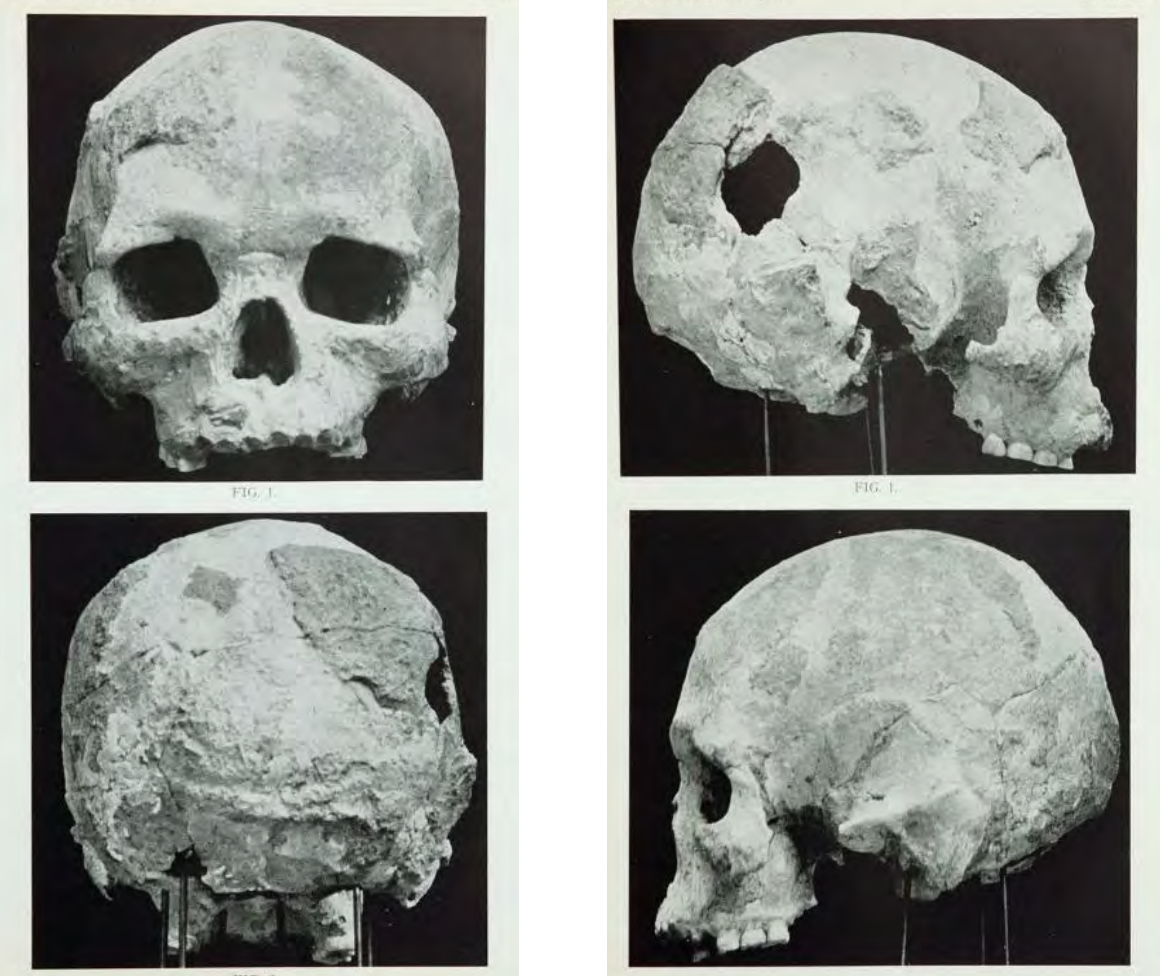

Fig 4. Photographs of the Keilor Skull.[97]

[97] Plates IV and V, taken from *Memoirs of the National Museum of Victoria* 13 (1943), 68-70

The first of the National Museum's three papers on the Keilor Skull, James Wunderly's anatomical description articulated a clear Aboriginal antiquity. Filled with measurements, contour drawings and photographs, Wunderly's description compared Keilor with the skulls of Aboriginal Australians, Tasmanian Aborigines, and other indigenous 'Oceanic groups.' The Keilor Skull, he remarked, was larger than the 'average male skulls of several Oceanic races,' and had a contour that most closely resembled 'the South Australian male.'[98] Of crucial importance, however, was that it combined 'Australoid and Tasmanoid characteristics in about equal proportions,' and seemed to sit somewhere in between the known measurements of these two Aboriginal 'races.'[99] Wunderly used this mixture of characteristics to argue that contemporary Aboriginal Australians had 'a bi-racial origin.'[100] This did not refer to the commonly held notion Australia had first been populated by a 'Negrito' Tasmanian race, who were then replaced 'in comparatively recent times' by a Malayan or Papuan race.[101] Rather, Wunderly argued the Keilor Skull proved a '*remote* bi-racial origin for the Australians' that was 'independent of recent admixture with races.'[102] The remoteness of this origin was consistent with Mahony's geological evidence that Keilor was 'of some geological antiquity.'[103] Wunderly did not elaborate on this argument. His interpretation suggested, however, that an Aboriginal ancestor—with both Australoid and Tasmanoid features—had existed on the Australian mainland long before the 'comparatively recent' migration of 'races' from the 'north and the north-east.'[104]

Wunderly also drew a direct connection between Keilor's antiquity and contemporary Aboriginal Australians by describing this 'remote bi-racial origin' as one that was 'for the Australians.'[105] Gone were the ambiguous descriptions of an antiquity

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[98] J. Wunderly, "The Keilor Fossil Skull: Anatomical Description," *Memoirs of the National Museum of Victoria* 13 (1943), 62

[99] Wunderly, "The Keilor Fossil Skull: Anatomical Description," 61. William Adam's dentition report supported Wunderly's claim of the Keilor Skull's mixed racial features, and he highlighted certain palatal features that were 'more Tasmanoid than Australoid.' See William Adam, "The Keilor Fossil Skull: Palate and Upper Dental Arch," *Memoirs of the National Museum of Victoria* 13 (1943), 76

[100] Wunderly, "The Keilor Fossil Skull: Anatomical Description," 62

[101] See Chapters Two and Four.

[102] Emphasis added. Wunderly, "The Keilor Fossil Skull: Anatomical Description," 62

[103] Wunderly, "The Keilor Fossil Skull: Anatomical Description," 62

[104] Wunderly, "The Keilor Fossil Skull: Anatomical Description," 62

[105] Wunderly, "The Keilor Fossil Skull: Anatomical Description," 62

belonging only to the 'extinct' Tasmanians, to a 'true' Aboriginal race, or to some biologically recondite human or 'Proto-Australian' type. Here, evinced by both anatomy and geology, was an undeniable human antiquity with an acknowledged connection to the 'the Australians.' This subtle semantic distinction is of immense significance in the history of human antiquity in Australia. With the exception of Hale and Tindale at Tartanga and Devon Downs, the Keilor Skull was the first artefact in the twentieth century to be assigned an Aboriginal antiquity whose descent was not abstracted by obscure racialisations or elided by an exclusive concept of 'humanity.' What's more, this Aboriginal antiquity had *geological* support from inside the 'Stone Circle' itself.

In the last of the Keilor papers, D. J. Mahony's two-page geological report was a self-described 'epitome of evidence' for the geological antiquity of the river terrace in which the skull had been found.[106] The discovery site, at the junction of Dry Creek and the Maribyrnong River, consisted of three rock terraces, labelled Keilor, Braybrook and Maribyrnong Park.[107] To date the terraces, Mahony referred to the eustatic changes in sea level, a well-documented geological feature of the glacial and interglacial periods of the Pleistocene era.[108] According to Mahony, the Keilor, Braybrook and Maribyrnong Park Terraces reflected a rise in sea level from the Riss-Würm interglacial phase, the last interglacial period of the Pleistocene.[109] This period was given its name by German geographers Albrecht Penck and Eduard Brückner in their ground-breaking monograph *Die Alpen im Eiszeitalter* (1909). By 1944, there was a scientific consensus that the Riss-Würm interglacial had occurred at least 100,000 years before the present.[110] Mahony did not include a numerical age in his report, but by linking the Keilor, Braybrook and Maribyrnong Park Terraces with the Riss-Würm interglacial, and consistently referencing

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[106] While Museum palaeontologist Alexander Robert Keble and conchologist Jessie Hope Macpherson had mapped the site, Mahony interpreted its antiquity. D. J. Mahony, "The Keilor Fossil Skull: Geological Evidence of Antiquity," *Memoirs of the National Museum of Victoria* 13 (1943), 79

[107] D. J. Mahony, "The Keilor Fossil Skull: Geological Evidence of Antiquity," *Memoirs of the National Museum of Victoria* 13 (1943), 79

[108] Mahony, "The Keilor Fossil Skull: Geological Evidence of Antiquity," 80

[109] Mahony, "The Keilor Fossil Skull: Geological Evidence of Antiquity," 80

[110] For a thorough discussion of the development of different interglacial theories in the early twentieth century, see John Imbrie and Katherine Palmer Imbrie, *Ice Ages: Solving the mystery*, (London: Macmillan, 1979).

the Pleistocene research of glaciologists, he made a forceful argument for the Pleistocene antiquity of the Keilor site. As one of Australia's most respected geologists—and one of the toughest artefactual critics of Australia's human antiquity to date—Mahony's analysis provided an impressive geological confirmation of the Keilor Skull's antiquity. Together, the Museum reports positioned the Keilor Skull as the most convincing evidence thus far of a Pleistocene Aboriginal antiquity for Australia.

