RESEARCHING SECRECY, STATE POWER AND PRISONER RESISTANCE IN THE AUSTRALIAN HIGH-SECURITY PRISON

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It seems to me that the real political task in a society such as ours is to criticise the working of institutions which appear to be both neutral and independent; to criticise them in such a manner that the political violence which has always exercised itself obscurely through them will be unmasked, so that we can fight them.

Michel Foucault

Modern maximum-security units are political institutions, their major objective being to curb acts of inmate resistance and silence ‘unruly prisoners’ through the utilisation of high-tech behavioural modification solutions, inmate segregation, and isolation. Aside from the common features of ‘pastel colours, electronic doors, camera surveillance, exercise cages, air conditioning and recorded public address system announcements’, the modern maximum-security unit is characterised by the prioritisation of security over human needs or programs of reform. Such security overkill translates into increased secrecy and lack of public accountability for prison authorities, polarised relationships between guards and prisoners, increased prisoner unrest, and a downward spiral into violence between guards and prisoners and amongst prisoners themselves. Incidents of violence and death, and prisoner allegations of brutality and mistreatment, create what Carlen and Burton have referred to as crises in popular confidence of the impartiality of legal state apparatus. Such ‘crises of legitimacy’ are negotiated in the production of official internal investigations, departmental reports, inquests and royal commissions. I argue that rather than producing any real avenues for accountability, reform or change, such official representations and responses are tactical in that they both increase and reinforce the power and legitimacy of the institution, while also marginalising and discrediting prisoner voices.

In this brief discussion I want to address three major themes that have emerged in my research into maximum-security prisons: processes of establishing and maintaining secrecy; the function of prisoner resistance in these institutions; and the researcher’s task of addressing and reconciling oppositional accounts by prison authorities and prisoners as represented through official reports and inquiries. More specifically, I will discuss the Jika Jika High Security Unit, part of the former Pentridge Prison in Victoria, Australia, as a case study. This research seeks to interrogate maximum-security regimes, and the discourses protecting them, and aims to both uncover marginalised narratives of resistance and interrogate such regimes in the same way that historians have interrogated other brutalising and penalising institutions such as asylums and slavery.

1 I would like to thank my supervisors Mark Peel, Jude McCulloch and Vicki Peel, and my friends Charandev Singh and Jessica Raschke for making the publication of this paper possible.
6 Ibid.
Michel Foucault’s invaluable study on social fear, policing and power portrays the organisation of technologies and mechanisms of power, such as constant surveillance in modern institutions, as an all-encompassing departure from punitive social control strategies that were aimed specifically at the body to those aimed at the mind. Such frameworks resonate well in terms of understanding some of the intended functions, behavioural modification and panoptic prisoner surveillance strategies that are characteristic of modern maximum-security units. While Foucault deals with the oppressive effects resulting from organised technologies of power, he fails to recognise the ability of individuals to subvert such power structures and inevitably resist the state’s power to punish. Moreover, the instability of power structures, as explored by Michel de Certeau, lies in the constant presence of an anxiety on the part of those in power over the possibilities of resistance and subordination that often bring surveillance power into crisis. Prisoner resistance actively exposes conditions inside prisons, challenges and destabilises power structures from within and, most importantly, resistance serves as a means of survival for prisoners themselves. These acts, and particularly narratives of those acts, draw attention to strategies of survival inside the prison. Further, they demonstrate how stories, words, poetry, song and study can lead to and sustain explosions of militancy that throw prison conditions and the workings of power structures into the public spotlight. In this way, narratives of acts of prisoner resistance are critical and, because part of the function of any punitive regime is to manage and suppress these narratives, it is crucial for us to listen to the voices of those inside, those who have died inside, their friends and their families.

Control Units and Prisoner Resistance

It is important to reinforce the historical link between the development of control units and prisoner resistance. Plans to construct units like Jika were derived from the United States and Britain where, in the 1970s, control units were developed in response to an explosion of prison rights movements and prisoner militancy. During the 1970s, in the lead-up to the construction of Jika, prisoner unrest within Pentridge was acute, manifesting in rooftop protests, riots and sit-ins. Prisoners in H Division at Pentridge highlighted the relationship between resistance and such systems of confinement stating that ‘apart from the official rhetoric, these new “control centres,” are a direct response to a decade of prisoner revolt’. It is necessary to briefly refer to the former Katingal Special Security Unit, part of the NSW Long Bay Prison Complex. Katingal preceded the development of Jika and was somewhat harsher and inflexible in its architectural design. Katingal was Australia’s first windowless high-tech solution to housing the NSW prison system’s ‘worst’ prisoners, and was constructed after riots at Bathurst Gaol in 1974 destroyed the prison. Katingal was only open for three years from 1975—1978, and, during that time, it was at the centre of public controversy. Prisoners, activists and reformers all criticised its windowless cells, the conditions of sensory deprivation, and the inhuman automated controls and crude Pavlovian incentive schemes for prisoners. In the 1978 NSW Royal Commission into Prisons, Commissioner Justice Nagle labelled the institution an electronic zoo and recommended its closure. The NSW State government and prison authorities buckled under prisoner and public pressure and, in 1978, Katingal closed.