In another paper, published in the same volume of *Memoirs*, Mahony included the Keilor Skull in an enormous review of the data that either suggested or proved the 'antiquity of man in Australia.'[111] Much like Tannatt Edgeworth David's lecture from 1924, and John Walter Gregory's from 1904, Mahony's paper surveyed the research of key scientists involved in solving the 'problem of the antiquity of man in Australia,' including A. W. Howitt, Frederic Wood Jones, Hermann Klaatsch, Robert Etheridge Jnr., Walter Baldwin Spencer, and David and Gregory themselves. There are several key factors, however, that set Mahony's paper and its articulation of antiquity apart from those of his predecessors. The first was his numerical quantification of antiquity, both historical and geological. Historical antiquity, Mahony explained, roughly equated with the world's earliest recorded historical traditions, dated back to about 7,000 years, while the depth of 'geological antiquity' hinged on the close of the Pleistocene period. Anything that had happened since the end of the Pleistocene, 'some 15,000 or 20,000 years ago,' was 'geologically recent.'[112] Describing something as having a geological antiquity thus designated a minimum age of 20,000 years. For Mahony, there was 'convincing evidence of the historical antiquity of man' in Australia, and 'good reason' to believe in a geological antiquity 'before the end of Pleistocene times.'[113] All of the evidence indicated 'mankind' had migrated to Australia 'at a period that is certainly ancient in the historical and almost certainly in the geological sense.'[114]

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[111] See D. J. Mahony, "The Problem of Antiquity of Man in Australia," *Memoirs of the Natural Museum Victoria* 13 (1943): 7-56.
[112] Mahony, "The Problem of Antiquity of Man in Australia," 7
[113] Mahony, "The Problem of Antiquity of Man in Australia," 7
[114] Mahony, "The Problem of Antiquity of Man in Australia," 44

The second distinguishing feature of Mahony's paper was his description of this geological human antiquity as *Aboriginal*. This assignation was infrequent but unequivocal. While Mahony described Australia's 'human' antiquity—using language like antiquity of 'man' and ancient migration of 'mankind'—this antiquity was steeped in an Aboriginality that was both Australian, Tasmanian, *and* connected to contemporary Aboriginal peoples. For example, when discussing theories on human migration, Mahony argued 'the ancestors of *both Australian and Tasmanian aborigines* no doubt reached Australia by way of that avenue of migration along which many races of mankind have passed towards the Pacific.'[115] He helped illuminate this migration path: 'an Australoid skull of some geological antiquity' had been found in New Guinea, and 'ancient Australoid skulls' had been described in Java by Dutch paleoanthropologist Eugène Dubois.[116] These ancient Australoid humans were the 'forefathers of the Australian race,' connected by descent to contemporary Aboriginal Australians.[117] Mahony even dismissed the previous racialisations that sought to abstract and obscure Australia's human antiquity to different Aboriginal 'types' when he stated the 'fossil skulls found in Australia have Australoid or Tasmanoid characteristics,' and that 'no fossil remains' had ever suggested Australia 'was ever occupied by other types of mankind before the arrival of modern Europeans.'[118]

Mahony emphasised this Aboriginal antiquity through specific artefacts throughout the paper. When discussing the Keilor Skull, he reiterated its combined 'Australoid with Tasmanoid characteristics' and the geological evidence dating it 'back to the Riss-Wurm Interglacial phase of Pleistocene times.'[119] Written alongside explanations and diagrams that once again positioned the Riss-Würm as having ended some 143,000 years ago, Mahony's brief description of the Keilor Skull conveyed a staggering Aboriginal antiquity.[120] He also mentioned Hale and Tindale's excavations at Tartanga and Devons Downs, and repeated their claim that the Tartangan human remains, whose 'geological and

[115] Emphasis added. Mahony, "The Problem of Antiquity of Man in Australia," 11
[116] Mahony, "The Problem of Antiquity of Man in Australia," 11
[117] Mahony, "The Problem of Antiquity of Man in Australia," 11
[118] Mahony, "The Problem of Antiquity of Man in Australia," 8
[119] Mahony, "The Problem of Antiquity of Man in Australia," 15
[120] Mahony, "The Problem of Antiquity of Man in Australia," 15

physiographic features' indicated 'at least some antiquity,' represented 'an early Australian race linking Talgai man with modern aborigines.'[121] Of the Talgai Skull itself, Mahony made a subtle but substantial amendment to its previous portrayal as a 'Proto-Australian.'[122] Instead of this ambiguous biological category, Mahony assigned the Talgai Skull 'undoubtedly' to the tangible racial category, 'of the Australian type.'[123] After decades of elision and allusive racialisations, Mahony's extensive paper, prompted by the 'irrefutable' Keilor Skull, articulated a Pleistocene Aboriginal antiquity for Australia.

This Pleistocene Aboriginal antiquity received public and academic support in Australia. Shortly after the Museum's *Memoirs* were released, articles appeared in newspapers in Victoria, New South Wales, Queensland and Tasmania that supported the Keilor Skull's illumination of 'early Australians.'[124] Most articles did not use the term 'Aboriginal,' but by repeating Mahony's conclusion of an antiquity for the 'Australian' and 'Tasmanian' races, the media reinforced an antiquity that was markedly different from earlier articulations of an exclusive human antiquity.[125] One article in Melbourne's *Weekly Times* argued Australia's 'problem' with human antiquity could now be met with evidence humans arrived 'before the end of the Pleistocene period…some 15,000 or 20,000 years ago.'[126] Another article, published in Melbourne's *The Herald* by nature writer Crosbie Morrison, claimed the Keilor Skull 'Makes History' by laying to rest the bewildering questions plaguing scientists for decades: the evidence from Keilor proved human existence in Australia 'in the Riss-Würm interglacial period—in historical time, about 100,000 years

[121] Mahony, "The Problem of Antiquity of Man in Australia," 29
[122] See Chapter Five.
[123] Mahony, "The Problem of Antiquity of Man in Australia," 27
[124] See *Examiner* (Launceston: Tasmanian), "Fossil Skull Guide to Early Australians," September 25, 1943, 5; *Weekly Times*, "News Books: Antiquity Of Man In Australia," October 27, 1943, 12; *Cairns Post*, "Current Nature Topics: Antiquity Of Man In Australia," November 5, 1943, 3
[125] *Examiner* (Launceston: Tasmanian), "Fossil Skull Guide to Early Australians," September 25, 1943, 5; *Weekly Times*, "News Books: Antiquity Of Man In Australia," October 27, 1943, 12; *Cairns Post*, "Current Nature Topics: Antiquity Of Man In Australia," November 5, 1943, 3
[126] *Examiner* (Launceston: Tasmanian), "Fossil Skull Guide to Early Australians," September 25, 1943, 5; *Weekly Times*, "News Books: Antiquity Of Man In Australia," October 27, 1943, 12; *Cairns Post*, "Current Nature Topics: Antiquity Of Man In Australia," November 5, 1943, 3; Crosbie Morrison, "This Skull Makes History," *The Herald*, November 13, 1943, 7

ago."[127] If it found general academic acceptance, Morrison argued, the discovery would mark 'an epoch in the scientific history of mankind."[128]

The Keilor Skull achieved academic acceptance the following year, when it was approved by Frederic Wood Jones, one of the most respected and sustained critics of Australian artefacts of human antiquity. The death of Alfred S. Kenyon, in May 1943, had removed much of the immediate opposition that may have been levelled at the Keilor Skull, but Wood Jones' confirmation of Keilor's antiquity—in the internationally acclaimed science journal *Nature*—was a substantial milestone in Australia's history of human antiquity. While Wood Jones believed the majority of evidence Mahony had surveyed ought to be returned with a verdict of 'not proven,' the Keilor Skull was the exception.[129] The circumstances of its discovery, *in situ* and 'undisturbed,' seemed to Wood Jones to be 'well authenticated."[130] So too were its characteristics: mineralised and bearing 'every evidence of being contemporary with the stratum from which it was removed."[131] As a result, Wood Jones stated, the Keilor Skull was 'the first Australian human fragment the geological antiquity of which is definitely guaranteed."[132] Like Mahony, and any other 'competent Australian geologist,' Wood Jones believed this antiquity corresponded with 'the Riss-Würm interglacial phase of the Pleistocene period."[133]

Even when Wood Jones disagreed with Wunderly's argument of a 'remote bi-racial origin' for Aboriginal Australians, he connected the Keilor Skull's Pleistocene antiquity to contemporary Aboriginal Australians. It was a 'bold claim indeed' to describe one skull 'as being the product of the racial mixture between the Pleistocene ancestors *of these two races living* (according to the geological report) more than 100,000 years ago."[134] The morphological features of Keilor were 'quite insufficient' to diagnose the 'racial mixture

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[127] Crosbie Morrison, "This Skull Makes History," *The Herald*, November 13, 1943, 7. For more on Morrison, see Graham Pizzey, "Morrison, Philip Crosbie (1900-1958)," *Australian Dictionary of Biography* 15 (Melbourne University Press: Melbourne, 2000).
[128] Morrison, "This Skull Makes History," 7
[129] Frederic Wood Jones, "The Antiquity Of Man In Australia," *Nature* 3877:153 (1944), 211
[130] Wood Jones, "The Antiquity Of Man In Australia," 211
[131] Wood Jones, "The Antiquity Of Man In Australia," 211
[132] Wood Jones, "The Antiquity Of Man In Australia," 211
[133] Wood Jones, "The Antiquity Of Man In Australia," 211
[134] Emphasis added. Wood Jones, "The Antiquity Of Man In Australia," 212

between the Pleistocene *ancestors of the present Australian and Tasmanian races*."[135] Wood Jones acknowledged the Keilor Skull's geological antiquity, its descent to 'the present Australian and Tasmanian races,' and even inferred that both Aboriginal Australians and Tasmanian Aborigines had lived 'more than 100,000 years ago."[136]

After years of acerbic critique, Wood Jones' support for the Keilor Skull would have been widely felt in Australia. Throughout his tenure in Australia, the anatomist was treated with celebrity-like status by newspapers who reported his promotions, reviewed his publications, and even published well-wishes from readers on his birthday.[137] This admiration followed Wood Jones even after he left Australia in 1938, and no doubt assisted the Keilor Skull's positive public reception. Indeed, the Australian public reflected little to no backlash against the Skull or its enormous antiquity. This was likely due also to the ongoing Second World War. After the 1939 National Security Act introduced rations on newsprint, strict censorship laws, and greater government control over newspaper production, there was not as much space for the lengthy debates that had characterised the public discussion of human antiquity in the inter-war period.[138] Indeed, science journalist H. C. McKay lamented how 'these wartime days' had left even 'many Keilor folk' unaware of the discovery that was, in reality, a 'scientific headliner."[139]

The War had already delayed the academic interpretation of the skull, which had been in the National Museum of Victoria's possession since November of 1940. Mahony remarked that 'war-time conditions' had made it 'impossible to carry out systematic excavation' of the Keilor site beyond what was necessary to write his geological report.[140]

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[135] Emphasis added. Wood Jones, "The Antiquity Of Man In Australia," 212
[136] Wood Jones, "The Antiquity Of Man In Australia," 212
[137] See *Register,* "Professor Wood-Jones: Resigned from Adelaide University: Important London Appointment," July 1923, 9; *Register*, "The Library Table," November 29, 1924, 4; *Mail*, "Birthday Next Week: Prof. Frederick [sic] Wood-Jones," January 16, 1926, 2; *News*, "Scientist Leaving: Prof. Wood Jones for Honolulu," January 25, 1927, 8; *Courier-Mail* (Brisbane), "Professor Wood-Jones Resigns Post," July 27, 1939, 7
[138] Four radio stations were ordered to close down after they broadcast information about the presumed sinking of the *HMAS Sydney*, in December 1941. See *The Sydney Morning Herald*, "Ban on radio stations," December 2, 1941, 6
[139] McKay also highlighted the War's disruption of scientific research efforts in Java and other parts of South-East Asia: '...anthropologists are itching to get back to Java, once the Japs are defeated, to get on the trail of the giants again.' See H. C. McKay, "Japs Jam Quest For Giants," *Smith's Weekly*, August 4, 1945, 20
[140] Mahony, "The Problem of Antiquity of Man in Australia," 32

Mahony published a brief report on another artefact from the Keilor site in May 1944, but his sudden death four months later removed the Keilor Skull's most credible Australian advocate, and sent the Museum somewhat into limbo.[141] Its changing of the guard, concurrent with the end of the War, forced the Museum to briefly suspend publication of its *Memoirs*, which in turn delayed the publication of further analysis of Keilor until 1946.[142] Despite these disruptions, however, the Keilor Skull lingered in the public and scientific imagination. In 1944, Tasmanian-born journalist Thomas Dunbabin used the skull to criticise Australian politics, remarking its 'brain-box capacity' of 1600 cubic centimetres proved 'its Pleistocene Age owner had more brains than shoals of our economists and politicians,' and was 'well above the Melbourne average today.'[143]

In 1945, the Keilor Skull even caught the attention of Jewish German anatomist Franz Weidenreich, honorary director of the Cenozoic Research Laboratory of the Geological Survey of China, involved in the excavation of Peking Man in the 1930s.[144] Weidenreich compared Keilor to the 'Wadjak Skull,' a human cranium found by Dutch paleoanthropologist Eugène Dubois in Java in 1889, arguing their likeness 'could not be greater if the skulls belonged to identical twins.'[145] As an anatomist, Weidenreich believed too much attention had been paid to Keilor's geological evidence, of which he was deeply suspicious: he found Mahony's assertion the skull was contemporaneous with Riss-Würm rock terraces unacceptable, and was 'astonished' that Frederic Wood Jones had 'accepted Mahony's views without reservation.'[146] Basing his interpretation entirely on the skulls' anatomical characteristics, Weidenreich argued Keilor and Wadjak were 'without any

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[141] See D. J. Mahony, "An Artefact, Probably Of Pleistocene Age, From Keilor, Victoria," *Memoirs of the Natural Museum Victoria* 14:1 (1944): 37-38. After a short illness, and only months after his retirement from the National Museum, Mahony died on September 27, while lodging at the Melbourne Club. See *The Argus*, "Death of Mr D. J. Mahony, Former Director of National Museum," September 28, 1944, 6

[142] See R. A. Keble and J. Hope Macpherson, "The Contemporaneity Of The Terraces Of The Maribyrnong River, Victoria, With Those Of The Upper Pleistocene In Europe," *Memoirs of the Natural Museum Victoria* 14:2 (1946): 52-68. Keble and Macpherson's paper was received for publication early in 1945, but was not published until late in 1946.

[143] Thomas Dunbabin, "Plain Talk," *The Daily Telegraph*, January 9, 1944, 5

[144] For a discussion of this laboratory and Peking Man, see Chapter Five.

[145] Franz Weidenreich, "The Keilor Skull: A Wadjak Type From Southeast Australia," *American Journal of Physical Anthropology* 3:1 (1945), 27. Mahony had mentioned some of these craniums when discussing 'Australoid' migration routes to Australia. See Mahony, "The Problem of Antiquity of Man in Australia," 11

[146] Weidenreich, "The Keilor Skull: A Wadjak Type From Southeast Australia," 29

doubt members of the same human race,'[147] but that Keilor Man, who 'seems to be more advanced than the Wadjak Man,' ought to be assigned to the more recent 'Post-Pleistocene' period.[148]

Weidenreich's assessment revived some of the public discussion that had characterised the inter-war period. From July to September 1945, multiple newspapers in New South Wales and Victoria circulated his claim that the Keilor Skull was closer to 20,000 years old.[149] In one article, Victorian anthropologist Donald Thomson stated that if Weidenreich's review of the Keilor Skull was correct, it 'rules out again any claim to really great antiquity for man in this country.'[150] Yet Thomson's article, and others like it, still assigned Keilor an antiquity of 20,000 years, which brought it 'just within the epoch known to geologists as Pleistocene.'[151] What's more, Weidenreich himself connected this antiquity explicitly to contemporary Aboriginal Australians. In a previous paper, Weidenreich had argued for an 'almost continuous phylogenetic line leading from the Pithecanthropus group [Java Man] through Homo soloensis [Solo Man] to the Wadjak Man and from there *to the Australian aboriginal of today.*'[152] The Keilor Skull remained, therefore, a convincing artefact of a Pleistocene Aboriginal antiquity for Australia.

The Keilor Skull was a crucial turning point in the history of human antiquity in Australia: for the first time, the nation's most experienced scientists agreed on the anatomical *and* geological evidence for a Pleistocene Aboriginal antiquity that they connected to contemporary Aboriginal peoples. The Victorian 'Stone Circle' had been

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[147] Weidenreich, "The Keilor Skull: A Wadjak Type From Southeast Australia," 28
[148] Weidenreich, "The Keilor Skull: A Wadjak Type From Southeast Australia," 30
[149] See Donald F. Thomson, "Science and Life: Not a Cradle of Creation," *The Sydney Morning Herald*, July 14, 1945, 7; *Williamstown Chronicle*, "The Keilor Skull: Australian Who Lived 50,000 Years Ago," August 3, 1945, 3; H. C. McKay, "Japs Jam Quest For Giants," *Smith's Weekly*, August 4, 1945, 20; *Sunshine Advocate*, "The Keilor Skull: Australian Who Lived 50,000 Years Ago," September 28, 1945, 3
[150] Donald F. Thomson, "Science and Life: Not a Cradle of Creation," *The Sydney Morning Herald*, July 14, 1945, 7
[151] See Donald F. Thomson, "Science and Life: Not a Cradle of Creation," *The Sydney Morning Herald*, July 14, 1945, 7; *Williamstown Chronicle*, "The Keilor Skull: Australian Who Lived 50,000 Years Ago," August 3, 1945, 3; H. C. McKay, "Japs Jam Quest For Giants," *Smith's Weekly*, August 4, 1945, 20; *Sunshine Advocate*, "The Keilor Skull: Australian Who Lived 50,000 Years Ago," September 28, 1945, 3
[152] See Weidenreich, "The Keilor Skull: A Wadjak Type From Southeast Australia," 30; see also Franz Weidenreich, "The skull of sinanthropus pekinensis: A comparative study on a primitive hominid skull," *Palaeontologica Sinica* 10:127 (1943): 96-157.

broken, forcing scientists to confront the paradigm of Aboriginal timelessness and dismantle ambiguities between concepts of Aboriginality and humanity. Its discussion may not have reached interwar levels, but the Keilor Skull impacted Australian scientists, the general public, and even international scientists. Why, then, do historians maintain there was no scientific discovery of either an Aboriginal or human antiquity in Australia until the professionalisation of archaeology in the 1950s and 1960s? Keilor occupies just one paragraph in Tom Griffiths' history of Victorian antiquarianism. He rightly identifies it as a 'local breakthrough in the search for antiquity,' and highlights its key persuasion of D. J. Mahony and Frederic Wood Jones.[153] He moves on quickly, however, to the skull's radiocarbon dating, conducted by archaeologist Edmund D. Gill in the 1950s, before transitioning to an expansive discussion of John Mulvaney.[154]

In his early writings, Mulvaney praised Edmund D. Gill as 'one of the few workers' who realised 'the need to relate aboriginal antiquities to their precise geological and environmental setting, and so give some perspective to their study.'[155] Yet Mulvaney also used these settings to undermine Gill's assessment of the Keilor Skull: it was discovered, he argued, in 'uncontrolled circumstances, years before [Gill's] tenure of office,' and was 'an isolated and culturally unassociated find.'[156] Such methodological standards, retrospectively applied, diminish the significance of the Keilor Skull as it was seen by scientists at the time. The Keilor Skull's anatomical and geological evidence shattered the rationale of Aboriginal timelessness well before Gill used radiocarbon dating on it in the 1950s; and indeed, before the archaeology of John Mulvaney in the 1960s. As this section has demonstrated, the discourse scientists used to articulate Australia's *Aboriginal* antiquity had changed dramatically. This was not a reflection of their refined dating techniques, but rather, Aboriginal survival and the years of rights-claiming that removed ambiguity between concepts of Aboriginality and humanity, and induced scientists to acknowledge the Aboriginality of the antiquity that lay before them. Griffiths and

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[153] Griffiths, *Hunters and Collectors*, 88-89
[154] Griffiths, *Hunters and Collectors*, 89
[155] Mulvaney, "Research into the prehistory of Victoria," 38
[156] See Mulvaney, "Research into the prehistory of Victoria," 38 and D. J. Mulvaney, "The Stone Age of Australia," *Proceedings of the Prehistoric Society* 4 (1961), 62

Mulvaney's continued historical emphasis of radiocarbon dating merely replaces the 'Stone Circle' core of their narratives with a new 'Atomic Circle.'