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8 Foucault, *Discipline and Punish.*
9 Foucault’s work evades the prominent presence and occurrence of racialised and gendered forms of punishment in modern incarceration systems. This paper does not deal specifically with these issues due to space constraints. See Joy James, *Resisting State Violence: Radicalism, Gender, and Race in US Culture* (Minneapolis: Minnesota Press, 1996).
12 After protests and unrest in H Division, prisoners made official allegations of brutality by officers. These allegations were investigated by the Jenkinson Board of Inquiry in 1973–1974 and no action was taken against officers. Ex–H Division prisoner Ray Mooney wrote a play titled ‘Every Night, Every Night’ that deals with these themes and incidents.
13 This extract was taken from the Victorian *Prisoner’s Voice Magazine*, cited in Zdenkowski and Brown, *The Prison Struggle*, 147.
Despite the controversy surrounding Katingal, Jika Jika opened in Victoria in 1980. While its designers attempted to distance themselves from Katingal, Jika used similar methods of automated controls and conditions of sensory deprivation. Within the first two years of opening, a prisoner died after a fellow inmate assaulted him. In 1982 the Director General of Community Welfare Services ordered a review of Jika by criminologist Dennis Challinger to monitor the progress, successes and limitations of the institution since its opening two years previously. Challinger’s mild criticisms foreshadowed the dysfunction, unrest, tension and violence to come, but his report did little to provoke any change. In early 1987 Prisoners Action Group spokesperson Jeff Lapidos pointed to statistics he obtained through Freedom of Information from the Office of Corrections confirming that during 1985–1987 there had been 2500 incidents occurring in Jika that were serious enough to report to the director-general. Such incidents could range from assaults between prisoners to the destruction of prison cells.

Here the major difference between Jika and Katingal becomes apparent — Jika remained open despite the increasing tension brought about by daily incidents of violence, death and suicide, which eventually culminated in the 1987 protest fire that killed five men. After the fire, State Attorney General Jim Kennan closed Jika, also calling it an electronic zoo. However, after three weeks, a fresh coat of paint went on, the pneumatic doors were removed and the unit reopened to hold women prisoners.

**Jika Jika**

Robert Wright was imprisoned in 1979 and was moved to Jika Jika when the unit opened in 1980. On 29 October 1987, he and four other men, Arthur Gallagher, James Loughnan, David McGauley and Richard Morris, died of asphyxiation during a protest fire in Side One of Unit Four. Side Two prisoners who also participated in the fire survived.

In 1986, Robert Wright wrote to the chairman of the Human Rights Subcommittee, Lou Hill:

> The units within Jika Jika are virtual echo chambers, as the minutest noise reverberates…In the cells at night, one is able to hear the other prisoners using their toilets, flushing them, watching their television, even turning in their beds…A degree of animosity will build up…violence can and does erupt…People such as yourself would never realise or understand the stress this place gives after a period…you can find no way anywhere in the unit to escape all of this.

Prisoners raised their general grievances relating to Jika in a prisoner publication entitled *Jika Jika Revisited*. They wrote that prisoners sometimes spent more than twenty–two hours a day within a controlled, air–conditioned atmosphere with the same five to six prisoners for a year, and that prisoners were under constant video–camera surveillance except when in cells. Prisoners characterised the relationship between prison officers and prisoners as one where prison officers played mind games and pitted prisoners against one another. When giving evidence during 1989, Craig Minogue stated, ‘Jika Jika was the mind games capital of Pentridge…if any single thing could be done to frustrate, annoy, humiliate, degrade a prisoner, it was done. If you wanted a toilet roll, well “five minutes”, if you wanted a bar of soap, “five minutes”…anything they could fuck you around with they did’. Mail was censored and visits were restricted and prisoners felt

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16 Within the first two years that Jika was open, a fire at Fairlea women’s prison precipitated a move by authorities to house some women prisoners in B Division at Pentridge. Consequently, a sub–unit of Jika opened to serve as a punishment block for women prisoners.
17 Whether or not Arthur Gallagher died of asphyxiation was disputed. Evidence in the form of witness statements suggested that he was brought out of the unit alive but was left to die. The Coronial Inquest dismissed the allegation. When later investigated during the Murray Inquiry 1989, it was again dismissed.
18 ‘The Coroner takes the pragmatic approach to death; Quotes from the Inquest’, *Age*, 29 July 1989, 27.
that regulations were inconsistent or subject to interpretation by administrators. Ultimately, a culture of violence and tension amongst prisoners, and between prison authorities and prisoners, had developed, which was due to a combination of idleness, boredom and oppressive conditions.