Constructing the Atomic Circle: The radiocarbon 'revolution'

In the few histories that address Australia's human antiquity, the Keilor Skull suffers from its proximity to the 'radiocarbon revolution' and the professionalisation of archaeology in post-war Australia. Histories of the period itself highlight the era's contradictions and contrasts, in which economic prosperity, political stability, and the rise of the suburban family was coupled with oppressive cultural norms, particularly for Aboriginal and Torres Strait Islander peoples, who continued to be subject to aggressive policies of assimilation.[157] Familiar discussions on the 'Aboriginal problem' played out alongside the desire to be part of a 'global human family' and cultivate a prosperous national identity. Tom Griffiths argues professional archaeology's 'discovery' of Australia's human antiquity in the post-war period actually helped to undermine these contradictions:

> If the 1950s saw the height of social propaganda about the domestic nuclear family, then so too was it the period of a scientific construction of a global nuclear family, one in which racial differences were undermined by the discovery of a long, shared human past. Australia joined the global nuclear family in those years through the scientific discovery of its own human antiquity. And it did so through the efforts of a 'family' of professional archaeologists that colonised Australia chiefly from Cambridge, and who embraced the scientific potential of a product of the nuclear age, radiocarbon dating.[158]

There is no doubt radiocarbon dating helped Australian scientists to conceptualise and articulate Australia's deep human past, especially when organising localised antiquities into a global human story of migration and evolution. This dissertation has already shown, however, that the post-war period was not the first time Australian scientists sought to

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[157] Nicholas Brown, *Governing Prosperity: Social Change and Social Analysis in Australia in the 1950s*, (Cambridge: Cambridge University Press, 1995); Graham Willett, "The darkest decade: Homophobia in 1950s Australia," *Australian Historical Studies* 27:109 (1997): 120-132; Anna Haebich, *Spinning the Dream: Assimilation in Australia, 1950-1970*, (North Fremantle: Fremantle Press, 2008).
[158] Griffiths, *Hunters and Collectors*, 86

claim an Australian space in a global story of human evolution; nor was it the first time a distinctly Aboriginal antiquity had been articulated, and received, by both professional scientists and the public.

By surveying the brief period between the discovery of the Keilor Skull, and John Mulvaney's arrival on the burgeoning scene of professional archaeology, the last section of this chapter argues radiocarbon dating did not immediately provide a more expansive Aboriginal antiquity for Australia; nor was it seen by scientists as the catch-all for solving problems with studying the deep past. Palaeontologist Edmund D. Gill was a key figure in this period, whose study of human antiquity was characterised by an attentive blending of old and new methodologies. Gill consistently argued for an extensive Aboriginal antiquity for Australia in widely circulated academic papers. Yet as Hale and Tindale had shown in the late 1920s, Keilor in the 1940s, and Gill would show in the 1950s, a method of absolute dating was not the key factor in recognising the Aboriginality of Australia's human antiquity. This recognition came from the combination of methodology and broader intellectual, social and political transitions, which were reflected in scientists' choice to disregard the paradigm of Aboriginal timelessness by articulating Australia's human antiquity as Aboriginal.

The academic certainty surrounding Australia's human antiquity took a public hit in 1953 when, after years of mounting suspicion, the famous Piltdown Skull was revealed as a fraud. Made remarkable for its unique combination of human and primate features, the Piltdown Skull was finally proven to be just that: a fossilised human cranium and the mandible of an orangutan, whose teeth and bones were deliberately filed and stained to insinuate antiquity. Doubts were raised over the skull's authenticity as soon as it was revealed to the scientific world in December 1912, but the calibre of scientists convinced by the find built a 'protective screen' around it.[159] This protection was gradually diminished by fossil discoveries in Asia and Africa that placed hominid origins away from Europe, and by the late 1940s, Piltdown appeared nonsensical in the pattern of human evolution.[160]

[159] Roger Lewin, *Bones of Contention: Controversies in the Search for Human Origins*, (New York: Simon and Schuster, 1987), 75
[160] Lewin, 75

Building on tests conducted in 1949 by palaeontologist Kenneth Oakley, anthropologist Joseph Weiner confirmed suspicions when he successfully recreated the 'unique' wear marks on the Piltdown molars.[161] After contacting Oakley, the pair conducted a series of tests that culminated in a media release titled *The Solution to the Piltdown Problem*.[162] On 21 November 1953, articles appeared in the London *Times* denouncing the elaborate forgery.

Reports appeared immediately in every major Australian newspaper, repeating the revelation of the 'century's biggest scientific hoax' that had scientists 'spinning around in their graves or on their study chairs.'[163] Several commentators pushed back against the idea that 'generations' of scientists had been fooled, while others pointed out the revelation did more to strengthen human evolutionary theories: now the Piltdown aberration had been removed, the human fossil record made much more sense.[164] Within five days of the reveal, the Australian press worried similar shocks might be in store for 'reputed Australian prehistoric skulls.' Articles listed the Talgai, Cohuna, Jervois and Keilor Skulls, the 'oldest inhabitants of our continent,' among those whose authenticity could be put to the same chemical tests.[165] One journalist wrote a lengthy article for Sydney's *The World's News*, imploring Australians to push for 'a reliable scientific investigation' into their 'prehistoric' skulls.[166] These fears were exacerbated when the Piltdown Skull received another blow in July 1954. Weiner and Oakley initially believed the cranial fragments belonged to a

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[161] See John Evangelist Walsh, "Chapter Five: Curtain Rising," *Unraveling Piltdown*, (New York: Random House, 1996): 64-80

[162] Walsh, 70-71

[163] See *The Daily Telegraph*, "Famous Relic Discovered To Be Fake: Ape's bones in Piltdown skull," November 22, 1953, 10; *Illawarra Daily Mercury*, "Century's Biggest Scientific Hoax Seen," November 23, 1953, 1; *Newcastle Morning Herald and Miner's Advocate*, "Piltdown Skull Century's Big Scientific Hoax," November 23, 1953, 1; *The Advertiser* (Adelaide), "Piltdown Man Skull 'Elaborate Hoax'," November 23, 1953, 1; *The Courier-Mail* (Brisbane), "Century's Biggest Hoax: Piltdown Skull A Fake," November 23, 1953, 5; *The Mercury* (Tasmania), "Piltdown Man's Skull 'Century's Biggest Hoax'," November 23, 1953, 9; *Northern Star* (Lismore, NSW), "Early Man Skull Claim 'Hoax'," November 23, 1953, 5; George H. Johnston, "George H. Johnston's London Diary: Piltdown Man is down now," *The Sun,* November 25, 1953, 26; *The Newcastle Sun*, "Great Hoax," November 26, 1953, 14

[164] *The Sydney Morning Herald*, "Sunset of the Dawn Man," November 24, 1953, 2; *The Advertiser*, "Letters to the Editor: Skull Hoax Not New: Scientists Not Easily Gulled," November 25, 1953, 4; *Southern Cross*, "Making Monkeys of Them," November 27, 1953, 6; *The Mail*, "The skull hoax left him happy," November 28, 1953, 33; *The Daily Telegraph*, "The scientists' faces were red," November 28, 1953, 22

[165] H. C. McKay, "Our Own Skulls May Be Fakes, Too," *The Daily Telegraph*, November 29, 1953, 17

[166] A. R. Wilkie, "Australia's link with prehistoric man: Exposure of Piltdown fake throws spotlight on ancient skull finds in Australia," *The World's News*, January 23, 1954, 8-9

primitive human, but after additional tests, the pair announced the cranium, and the 'extinct animal' bones found with it, had also been artificially 'aged' with iron and chromium to match the soil in which they were planted.[167] The 50,000 year label that had remained after the discovery of the first hoax was now completely eliminated.[168]

While in this case new chemical techniques diminished public and academic certainty in human antiquity, they would also provide the counterpoint in the form of radiocarbon dating. What began with the discovery of radioactivity by Marie and Pierre Curie in the 1890s, developed through Ernest Rutherford's attempts to measure radioactive decay in the early twentieth century, to become, in 1949, a chemical revolution that transformed Western understandings of the deep past.[169] The discovery belonged to American chemist Willard Libby (1908-1980) who had spent the Second World War developing nuclear weapons for the covert Manhattan Project, before taking a post-war position at the University of Chicago to study radioactivity.[170] There, Libby theorised organic materials could be dated by measuring their content of Carbon-14, a newly discovered radioactive isotope.[171] Libby and his team spent three years testing the theory by analysing the Carbon-14 content of archaeological samples with a known antiquity; artefacts from the ancient Roman city of Pompeii, for example. They discovered a clear and convincing correlation. On 23 December 1949, Libby and his colleague, Jim Arnold,

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[167] Walsh, 73-76

[168] *The Newcastle Sun*, "Atomic Test of Faked Skull," July 1, 1954, 2; *Goulburn Evening Post*, "Piltdown Skull Was Faked," July 1, 1954, 3; *The Daily Telegraph*, "New test on 'old' relic," July 2, 1954, 4; *Daily Mercury*, "Skull hoax," July 2, 1954, 5; *The Sun*, "Piltdown Fake Gets Final K.O.," July 8, 1954, 27; *The Newcastle Sun*, "Famous Scientists Hoaxed For Half-Century," July 9, 1954, 10

[169] See David Christian, "History and Science after the Chronometric Revolution," in *Cosmos & Culture: Cultural Evolution in a Cosmic Context,* ed. Steven J. Dick and Mark L. Lupisella, (Washington, D.C: National Aeronautics and Space Administration, Office of External Relations, History Division, 2009): 441-462.

[170] Rainer Berger, Leon Knopoff, and W. G. McMillan, "Willard Frank Libby, Chemistry: Berkeley and Los Angeles," University of California: In Memoriam, 1980, University of California (System) Academic Senate, 157-159, courtesy of University Archives, The Bancroft Library, University of California at Berkeley, Berkeley, CA. See also *Time*, "Science: The Philosopher's Stone," August 15, 1955.