There were a number of deaths in the lead-up to the October fire. The death of prisoner Sean Downie two months prior to the fire raised many questions relating to the culture of tension and violence inside Jika and was later subject to investigations into the conduct of the Office of Corrections. Jika Jika prisoners participated in many protests to draw attention to prisoner grievances in the form of hunger strikes, bronze-ups, self-mutilation, formal written complaints, and prisoner publications drawing attention to inside violence. These incidents inflamed public debate about Jika, and escapes from the ‘escape-proof’ prison caused a frenzied media scare-campaign.

On the morning of the fire, the Classification Committee informed Robert Wright that his reclassification case had been unsuccessful and he would remain inside Jika Jika. That afternoon, Robert Wright and his fellow inmates on both sides of Unit Four barricaded themselves in the unit and lit a fire. The Hallenstein Coronial Inquest into the fire attributed Wright’s reclassification case as a major factor that contributed to the protest fire, but also found fault with the Office of Corrections for not acting to get the prisoners out quickly enough. It was found that prison officers lacked the formal training and equipment to enable them to deal adequately with emergency situations. The rescue effort by authorities proved inefficient and chaotic. The pneumatic electronically operated doors also presented difficulties as prisoners barricaded them shut, causing them to malfunction. Hallenstein also criticised the lack of preventative action by afternoon duty officers who should have considered the possibility of a fire, given obvious signs that prisoners were openly preparing for one. Indeed, Wright warned the officers that he would take action after being informed of his unsuccessful reclassification application. One of the four prisoners who survived the fire stated that it was a protest against conditions, and, in the end, the fire was organised with the hope that the incident might ‘help things along the way to a Royal Commission’.

**Prisoner Voices and Prisoner Resistance**

Prisoner voices become disempowered easily when examining prison histories and there is a tendency to solely paint a bleak picture of the power structures inside, and recycle institutional stereotypes of criminal deviance and psychiatric disorder. This is not to discount the power regimes, violence and desperation prisoners endure on a daily basis, nor promote a romantic sympathetic image of prisoners and their experience. It is merely intended to highlight that institutional regimes generate human resistance for survival.

Acts of prisoner defiance and protest in their many forms are ‘arguably the only effective vehicle at their disposal for voicing grievances about prison conditions and for demonstrating a lack of legitimacy in the system. Riots and disturbances are a way prisoners can resolve the “crisis of visibility”...an endemic part of penal institutions’. Throughout history, prisoners have been concerned with their own rights and conditions, and have expressed this through

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20 Anonymous Jika prisoner, *Jika Jika Revisited*, 1988, 5
21 Keith Carter refers to this as a ‘disorder amplification spiral’ and refers to Matthews’ definition as a dynamic that once set in motion ‘is likely to create greater polarisation between staff and inmates, a growing sense of antagonism and insecurity and a decreased level of tolerance on both sides. At this point a number of “triggers” may serve to turn anger into a riot’. See Keith Carter, ‘The Casuarina Prison Riot: Official Discourse or Appreciative Inquiry’, *Current Issues in Criminal Justice*, vol. 12, no. 3 (March 2000): 364.
23 A ‘bronze-up’ is an act of protest where prisoners smear their excrement over the inside of their cells.
action. It is also through these actions, whether they be a fire, peaceful sit-in, hunger strike, self-mutilation, strike or riot, that outside scrutiny of regimes are raised, if only momentarily.  

*The Politics of Maximum-security Units*

While this discussion focuses on acts of resistance inside maximum-security institutions, it should be noted that many forms of struggle and protest take place throughout all parts of the prison system. However, there is a strong relationship between the functions of maximum-security confinement and forms of prisoner resistance. Often the justification used for these units is ‘security’ to house the prison’s ‘worst’ prisoners, to protect the institution’s inmates, staff and broader community. These claims will not be dealt with here as they detract from the more political issues at hand. One of the most important functions of such institutions is to deal with prisoners who, for many diverse reasons and in a variety of forms, have challenged prison regimes from the inside. Maximum-security confinement is a political tool used by prison authorities to curb inmate resistance through instituting more repressive disciplinary, management, and spatial regimes. While the departmental rhetoric stresses reform and rehabilitation, the actual goals of such institutions are to silence and destroy. Furthermore, while prisoner resistance does take place in other parts of prison, it is arguable that maximum-security regimes increase tensions between staff and inmates and actively exacerbate and intensify modes of resistance. These tensions are demonstrated through the deterioration of relations, incidents of violence and prisoner resistance occurring inside Jika Jika.