[171] See Alison Romig and Keith Lindblom, "Discovery of Radiocarbon Dating," in *National Historic Chemical Landmarks: Chemist and Chemistry that Transformed Our Lives,* (Chicago: University of Chicago and American Chemical Society, 2016), 1-4.

published their results in a three-page article that would 'shake the world' with its prediction samples up to 20,000 years old could soon be reliably tested.[172]

Radioactive technologies were already a hot topic in Australia, with urban and regional newspapers regularly publishing articles on 'peacetime' uses of the 'atomic project,' and how the newly discovered 'Carbon-14' isotope was pushing boundaries in medical research.[173] Early forms of Libby's research, and the theory that Carbon-14 could be measured to determine age, were reported regularly throughout the late 1940s, in articles that claimed science was now within sight of 'the Clock of Ages—a Geiger device which tells one's age by clicks showing the ravages of time on each person's radio-active carbon.'[174] The stage was therefore set for the reception of radiocarbon dating. Just like the consensus on human antiquity, details of the development were delivered directly to the Australian public through their print media, this time circulating articles from the United States that boasted the new method for 'dating relics.'[175] The first sites and artefacts to be dated came from American research projects in Alaska, Mexico, and parts of the Middle East, and the Australian media followed the stories eagerly.[176]

Australian scientists were quick to jump on the new technology. In 1951, New Zealand-born palaeontologist Edmund Dwen Gill (1908-1986) sent samples from an

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[172] J. R. Arnold and W. F. Libby, "Age Determinations by Radiocarbon Content: Checks with Samples of Known Age," *Science* 110:2869 (1949): 678-680. British archaeologist Sir John Grahame Douglas Clark described Libby and Arnold's 1949 paper as the article 'that was to shake the world' in his *Prehistory at Cambridge and Beyond*, (Cambridge: Cambridge University Press, 1989), 84

[173] For example: *Daily Mercury*, "Radio Active Carbon Opens Phase In Medical Research," August 3, 1946, 1; *Northern Star*, "First Peace Use Of Atom," august 3, 1946, 1; *Daily Examiner*, "First Peacetime Use Of Atomic Project," August 3, 1946, 1; *Warwick Daily News*, "Carbon 14 May Open New Horizons of Research," August 3, 1946, 3; *Cairns Post*, "World of Science: Peaceful Atomic Energy on Sale," August 31, 1946, 4; *Queensland Times*, "Radioisotopes For Treatment Cancer," September 5, 1947, 3; *Kalgoorlie Miner*, "Atomic By-Products: Use In Combating Disease," September 6, 1947, 5

[174] *The World's News*, "Women, You Can't Stay 20 For Ever," February 7, 1948, 15. See also *The Canberra Times*, "Tiny Atomic Unit Gives Off Energy For 25,000 Years," August 3, 1946, 1; Marcus Hook, "Radio-Active Carbon In Human Body," *Daily Mercury*, July 9, 1947, 5; Marcus Hook, "Radioactive Carbon In Human Body," *Tweed Daily*, July 19, 1947, 5

[175] *Cairns Post*, "New Methods In Dating Relics," April 18, 1949, 6; *Daily Mercury*, "Dating Of Old Relics," April 19, 1949, 6

[176] *The Newcastle Sun*, "Traces Of Early Men Found In Alaska," October 26, 1950, 20; *Queensland Times*, "This One's Old…It's 1900th Birthday!" October 3, 1950, 3; *Warwick Daily News*, "7000 Year Old Village," October 3, 1950, 5; *Singleton Argus*, "A 7000-Years-Old Village: New Exploration," October 25, 1950, 3; *The Horsham Times*, "Looking For 7,000 Year Old Village," November 1950, 5; *Avon Argus and Cunderdin-Meckering-Tammim Mail*, "Oldest village say scientists," December 14, 1950, 5

Aboriginal kitchen midden in Armstrong Bay, near Warrnambool, Victoria, to the United States for testing. After coming to Australia in the early 1930s to study at the University of Melbourne, Gill worked as a Baptist minister. He had an avid interest in palaeontology and zoology, and published his first scientific paper in the *Victorian Naturalist* in 1938.[177] Gill was appointed Honorary Associate in palaeontology at the National Museum of Victoria in 1944 and, after years of conflict with his Church over evolution, resigned his ministry in 1948 to succeed Robert Keble as the Museum's Curator of Fossils.

Australia would not receive its own radiocarbon testing facilities until 1965, but despite a lack of resources, Gill was an active participant in the early years of radiocarbon dating and a driving force in Australian archaeology on the eve of its disciplinary formalisation. He consistently argued for a distinctly Aboriginal antiquity for Australia and combined the new method of radiocarbon dating with traditional archaeological techniques in order to do so. He also frequently published his work in both scientific journals and newspapers. His early midden samples, for example, although only 538 years old, were published amid an extensive list of radiocarbon dates collated by the Society for American Archaeology, and then in Sydney's *The Daily Telegraph*.[178] Later in 1951, Gill made a more thorough investigation of Aboriginal antiquity. These results were published as a two-part newspaper special, which was expanded into a 73-page article for the *Memoirs of the National Museum of Victoria* in 1953.

In all three articles, Gill combined radiocarbon dating and archaeological evidence to argue for a distinct Aboriginal antiquity that, in some places, ran continuously from the Late Pleistocene all the way to the British invasion in 1788. Gill framed his research as an answer to the famous questions posed by anthropologist Alfred William Howitt in 1899 on whether or not Aboriginal people had brought the dingo to Australia, and lived alongside

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[177] E. B. Joyce, "Gill, Edmund Dwen (Ed) (1908-1986)," *Australian Dictionary of Biography* 17 (Melbourne: Melbourne University Press, 2007)

[178] Frederick Johnson, et. al., "Radiocarbon Dating: A Report on the Program to Aid in the Development of the Method of Dating," *Memoirs of the Society for American Archaeology* 8 (1951): 1-65. See 18 for Warrnambool samples. See H. C. McKay, "Science in Australia: Atomic eye may solve an Aussie mystery," *The Daily Telegraph*, December 23, 1951, 23 for public circulation of Gill's dates.

Pleistocene megafauna like *Diprotodon*.[179] Both questions, Gill argued, could now be answered in the affirmative: 'The giant marsupial fauna, the Colongulac bone, the fossil dingo, and therefore the aborigines, belonged to the time of the last glaciation—late Pleistocene."[180] Under the headline 'Antiquity of the Australian Aborigines,' Gill argued 'during the past ten years,' much 'new information' had been gathered to overturn both John Walter Gregory's 1904 review of the 'evidence for the antiquity of man in Victoria' and the 'Stone Circle's' 1933 submission on 'fossil man' to the 16th International Geological Congress in Washington D.C.[181] Mahony's 1943 work on Keilor had indicated 'a considerable antiquity for the aborigines in Western Victoria,' and now Gill's research demonstrated 'two periods of aboriginal occupation,' one from the 'time of the giant extinct marsupials' in the 'Late Pleistocene,' and the other from the 'time of the formation of the loess' in the 'Mid-Holocene."[182]

Gill was resolute in articulating an Aboriginal antiquity for Lake Colongulac. He consistently used the words 'aboriginal' and 'aborigine' to describe the Pleistocene communities whose relics he examined, moving beyond Mahony's more sanitised and scientific sounding categories of 'Australoid' and 'Tasmanoid.' Gill's most powerful claim, however, was that the evidence from Lake Colongulac proved a continuous Aboriginal occupation from 'Late Pleistocene,' through the 'Mid-Holocene,' and 'since then up to the time of arrival of Europeans."[183] 'There is no reason to doubt,' he argued, 'that the aborigines lived more or less continuously in the district throughout the time represented."[184] The role radiocarbon dating played in evincing this antiquity was minor: Gill used his 1951 kitchen midden dates to prove the area's Aboriginal occupation in the 'very recent period."[185] Gill's

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[179] Edmund D. Gill, "Antiquity of the Australian Aborigines: New Evidence from Victoria," *Camperdown Chronicle*, March 25, 1952, 3
[180] Edmund D. Gill, "Antiquity of the Australian Aborigines, Part II," *Camperdown Chronicle*, April 1, 1952, 4
[181] Gill, "Antiquity of the Australian Aborigines: New Evidence from Victoria," 3
[182] Loess is a loosely compacted yellowish-grey deposit of wind-blown sediment. Gill, "Antiquity of the Australian Aborigines, Part II," 4
[183] Edmund D. Gill, "Geological Evidence In Western Victoria Relative To The Antiquity Of The Australian Aborigines," *Memoirs of the National Museum of Victoria* 18 (1953), 61
[184] Gill, "Geological Evidence In Western Victoria Relative To The Antiquity Of The Australian Aborigines," 62
[185] Gill, "Geological Evidence In Western Victoria Relative To The Antiquity Of The Australian Aborigines," 25

use of radiocarbon dates as a supplementary dataset reflects both the scarcity of samples, and his confidence in the geological and palaeontological evidence as markers of Aboriginal antiquity. While he appreciated the usefulness of radiocarbon dating, the new technology was not without its issues, particularly when it came to contamination.[186] For Gill, the chemistry could not—indeed should not—replace the knowledge gained through careful and attentive fieldwork.