*Imprisoned Histories — Research and the Veil of Secrecy*

The reality of prison life is continually mystified and mythologised, which both contributes to and masks the use of imprisonment as a tool of social control. As Paul Wright has argued, ‘The intimidation and deterrence factor of prison is served by keeping it distant, remote, and unknown, but at the same time, nearby, an immediate threat of imaginable evil’. Myths about prison life are fostered by the construction and maintenance of a veil of secrecy. Such barriers to information and processes of secrecy are key factors in the preservation of prison regimes and these barriers are purposely cultivated and enforced by authorities; presenting ongoing difficulties and limitations to those challenging the system.

Researching incidents or acts of resistance in prison necessitates the task of reconciling oppositional histories and voices. When representing and investigating prison incidents or allegations of brutality and prisoner complaints, ‘official discourse’ and the ‘official inquiry’ both play an active role in upholding the authority and legitimacy of the institution. Official accounts delegitimise prisoner accounts through a lack of validation and strategic processes of discreditation. Carlen and Burton have referred to the power of official discourse and define it as ‘the systematisation of modes of argument that proclaim the state’s legal and administrative rationality’. They argue that the existence of such mechanisms is a necessary requirement for political and ideological hegemony. The development of these authoritative ‘official’ state representations benefit the life and regime of the institution and result in the construction of revisionist histories and the justification and normalisation of punitive violence in prison.

Historians have recognised how such conflicting representations are a site or subject for social struggle where marginalised groups claim legitimacy from opposing forms of

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28 Bill Birnbauer, ‘Now concrete cages the incorrigibles’, *Age*, 25 July 1980, 3. This is an example of such justifications as promoted by the Office of Corrections at the time of Jika Jika’s opening.
29 The online Prison Activist Resource Centre refers to the role of control units as ‘more than fulfilling “security needs”, control units employ sophisticated methods of behaviour modification which not only control violence but any form of resistance at all…Control units are used to isolate and punish those people who present a threat to the established power, for example, those who have filed law–suits against prison officials, participated in work stoppages, or actively pursued their religious and/or political beliefs’. Web site www.prisonactivist.org/control-unit/, accessed 12 July 2001.
33 Ibid.
‘commonsense classification’.\(^{34}\) As Tim Cresswell has pointed out, dominant power groups in society have an interest in defending the ‘taken-for-grantedness of things…while the dominated groups seek to push back the boundaries of what is taken as natural’.\(^ {35}\) There is no place within official discourse for the inclusion or understanding of the narratives that challenge the power and legitimacy of the institution. Recognising that prisoners continually challenge and struggle to fight this imbalance on a daily basis, and that prisoner resistance narratives are critical to any consideration of the prison experience, are fundamental factors in addressing the use of official discourse to override alternative voices and representations of the prison experience.

Along with interrogating ‘official’ representations and barriers of secrecy, listening to the voices of those directly affected by the prison experience is essential. In his interrogation of brutalising regimes John Pilger has pointed to what he calls processes of ‘rationalising the unthinkable’.\(^ {36}\) This process requires the further development and sophistication of technologies, which Pilger believes to be ‘the function of the experts, and mainstream media, to normalise the unthinkable for the general public’.\(^ {37}\) The establishment of ‘official truths’ that distance us from the voices of those within is also an important part of these ‘rationalising’ and ‘normalising’ processes, and these processes need to be interrogated. At this point it must be emphasised that that there are many people working in this field. Prisoners are constantly struggling for access to information — they are writing complaints, letters, prisoner publications, and are litigating human rights issues. There is also a large body of work by a diversity of activists, prison advocates, academics and lawyers dealing with different aspects of incarceration issues. In this sense my research benefits strongly from a tradition of spirited debate which has comprised significant critical challenges to prison secrecy.

**Cracks in the Structures**

While repressive total institutions like prisons present barriers of secrecy, they do not remain impenetrable. Cracks in their structure eventually provide glimpses from which they become exposed. Such glimpses are often precipitated by the challenges outside, but most importantly, they are exacerbated by challenges from within. By challenges within I refer specifically to prisoner resistance in its many forms. The very act of interrogating and challenging the institution allows these glimpses to occur.