Gill reinforced this point in 1955, when he published the first comprehensive list of radiocarbon dates for Australian archaeological sites: a table of dates from the late Quaternary period, broken down into glacial divisions, and published in *The Australian Journal of Science*. Gill warned this first attempt would likely contain imperfections: there was not enough Carbon-14 analysis, he argued, to establish many of the dates 'for certain."[187] The dates, however, were found to be largely consistent with geological estimates made before radiocarbon dating was carried out.[188] Results from charcoal and wood samples respectively confirmed an Aboriginal occupation of Mount Gambier, South Australia, and Hobson's Bay, Victoria, to 4,800±200 years, while 'indirect evidence' of an Aboriginal presence at Lake Colongulac was carbon dated to a huge 13,725±350 years.[189]

The only artefact whose radiocarbon age did not align with previous geological estimates was the Keilor Skull. Gill first turned his attention to Keilor amid the Piltdown fallout in 1953.[190] He applied a number of fluorine tests that determined the skull was the same age as the rock terrace in which it was found, but that these terraces were not as old as the 100,000 years originally postulated by Mahony (1943), and Keble and Macpherson

[186] Many scientists, including Libby, were aware of the technology's limitations from the outset, and actively worked towards refining the techniques and its accuracy. See Ingrid U. Olsson, "Radiocarbon Dating History: Early Days, Questions, and Problems Met," *Radiocarbon* 51:1 (2009): 1-43.
[187] Edmund D. Gill, "Radiocarbon Dates for Australian Archaeological and Geological Samples," *The Australian Journal of Science* 18 (1955), 49
[188] Gill, "Radiocarbon Dates for Australian Archaeological and Geological Samples," 49
[189] The original date recorded was 13,520±540, but was thought by Gill to have been contaminated by an 'atom bomb test' in the American laboratory. After the article went to press, Gill was able to re-do the test using the acetylene method to obtain the dates of 13,725±350 years. Gill, "Radiocarbon Dates for Australian Archaeological and Geological Samples," 51
[190] H. C. McKay, "Our Ancient Skull Is No Fake," *The Daily Telegraph*, February 21, 1954, 45

(1946).[191] After further testing, the Keilor terrace was radiocarbon dated to 8,500±250 years, with Gill estimating 'Keilor Man' had lived 9,000 to 10,000 years ago, at the end of the Pleistocene.[192] The Keilor site was an apposite example for the advantages and disadvantages of radiocarbon dating. While the revised dates were demonstrably younger than those originally speculated, Gill had also received multiple results from the Keilor terrace. Charcoal samples had first been dated to approximately 3,000 years; a result blatantly amiss with the geological evidence. These dates prompted 'check assays,' which then returned the more feasible result of 8,500 years.[193] 'If the first date had been obtained without field work,' Gill noted, 'it would no doubt have been accepted.'[194]

This experience confirmed for Gill that while radiocarbon dating was a useful tool, it must not be regarded as an easy way out of the problems of age determination: 'The writer's experience is that C14 cannot replace the patient field work of geologist and archaeologist, but is a check for it and an added refinement to it.'[195] Indeed, Gill's date of 13,725±350 years for the Aboriginal antiquity at Lake Colongulac was older than those John Mulvaney first received from the Carnarvon Range in central Queensland in 1962. That date of 12,300 years was so unexpected, Mulvaney thought the radio communication he received from the Melbourne lab was a transmission error.[196] Although Mulvaney has consistently praised Gill's investigations in the 1950s, arguing 'all subsequent research must take account of his conclusions and utilise similar scientific aids,' Gill's excavation and research

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[191] Edmund D. Gill, "Fluorine Tests Relative to the Keilor Skull," *American Journal of Physical Anthropology* 11:2 (1953), 229-231

[192] See Edmund D. Gill, "Notes and News: Keilor Man," *Antiquity* 8 (1954), 110-113; Edmund D. Gill, "Fluorine-Phosphate Ratios In Relation To The Age Of The Keilor Skull, A Tertiary Marsupial, And Other Fossils From Western Victoria," *Memoirs of the National Museum of Victoria* 19 (1954), 106-125; and Gill, "Radiocarbon Dates for Australian Archaeological and Geological Samples," 50

[193] Gill, "Radiocarbon Dates for Australian Archaeological and Geological Samples," 52

[194] Gill, "Radiocarbon Dates for Australian Archaeological and Geological Samples," 52

[195] Gill, "Radiocarbon Dates for Australian Archaeological and Geological Samples," 52

[196] On 27 July 1962, Mulvaney initially received by radio the date of 12,300 years. Once back in Melbourne, certain the figure had been miscommunicated, Mulvaney contacted the lab, who amended the date to the even older figure of 12,600 years. See letter from John Callow to John Mulvaney, 20 July 1962, and letter from John Mulvaney to John Callow, 5 December 1962, in Papers of John Mulvaney, MS 9615/8.4/8, Box 62, National Library of Australia. See also Introduction to this dissertation.

at Lake Colongulac are rarely incorporated into the narrative of Australian archaeology's 'scientific discovery' of Aboriginal antiquity in the 1960s.[197]

Between 1953 and 1955, Gill published articles on the Keilor Skull and rock terrace in six different academic journals, of national and international acclaim.[198] Engagement from the Australian public, however, was at an all-time low. Although Melbourne's *The Argus* published an article on the Keilor Skull's revised dates in February 1955, the story captured little attention.[199] Radiocarbon dating was just one of many technological advancements making headlines in Australia. Newspapers published articles on 'electronic brains' that could screen participants in job interviews, predict student's examination results, compose music with Beethoven-like skill, and even beat the Duke of Edinburgh at noughts and crosses.[200] Although dedicated science journalists like Harry McKay spoke eagerly of the future of Australian archaeology in the 'Atomic Dating Era,' the majority of articles that did discuss radiocarbon dating focused on material from the United States.[201] Scientific books that looked beyond the concept of human antiquity were already beginning to emerge. As one book review early in 1960 argued, with radiocarbon dating now 'establishing reliable chronologies' for researchers, other topics of interest like a 'reasonably complete cultural sequence' could be worked out for primitive human cultures in Australia and the South Pacific.[202] Australia's Aboriginal antiquity had become almost a given for scientists, and a former interest for a public now saturated with scientific news.

A major influence on the public's waning interest in a topic that had once captured national attention was, indeed, the absence of a professionalised school of Australian archaeology. Up until this point, Australia's human antiquity had been the specialty of

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[197] See Mulvaney, "Research into the prehistory of Victoria," 38
[198] In *Nature* 4374:172 (1953), 409-410; *American Journal of Physical Anthropology* 11:2 (1953), 229-231, *Antiquity* 8 (1954), 110-113; *Memoirs of the National Museum of Victoria* 19 (1954), 106-125; *The Australian Journal of Science* 18 (1955), 49-52; and *Anthropos* 50:1/3 (1955), 417
[199] *The Argus*, "Keilor Skull Is No Longer A Mystery," February 18, 1955, 3
[200] *Truth*, "News Oddities," November 26, 1950, 8; *The Courier-Mail*, "Noughts & crosses: Duke lost to 'brain'," April 24, 1952, 1; John Maughan, "Exam Heartbreak May Be At End," *The Advertiser*, January 30, 1954, 2; *Avon Argus and Cunderdin-Meckering-Tammin Mail*, "South Africans—They're Just Mad Over Music Discs!" September 2, 1954, 5
[201] H. C. McKay, "Science In Australia: A-Bombs Bedeviling Our Scientists," *The Daily Telegraph*, December 26, 1954, 22; Steve Pugh, "Archaeology The Modern Way," *The Canberra Times*, October 14, 1957, 2
[202] *The Canberra Times*, "Broad Survey Of South Seas Social Systems," January 30, 1960, 13

geology, anthropology and anatomy, disciplines with their own distinct intellectual beginnings largely born of trends and traditions from Britain and continental Europe. Radiocarbon dating had been invented by nuclear chemists, but was quickly incorporated into the expertise of American archaeologists. With the discovery of the Piltdown fraud diminishing the power of the British school, and Australia's post-war alliances with the United States opening new avenues of intellectual exchange, American archaeology caught more of the Australian public's attention. So too did its techniques begin to influence Australian science: as radiocarbon dating became more accessible, it was the discipline of archaeology that dominated investigations of human antiquity in Australia from the 1960s onwards. Historians are correct to highlight the impact of radiocarbon dating and the institutionalisation of archaeology on Australian understandings of Aboriginal antiquity; but the twin 'revolutions' were not, as is argued, responsible for Aboriginal antiquity's 'scientific discovery' or its broad public understanding. They helped *solidify*, through more absolute dating, an existing scientific conceptualisation of a vast Aboriginal antiquity; and in the second half of the twentieth century, they *revived* the interest of a public that had given steady attention to *human* antiquity since its establishment in 1859, as well as feverish moments of recognition to various forms of *Aboriginal* antiquity.[203]

Overturning the spectre of the 'Stone Circle': Conclusion

Edmund D. Gill straddled this period of transition in Australian science, utilising new technologies while upholding the rigours of fieldwork and excavation. He was not the only scientist wary of the gathering fanfare surrounding radiocarbon dating: renowned archaeologist V. Gordon Childe was also sceptical to the point of pessimism. Born in Sydney, Childe spent the majority of his life in the United Kingdom, where he made his name with sweeping yet accessible books like *The Dawn of European Civilization* (1925), *Man Makes Himself* (1936), and *What Happened in History* (1942). A fellow of the Royal Anthropological Institute, the Society of Antiquaries of Scotland, and the British Academy,

[203] For discussions on interpretations of Aboriginal antiquity and the deep human past from the 1960s onwards see Amy Way, "Between Discovery and Deep Time: A Study of the Cultural Representations of Mungo Man," (MRes thesis, Macquarie University, 2016).

Childe was also a professor of European archaeology and director of the Institute of Archaeology at the University of London.[204] Although he constantly stressed the overriding need for a firm chronology for archaeological sites, Childe feared developments in radiocarbon dating would prompt archaeologists to 'abandon responsibility for chronology or themselves become nuclear physicists.'[205] For Childe, archaeologists ought to 'master enough mathematics, physics and chemistry to appreciate the limitations of the information the latter can provide.'[206]

Upon his retirement in 1957, Childe returned to Australia only to be affronted by the 'hopeless neglect' of Australian archaeology.[207] He was certain the continent contained a wealth of significant sites, particularly those with Aboriginal rock art, but lamented only '3 or 4 people were working on it at all seriously' and with 'inadequate training and hopelessly inadequate resources.'[208] Childe would not live to see the rise of Australian archaeology in the 1960s. On 19 October 1957, he ended his life at Govetts Leap lookout, among the sandstone cliffs of the Blue Mountains. Shortly before his death, Childe actually spent time with John Mulvaney, the man who, over the next few years, revitalised archaeology in Australia. Mulvaney had invited Childe to the University of Melbourne to deliver two lectures to students in his Australian and Pacific prehistory course, the first and only of its kind being taught in Australia at the time.[209] Eleven days before his death, Childe remarked to a friend that Australia was in urgent need of professional archaeology, with Mulvaney being the 'only man with first class techniques to tackle it seriously.'[210]

Historian Billy Griffiths notes the sad irony of Childe's jeremiad, coming just one year after Mulvaney's first systematic archaeological excavation at Fromm's Landing, and

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[204] Jim Allen, "Childe, Vere Gordon (1892–1957)," *Australian Dictionary of Biography* 7 (Melbourne University Press: Melbourne, 1979)
[205] V. Gordon Childe, "Valediction," in *Prehistorian: A Biography of V. Gordon Childe*, Sally Green, (Moonraker Press: Wiltshire, 1981), 167
[206] V. Gordon Childe, 167
[207] Billy Griffiths, *Deep Time Dreaming: Uncovering Ancient Australia*, (Black Inc.: Carlton, 2018), 13
[208] Green, 149
[209] Billy Griffiths, 14
[210] Childe, quoted in Tim Murray, "Aboriginal (Pre)History and Australian Archaeology: The Discourse of Australian Prehistoric Archaeology," *Journal of Australian Studies* 16:35 (1992), 4

so soon before his career-defining digs in the early 1960s.[211] Yet the greater irony is that Childe and Mulvaney together dismissed the decades of scientific investigation—some of it with systematic archaeological methodology—that had come before them. Mulvaney undoubtedly transformed the practice of archaeology in Australia, just as radiocarbon dating went on to aid the articulation of an Aboriginal antiquity that, over time, surpassed inaccurate typologies and racialist generalisations. The historical emphasis, however, on the 'twin revolutions' of radiocarbon dating and professional archaeology not only devalues previous investigations, but disregards the remarkable strength with which Australia's Aboriginal antiquity was both upheld and elided through different disciplines, politics and paradigmatic persuasions. In a manner similar to WEH Stanner's 'Great Australian Silence,' the 'radiocarbon revolution' has become a locution with a simplistic narrative too often substituted for a much more complex process of intellectual, social and political change—particularly in the 1930s, 1940s and 1950s.

This chapter has made two interwoven arguments about this deceptively complex period in the history of human antiquity in Australia. First, it argued that despite a powerful influence within their own intellectual community, the Victorian 'Stone Circle' did not prevent the scientific articulation and acceptance of a Pleistocene Aboriginal antiquity for Australia that was connected to contemporary Aboriginal peoples. Second, it argued this extensive Aboriginal antiquity was not solely the product of refined dating techniques and 'professional' archaeological methodologies. Instead, new techniques were interwoven with broader intellectual, social and political transitions, which ultimately induced scientists to recognise the Aboriginality of the antiquity that lay before them. After a steady accumulation of activism and rights claiming, coupled with the reality of Aboriginal survival, scientists' claims for Aboriginal antiquity reflected the gradual coming together of the concepts of Aboriginality and humanity. Just as Stanner claimed Australia's 'cult of disremembering' might be broken by a 'searching study' of the period's 'moral, intellectual and social transitions,' this chapter provides a detailed study for Australia's history of

[211] Griffiths, *Deep Time Dreaming*, 11-15; see also Billy Griffiths, "The 'Dawn' of Australian Archaeology: John Mulvaney at Fromm's Landing," *Journal of Pacific Archaeology* 8:1 (2017): 100-111.

human antiquity.[212] It has shown there was no professional 'silence' over Australia's Aboriginal antiquity in the decades before radiocarbon dating, except one retrospectively applied by contemporary historians.

[212] Stanner, "The Great Australian Silence," 189

Conclusion

The Prehistory of Deep Time

In 1969, 110 years after the British-led consensus on human antiquity, John Mulvaney published *The Prehistory of Australia*, the monograph that firmly established his reputation as Australia's pre-eminent professional archaeologist. In the first paragraph—indeed the very first sentence—Mulvaney made a powerful statement of the role of Aboriginal people in Australian history: 'The discoverers, explorers and colonists of the three million square miles which are Australia, were its Aborigines.'[1] Their dispersal across Australia, utilisation of its natural resources, and their 'responses and adjustments to the challenges of its harsh environment,' were, he declared, a 'stimulating testimony to the achievements of the human spirit in the face of adversity.'[2] For Mulvaney, Aboriginal Australians were unquestionably human; and they were also undoubtedly ancient: 'Although Australia was the last inhabited continent to be discovered by Europeans, it has been colonised by Aborigines for perhaps thirty millennia.'[3]

This dissertation has not disputed Mulvaney's enormous influence on professional and public understandings of Australia's deep past, nor his determination to recognise the Aboriginality of that past. Instead, this dissertation has challenged the other core element of Mulvaney's historical narrative, overlooked in his own scholarship and that of the generation of archaeologists who followed his lead. In the second paragraph of his *Prehistory*, Mulvaney noted Aboriginal artefacts had been collected by Dutch navigator Carstensz in 1623, an archaeological dig had been made by Governor Arthur Phillip in 1788, and 'sympathetic memoirs on Aboriginal society' had been written in the 1840s, all of which seemed to predict 'great progress in Aboriginal studies.'[4] Unfortunately, Mulvaney argued,

[1] D. J. Mulvaney, *The Prehistory of Australia*, (London: Thames and Hudson, 1969), 12
[2] Mulvaney, *The Prehistory of Australia*, 12
[3] Inside jacket blurb, D. J. Mulvaney, *The Prehistory of Australia*, (London: Thames and Hudson, 1969).
[4] Mulvaney, *The Prehistory of Australia*, 12

'this expectation was unrealised, particularly in the prehistoric field.'[5] What he had detailed in research papers in the 1950s and early 1960s was now crystallised in monographic form: despite some early intimations, it was not until the early 1960s that Australia experienced any substantial scientific understanding of its extensive Aboriginal antiquity.

This dissertation has grappled with the broad but crucial question of why Australian historians and archaeologists continue to claim there was no 'scientific discovery' or broad public understanding of Australia's deep human past before the 'radiocarbon revolution' of the 1960s? Put simply, why did it take a century to successfully apply an understanding of human antiquity to Aboriginal Australians? Current answers to this question cite a combination of scientific racism, settler-colonial guilt, and inadequate methodology, training and resources. Mulvaney, fresh from his Cambridge training in the 1950s, looked into Australia's past and saw sloppy stratigraphy and 'uncritical enthusiasm for evolutionary theory.'[6] His interpretation, part of the 'fiction of a new beginning' built into the bedrock of Australian archaeology, has only recently begun to be reassessed.[7] Several historians have made more nuanced responses. Tom Griffiths acknowledges the 'discovery' of Aboriginal antiquity 'was not just a product of radiocarbon, but awaited cultural as well as scientific insights by Europeans.'[8] At the same time, however, he consistently argues settler Australians were reluctant to 'acknowledge the depth of belonging of a people whose continent they had usurped,'[9] and as a result, the 'scientific discovery of *human* antiquity in Australia' was reliant on the 'twin revolutions of professional archaeology and radiocarbon dating.'[10]

While not entirely incorrect, these claims are part of an oversimplified historical narrative whose periodisation and teleology has ignored, elided and downplayed a lengthy

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[5] Mulvaney, *The Prehistory of Australia*, 12
[6] D. J. Mulvaney, "The Australian Aborigines 1606–1929: Opinion and Fieldwork, Part 2," *Australian Historical Studies* 8:31 (1958), 304
[7] The most recent critique being Matthew Spriggs, "Everything You've Been Told About the History of Australian Archaeology is Wrong!" *Bulletin of the History of Archaeology* 30:1 (2020): 1-16.
[8] Tom Griffiths, *Hunters and Collectors: The Antiquarian Imagination in Australia,* (Melbourne: Cambridge University Press, 1996), 84
[9] Tom Griffiths, "A landmark work of Australian history," *Inside Story*, May 6, 2013; and Tom Griffiths, *The Art of Time Travel: Historians and Their Craft,* (Carlton: Black Inc., 2016), 62.
[10] Emphasis added. Griffiths, *Hunters and Collectors,* 58

history of professional and public engagement with human antiquity in Australia. In particular, this narrative minimises the crucial moments in which a distinctly *Aboriginal* antiquity was both known and proven to the scientific standards of the day. Mulvaney, and the generation of scholars he inspired, were correct to criticise many of these past interpretations for their discriminatory depictions of Aboriginal primitivity. Yet in an effort to wipe the slate clean of their erroneous evolutionism, Mulvaney also wiped away a deep and complicated history of Australian engagement with human antiquity.[11] A key finding of this dissertation is that over the century between the British consensus and the 'radiocarbon revolution,' Aboriginal antiquity and human antiquity became two separate intellectual concepts in Australia. Australia's human antiquity was always relevant, interesting, and at various points, proven by professional science. The status of Australia's Aboriginal antiquity, on the other hand, was increasingly fluid; transitioning from proven, to not proven, to proven only by specific tribal groups or disembodied objects of material culture. By acknowledging and tracking this conceptual separation, this dissertation has reclaimed the nuance of the history of human antiquity in Australia, and exposed a much more insidious process of intellectual dispossession at its heart.

In 1859, human antiquity began its intellectual life as a geological concept. It was established and defined through the paradigms of British geology, and was articulated as a vast antiquity for the entire species. At this point in time, Aboriginal antiquity was not a separate concept, but an Australian example encompassed within a broader theory. The knowledge of human antiquity came with speed and fervour to colonial Australia, and together, Chapters One and Two traced the concept's reception and dissemination in the decades after its establishment. In direct contrast to Mulvaney's claims of intellectual isolation and public disinterest, the chapters revealed settler Australians were actively connected to the concept of human antiquity in the 1860s and 1870s. Chapter One argued human antiquity was a popular form of cultural capital that local intellectuals and the colonial press tapped into and repurposed for their audiences. Through newspapers and

[11] Denis Byrne described Mulvaney's scholarship in the late 1950s as a 'ritualistic cleaning of the slate' before 'modern' archaeology began. See Denis Byrne, "Deep nation: Australia's acquisition of an indigenous past," *Aboriginal History* 20 (1996), 92

public lectures, Australians interrogated human antiquity's empirical foundations, implications, and the scientific personalities promoting it. This chapter argued public lectures were a particularly important mediating intellectual authority in this period; sitting between Australia's seemingly separate public and professional spheres, and articulating a distinctly scientific understanding of human antiquity to the Australian public.