Processes of secrecy, issues and questions regarding corruption and accountability relating to the now closed Jika Jika, are still as acute as they were when it was open. The issues that stem from Jika are intimately linked to the development and use of other control units and high–security divisions in the present prison system; a system further complicated by stricter limitations on the flow of information and private institutions whose business contracts limit their accountability.\(^ {38}\) Acknowledging this past, raising community awareness, and urging vigilance for real change in the present and future is central to the objectives of this project.

In such a brief discussion, the extensive issues that arose from the Hallenstein Coronial Inquest, including oppositional accounts by prisoners and the authorities of the events that transpired around the fire cannot be thoroughly considered, but there are some key points for consideration before concluding. The OOC took legal action in an attempt to limit the scope of Hallenstein’s investigation. They claimed that he had ‘exceeded his jurisdiction by admitting into evidence testimony as to a number of matters relating to prison administration and operations’.\(^ {39}\)

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\(^{35}\) Ibid.


\(^{37}\) Ibid., 4.


\(^{39}\) Harmsworth vs the State Coroner [1989] V.R. 989 per Nathan J.
This legal action was one incident amongst numerous attempts to thwart the Jika fire inquest process:

The conduct of the Office of Corrections in this case raises deep and fundamental concern for our community's free institutions and democratic style. Like any public institution, the Office of Corrections is accountable to the community it serves. Unlike many public institutions the affairs of the Office of Corrections are behind closed walls, and are not easily subject to public scrutiny.

The Office of Corrections has misinterpreted this position of advantage as a license for secrecy, rather than as requiring the maximum of openness and accountability. The Office of Corrections has used this position of advantage to try and manipulate the facts to try and prevent their proper investigation, and in a manner which could be described as corrupt.40

Angela Davis refers to the critical role of researchers: ‘we have to think seriously about linkages between research and activism, about cross-racial and transnational coalitional strategies, and about the importance of linking our work to radical social agendas’.41 Issues surrounding the Jika Jika fire and the Katingal experience and closure remain unresolved. Processes of secrecy and issues of public accountability in relation to the prison system are ongoing. In fact, where private prisons are concerned, the relationship between increased concealment and commercial confidentiality is crucial. Acts of prisoner resistance are essentially acts of transgression that subvert and transform strategies of the powerful into weapons for the weak.42 In this sense transgression and resistance play a critical role and are important tools, but their limitations must be recognised. As Cresswell argues, the powerful can constantly tabulate, build, and create spaces and places, while the relatively powerless can only use, manipulate and divert these spaces. He highlights that ‘the power of transgression lies in its ability to reveal topographies of power that surround us. The limits of transgression lie in the fact that it is not enough to constantly deconstruct and destabilise’.43 Thus the important functions of prisoner resistance are survival, exposure, subversion, but, more importantly, they are an appeal for outside community action and systemic change. The arousing of community vigilance, action and discussion of these issues are critical ‘because the people whose lives are affected by prison policies and practices are unable to participate in this debate. Prisoners are locked away from us and are in the absolute control of those same prison authorities they may wish to criticise’.44 Edward Said has identified the role of the public intellectual ‘to challenge and defeat both an imposed silence and the normalised quiet of unseen power, wherever and whenever possible’.45 Interrogating these institutions and addressing the revisionist histories and silences are crucial if we want to change these institutions.

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41 Angela Davis, 230–231.
42 Tim Cresswell, 164.
43 Ibid.
This paper arises from doctoral research on the interpretation of age in the Australian landscape by earth scientists since 1830. The late nineteenth–century discovery and description of diprotodon bones from Lake Callabonna in central South Australia is one of five case studies. Each is an agglomeration of stories which shed light on the ways the earth sciences have been ‘made’ and signs of age have been interpreted in Australia. These places have political and cultural meaning beyond their geological significance. ‘Ideas, words, images,...experiences’, coincidence and the curiosity of men and women, more than global tectonics, heat, ice, wind and water determine the shape of meaning. Assembled and consecutive in place and time, the scientific, geological, intellectual, economic and socio–political landscapes distinguish these case studies from among other possible landscapes.

Lake Callabonna, known from 1860 until 1894 as Lake Mulligan, after an Aboriginal word for the mound springs on its western side, is one of a chain of large salt–pans between Lake Eyre to the northwest and the Flinders Ranges to the south, arcing from Lake Torrens in the west to Lake Frome in the east. Stranded beaches and fossil fish, turtles, crocodiles, waterbirds and bivalve shells indicate that formerly the lake was much larger and intermittently filled with fresh water.