While it's clear there was no tyranny of distance when it came to the Australian public's knowledge and interest in human antiquity, the concept's dissemination within Australia's professional scientific community was more complex. Chapter Two revealed the outlets deliberately cultivated to produce Australia's 'professional' science did not engage with the concept of human antiquity with the same fervour in the 1860s and 1870s. Australia's nascent professional community was just as connected and conscious as the Australian public, but their desire to replicate British scientific epistemologies conflicted with the materialistic, pragmatic demands of a settler-colonial project. In this context, their eagerness to emulate their British colleagues led not to a deeper engagement with human antiquity, but to a prioritisation of scientific subjects whose outputs related more directly to colonial material advancement. Chapter Two also highlighted the severe consequence of these settler-colonial priorities: Australia's professional scientists missed out on the logic of Aboriginal antiquity when it was at its most conspicuous in the epistemologies of British science. The chapter argued that as part of the new science of British anthropology, there existed a conceptual link between human primitivity and human antiquity, which in turn allowed anthropologists to read the primitivity of Aboriginal Australians as a marker of their antiquity. A remarkable aspect of this conceptual link was how unremarkable it rendered the resulting claims of Aboriginal antiquity. The work of British anthropologists, who used this link to position Aboriginal Australians among the oldest human populations on Earth, were not shocking, or even particularly revolutionary. Instead, they were the logical application of the knowledge of human antiquity to Australia.

When Australian scientists began to produce their own anthropological scholarship in the 1880s, they reflected the disciplinary logic of Aboriginal ancientness. Yet these

Australian anthropologists also set in motion a substantial paradigm shift that, in the space of one academic generation, erased Aboriginal antiquity from anthropology. This sustained moment of paradigmatic change forms the most significant chapter in this dissertation. As Chapter Three argued, anthropology's conceptual erasure of Aboriginal antiquity was not just part of its disciplinary development in Australia but a crucial functioning aspect of it. Evolutionary paradigms were gradually unable to answer questions the discipline had set for itself, and the chapter traced how anthropologists first severed the concept of Aboriginal antiquity from its paired logic of primitivity, before removing it altogether. By the time the science of anthropology was institutionalised in Australia in the 1920s, its logic of Aboriginal antiquity no longer existed. Many historians and anthropologists have acknowledged anthropology's rationale of Aboriginal timelessness in the twentieth century. None, however, have historicised this notion of 'time' as the specific concept of human antiquity, nor placed it in a longer intellectual history of the concept itself. They have therefore overlooked both the unique mechanics and the severity of anthropology's erasure of what was one of its core theoretical tenets, in the decades it was first articulated by professional Australian scientists.

Anthropology's erasure of Aboriginal antiquity created a difficult intellectual legacy for scientists in other disciplines in the first half of the twentieth century. Both professional scientists and the broader Australian public remained captivated by Australia's *human* antiquity, but thanks to anthropology's paradigm shift, articulating the *aboriginality* of that antiquity was a process that became increasingly fraught. Chapters Four and Five examined the strategies Australian scientists used in an effort to overcome their articulation issues. By tracing the interpretations of one artefact—the Warrnambool slab—Chapter Four argued scientists embraced a vernacular of racialisations, which they manipulated in order to prove their chosen claims about Australia's human antiquity. While anthropology was shifting its paradigm, scientists in other disciplines could create their own fluid concept of Aboriginal antiquity, whose application to Aboriginal Australians, both in the past and in the present, was deliberately ambiguous. Scientists leaned into this ambiguity in order to

claim an extensive human antiquity for Australia while still maintaining the rationale of Aboriginal timelessness.

Aboriginal antiquity was even more ambiguous in the 1920s and 1930s, as geological evidence became a supplementary dataset to the more visually impressive anatomical evidence of human crania. After the 1912 discovery of the Piltdown Skull, the cultural capital of human antiquity was higher than ever, but anthropology's erasure of Aboriginal antiquity had been solidified in the new framework of functionalist anthropology. Instead of manipulating racial typologies to assign antiquity to various races, Chapter Five revealed how Australian scientists ignored the complicated category of Aboriginality altogether, and instead framed Australia's antiquity as broadly and exclusively human. Scientists relied on the evidence provided by Aboriginal bodies to evince this antiquity—and to claim an Australian space in a global evolutionary story—but they never acknowledged or described it as Aboriginal. Through yet more legacies of warped evolutionism and racial science, Australian scientists blurred the lines between Aboriginality and humanity in order to position Aboriginal Australians outside Australia's human antiquity. Aboriginal antiquity was thus no longer encompassed within a broader concept of human antiquity, but was hidden and elided by it.

Both of the articulation strategies outlined in Chapters Four and Five involved a type of intellectual dispossession, enacted by Australian scientists and perpetuated by a general public who took their cues from scientific scholarship. It was fast becoming obvious that Australia had a vast human antiquity, but even as Aboriginal artefacts and bodies were used to prove it, Australian scientists continued to dissociate that antiquity from Aboriginal people themselves. What's more, this intellectual dispossession demonstrates that had a method of absolute dating existed in the early twentieth century, it would only have ratified a *human* antiquity for Australia: the concept of *Aboriginal* antiquity would still have been tenuously subjected to racialised manipulation. Radiocarbon dating could not have proven Aboriginal antiquity in the 1920s and 1930s, and it did not 'prove' Aboriginal antiquity in the 1950s and 1960s either. In a period frequently portrayed as devoid of significant discoveries, Chapter Six argued there were indeed several moments in which Australian

scientists clearly articulated an Aboriginal antiquity that connected to contemporary Aboriginal peoples. These moments did not cause a total and immediate demolition of the rationale of Aboriginal timelessness, but they reflected, and were part of, a gradual coming together of the concepts of Aboriginality and humanity. By stepping out these moments in detail, this chapter revealed that new scientific techniques were interwoven with broader intellectual, social and political transitions, which ultimately induced scientists to recognise the Aboriginality of Australia's human antiquity.

Recognising the complexities that produced scientific assertions of Aboriginal antiquity in the decades before the 'radiocarbon revolution' is critical in redressing the overarching and oversimplified narrative that currently constitutes the history of human antiquity in Australia. The 1930s, 1940s and 1950s are frequently portrayed as a period caught in the intellectual grips of the Victorian 'Stone Circle,' a group of stone tool collectors whose belief in timeless Aboriginality 'silenced' Australia's collective understanding of its deep Aboriginal past. Mulvaney, in particular, positions the collectors as 'Australia's closest approximation to prehistorians,' and thus frequently dismisses the 'amateur' interpretations that came before them.[12] Chapter Six demonstrated the inaccuracy of this narrative: there was no professional 'silence' over Australia's Aboriginal antiquity in the decades before radiocarbon dating except the one retrospectively applied by historians. Indeed, this dissertation as a whole has demonstrated the inaccuracy of 'Circle' centric narratives, whose emphasis on the 1960s is part of a fictional beginning used to authorise the knowledge and experience of Australian archaeology. Just as there *was* an assertion and acceptance of Aboriginal antiquity before the 1960s, there *was not* an automatic and widespread recognition of Aboriginal antiquity, history and culture afterwards. At the same time Mulvaney was publishing his revolutionary scholarship on 'Aboriginal prehistory,' Australian federal and state government ministers agreed on an official policy of Aboriginal assimilation.[13] As historian Billy Griffiths has argued, a more comprehensive acknowledgment of the depth of Aboriginal antiquity and culture came in

[12] D. J. Mulvaney, "Two Remarkably Parallel Careers," *Australian Archaeology* 10 (1980), 99
[13] The Minister Paul Hasluck announced the policy in a statement to Parliament on 20 April 1961. See Paul Hasluck, House of Representatives, *Debates*, 20 April 1961, p. 1051.

the late 1980s, after decades of continued, insistent rights claiming by Aboriginal communities.[14]

This dissertation has demonstrated there was a scientific understanding of both human *and* Aboriginal antiquity in Australia before the 'twin revolutions' of radiocarbon dating and professional archaeology in the 1960s. It is only by historicising the concept of human antiquity as part of an intellectual history, however, that this study has been able to reveal the complicated process of contrary cognition and intellectual dispossession that lies at the heart of the concept's history in Australia. The intellectual conditions surrounding the 'proof' of Aboriginal antiquity were much more fluid—and more insidiously manipulated—than previous histories have accounted for. Given archaeologist Denis Byrne's assertion that Australian antiquarians and professional scientists had a 'shared propensity' to produce Aboriginal artefacts as a 'particular kind of 'cultural capital' in settler and national society,'[15] the intellectual dispossession of Aboriginal antiquity is not, however, surprising. Intent on delineating the depth and detail of this intellectual dispossession, this dissertation has primarily focused on its mechanics. At times, the motivations behind it were clearly methodological; yet they were always entangled with prejudicial racial science and ambiguous levels of settler ideology, both on an individual and broader cultural scale. Additional study should unpack the ways in which the manipulation of human and Aboriginal antiquity were undoubtedly integrated further into colonial and nationalist projects.

As far as this study is concerned, whether Australian scientists felt threatened by Aboriginal survival; were, as Griffiths argues, 'reluctant to acknowledge the depth of belonging of a people whose continent they had usurped'; or were deeply entrenched in erroneous scientific paradigms, as Mulvaney maintains; the end result was the same: Australia's deep past was scientifically appropriated to its colonial and national present. The history of human antiquity in Australia is one that dispossessed and colonised Aboriginal antiquity. As such, it is almost entirely absent of Aboriginal voices. The current

[14] See Billy Griffiths, *Deep Time Dreaming: Uncovering Ancient Australia*, (Carlton: Black Inc., 2018).
[15] See Byrne, 82-107

scholars investigating Australia's deep human past have recognised the necessity of engaging with Aboriginal and Torres Strait Islander peoples, voices, and indeed, their own understandings of what is first and foremost a lived, embodied experience of an enduring connection to Country. This dissertation acts as a prehistory to settler histories of deep time in Australia, and reclaims the messy detail of past assumptions to provide a more accurate foundation for future study.

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