The Lake Callabonna Fossil Reserve was gazetted in 1901 to safeguard a ‘veritable necropolis’ of extinct vertebrate remains first brought to European notice by Aboriginal stockman Jackie Nolan in 1892. Particularly spectacular are those of *diprotodon optatum*, the largest marsupial ever found. It was so–named by British comparative anatomist Richard Owen in 1838, based on a fragment of lower jaw sent to him from the Wellington Caves in New South Wales by Sir Thomas Mitchell. It was not until seven decades later that the first complete skeleton of a diprotodon was assembled from a miscellany of Callabonna remains by A.H.C. Zietz and E.C. Stirling of the South Australian Museum and unveiled in 1907.

Formerly a sheep station, Lake Callabonna is considered a ‘Classical site’ by the Geological Society of South Australia. But due to its inaccessibility and distance from Adelaide, very few successful scientific expeditions have been mounted to the lake since 1892, and until 1953, the South Australian Museum did not really know if the gazetted boundaries actually

2 E.C. Stirling, Minutes of the South Australian Museum Board, 2 February 1894.
8 Pledge, ‘Fossils of the Lake’, 75.
incorporated the fossil site. Its heritage significance lies not only in the sheer volume of bones and the palaeoecological diversity of the site, but in its impact on nineteenth and twentieth century debates about the nature and ecology of these rhinoceros-sized animals. In the nineteenth century the fossil remains of the giant herbivore encroached on discussions about the origin of species, mechanisms for extinction and the antiquity of Aboriginal people. As part of the late twentieth century rehearsal of some of these debates they have become emblematic of the destructive capacity of human beings in the often emotive, contentious question of the extinction of the Australian Pleistocene megafauna. With this in mind, and before I attempt to insert the diprotodon’s toe into a narrative of South Australian provincialism, a word on the sciences of the ‘deep past’ in nineteenth century global historical perspective is necessary.

Over the last four decades, historians of geology have tracked what Martin Rudwick called ‘the emergence of a sense of the history of the earth — and specifically a long and complex prehuman geohistory — in the late eighteenth and early nineteenth centuries’. From Buffon’s ‘epochs’ to Blumenbach’s ‘archaeology of the earth’, to the French comparative anatomist Georges Cuvier ‘bursting the limits of time’, the ‘existence of a world [or worlds] anterior to ours’ was emerging incontrovertibly from the sedimentary record. But the fossil record proved contentious, and it seemed the same ‘facts’ could be marshalled in the cause of opposing hypotheses.

At the beginning of the nineteenth century, western European scientific understanding of ‘time’ was an amalgam of its Judaeo–Christian heritage — that insisted on a finite age for the Earth, calculated from Biblical chronologies in the Middle Ages to approximately 4000 BC — and Aristotelian–derived Eternalism. Georges Louis Leclerc, comte de Buffon, anticipating nineteenth–century uniformitarianism and twentieth–century continental drift theory, deduced from experiments with heated metal spheres that up to three million years were needed to account for the cooling of the Earth from a molten ball. The Scottish geologist James Hutton argued in 1795 that the age of the Earth was unfathomable — ‘no vestige of a beginning, no prospect of an end’.

The revision or redeployment of widely accepted rules governing the genesis and behaviour of the natural world was partly a result of the development and increasing specialisation of geology from the department of natural history known as physical geography, and also of discoveries in the New World, but it by no means involved a complete paradigm shift. Although by early in the nineteenth century many high profile geologists accepted that the Earth must be millions of years old, debate still raged over mechanisms for change, notably between those who approached the shape of the earth with a steady–state outlook, epitomised by the uniformitarian paradigm delineated in 1830 by Charles Lyell, and those like Georges Cuvier,

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16 Buffetaut, *Vertebrate Palaeontology*, 40–44.
17 Quoted in McPhee, *Basin and Range*, 140.
the cleric and geologist William Buckland and Swiss naturalist Louis Agassiz, who thought that the current shape of the earth’s surface was wrought by cyclical catastrophes.\(^{19}\)

The problems of geographical distribution, as historian Janet Browne has said,\(^{20}\) were as complex in the nineteenth century as they are at the beginning of the twenty-first. The lack of any unifying doctrine encouraged both a broad-minded opportunism and equal intolerance amongst naturalists in their selection of evidence. Debate centred broadly on issues arising from what might be termed palaeobiogeography — the study of the distribution of fossil flora and fauna across the earth. The sticking point was often unexpected fossil affinities: for example, the presence of the bones of fossil reindeer and fossil elephants in the same strata, or the presence of so-called ‘tropical’ fossil assemblages in temperate regions. These apparently anomalous relationships, and other phenomena, such as extinction — the disappearance of species that are represented in the fossil record but not found alive anywhere, such as the North American mastodons, or the giant ground sloths — and such cryptic presences in the landscape as the thick layer of sediment known as ‘drift’ covering much of northern Europe, were often explained in terms of the latest of these cyclical catastrophes — the Noachian Deluge — or by invoking various mechanisms for gradual climate change across the earth. The occurrence or otherwise of such phenomena in the southern hemisphere was thus a point of great interest and debate.

The European colonisation of, and by, the antipodes in this emergent intellectual landscape was well under way by the time Charles Sturt and Thomas Mitchell, in the 1820s and 1830s, traced Australia’s landform history in the southeast back to a universal Deluge.\(^{21}\) These early British annalists of Australia’s former worlds discovered unpeopled geographies in the dirt and rocks. Australia was a fabulous bestiary of anachronistic natural science specimens to hunt, shoot, dissect and pickle, but when Mitchell sent a package of fossils from the Wellington Caves to Robert Jameson in Edinburgh in 1833 it became a scientific necropolis as well, yet another site of transcontinental renown, like Big Bone Lick in Ohio or Montpellier in France,\(^{22}\) for the investigation and imagination of lost ecologies. Several British savants spent a large part of their professional careers in the consideration and classification of the fossil remains of the antipodes and fostered wide networks of antipodean collectors and correspondents.\(^{23}\)

In 1892, the Director of the South Australian Museum, Dr Edward Charles Stirling, announced the discovery of an abundance of diprotodon fossils at Mulligan’s Lake. Also in 1892 Sir Richard Owen, international bone collector and arguably Europe’s leading comparative anatomist, died aged eighty-eight.

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Diprotodon optatum was so named by Owen from bones he obtained from Mitchell in 1838.24 Optatum means wish or desire, and in 1880 Owen recorded these words that could be a palaeontologist’s manifesto: ‘Of no extinct animal...did I ever feel more eager to acquire fuller knowledge...No chase can equal the excitement of that in which, bit by bit, and year by year, one captures the elements for reconstructing the entire creature of which a single tooth or fragment of bone may have initiated the quest’.25 By the time Owen died, most parts of the animal’s skeleton had been found and sent to London for identification, but it was usually depicted ankle-deep in grass, as no footbones had been identified. Much about its stance remained a mystery. Owen’s desideratum was the foot.

In 1892 the first diprotodon footprint was discovered in the sediments of Lake Callabonna. In 1893 the first bones were found, putting to rest any last doubts as to whether it had feet. In fact diprotodon feet had been discovered many years before at the Wellington Caves and sent to Owen in London but never recognised as such and assigned to other skeletons.26 How could such a delicate toe belong to this marsupial behemoth?

Owen died without recognising the feet right under his nose. But their significance surpasses the narrative twists their discovery invites. Like minerals, fossils were part of the capital of the earth and the wealth of Empire. Colonial authorities saw an opportunity to exploit the new resource. The Royal Society of South Australia, not alone in offering a cash reward, in 1870 promised £1000, which for various reasons was never paid, to the first person to present them with a complete diprotodon skeleton.27 When the wealth of the Lake Callabonna finds was announced, metropolitan scientists anticipated a marsupial windfall. It was not forthcoming. Stirling held onto his feet.

Mechanistic models invoking a flow of data unmediated by ideology or analysis from the colonial ‘periphery’ to the metropolitan ‘centre’, and of knowledge and patronage back from the centre to the periphery have characterised Australian collectors, naturalists and institutions, particularly during the first three quarters of the nineteenth century, as handmaidens to imperial science practised in Britain.28 But metropolitan theories and classifications were not formulated in a vacuum. Ditch-diggers, sheep farmers, Aboriginal people, collectors, amateur naturalists and increasingly professional scientists selected which parts of the fossil record made their way to which scientist in Britain, in a chain of serendipity, patronage, decreasing agency and increasing renown, beginning with the coincidence of preservation and discovery.

The timing and extent of the singular Callabonna discovery was fortuitous for the South Australian Museum. At first glance the diprotodon’s toe may seem to have little to do with South Australian proto-nationalism and the commodification of the material remains of the deep past. But as a letter to Edward Stirling from collector Henry Hurst, employed by the Museum to excavate at Callabonna, made clear, ‘the main object of the Expedition’ as Hurst understood it was that South Australia would ‘have the honour of possessing the first complete Diprotodon’.29 An increasing demand for independence, recognition and specialisation among colonial museum

26 Tedford, Interview, 20 July 2000.
29 Henry Hurst to Edward Charles Stirling, 11 March 1893, Lake Callabonna Papers, Department of Vertebrate Palaeontology (hereafter Callabonna Papers), South Australian Museum (hereafter SAM), Adelaide.
curators during the last quarter of the nineteenth century resulted in more aggressive collecting and exchange policies in colonial institutions. Specimen exchange was a way of accumulating capital, as considerable cachet was attached to the acquisition of exotic foreign materials. This was facilitated by the unearthing of duplicate specimens, as in the Callabonna case, and the construction of casts, as museums were loathe to risk the loss of unusual or valuable specimens. ‘Private interests’ speculated in 1893 that the fossils would be more lucrative than mining and in 1894 an Adelaide syndicate was floated with the intention of unearthing Callabonna specimens for private profit.

Stirling and the Museum guarded their intellectual capital. Contrary to mid-century trends, the Director and his assistant Amandus Zietz described most of the specimens themselves and published their most significant findings in the Transactions and Memoirs of the Royal Society of South Australia before more prestigious overseas journals, despite the interest from abroad as well as within the colony. Correspondence from the British Museum of Natural History was met with firm apologies from the Director, explaining that it was impossible to transport the skulls without risking irreparable damage. To prove his goodwill and the patriotism of the Museum Board he was willing to trade some metatarsals and maybe a clavicle. But in the interests of science and all their institutions, he advised waiting until the Museum had got ‘all the parts accurately represented’ and a cast of the whole might be available. The Museum Board was reluctant to allow scientists from other states and institutions untrammelled access to the site, as discovered by J.W. Gregory, Professor of Geology and Mineralogy at Melbourne University, when he planned his summer field trip to the dead heart by camel in 1901–2. It was for this reason as much as to protect the site from amateur rock hounds who might damage it and entrepreneurs who might exploit it, that a fossil reserve was proposed by the South Australian Government Geologist H.Y.L. Brown in 1893:

[The site] affords [scientific] opportunities which have seldom before occurred on this continent, and which may not occur again. The work now being done by the Adelaide Museum in collecting specimens will doubtless lead to the settlement of many points...In view of the importance of preserving these relics of a bygone age for the future scientific exploration, I would recommend that the whole area...be reserved for that purpose, and to prevent the indiscriminate digging up and removal of portions of the specimens.

31 Henry Hurst to E.C. Stirling, 16 March 1893, Callabonna Papers, SAM, Adelaide: ‘By the end of the period I propose I believe there would be enough material to supply a large number of the Museums in the World’.
32 Anon., ‘Arrival of mammoth fossils from Mulligan Lake’, South Australian Register (31 July 1893): 6. See also Henry Hurst to E.C. Stirling, ibid.: ‘It would be a great pity to suspend operations...there is a great possibility of more valuable discoveries...The material we now have is worth many hundreds of pounds...I do not think we have got a fractional part of what another 3 months work would yield if we continued the search’.
33 Pledge, ‘Fossils of the Lake’, 74.
34 For example, Stirling, ‘Fossil Remains’: ‘Of the feet, in which from our previous ignorance of their constitution much interest is centred, I prefer not saying much at present’.
35 Between 1894 and 1914 Stirling’s and Zietz’s papers on the fossil remains of Lake Callabonna appeared in the Royal Society of South Australian publications. Stirling also published a preliminary account of the diprotodon bones and the Callabonna site in Nature in 1894 (Stirling, ‘Fossil Remains’).
36 E.C. Stirling to Professor E. Ray Lankester, 14 February 1899, Callabonna Papers, SAM, Adelaide.
37 Gregory, Dead Heart. Also correspondence between J.W. Gregory, A.H.C. Zietz and the South Australian Museum Board from September to December 1901, Callabonna Papers, SAM, Adelaide. For example, Gregory to Zietz, 14 September 1901; and Zietz to Museum Board, September 1901.
Requests for Callabonna fossils were made by institutions as far apart as Perth, London, Cape Town and Brazil. Eventually seven casts of the complete diprotodon skeleton were distributed, along with bones of extinct kangaroos, giant wombats and *genyornis*, a giant flightless bird first identified at Callabonna, in exchange for such exotica as stuffed black monkeys and leg bones of the dinosaur, *diplopterus*. The importance of material artefacts in the reconstruction of the deep past demanded a conversation between metropolitan and colonial scientists, collectors, farmers, ditch diggers and the dirt itself. This process of negotiation eventually helped to undermine the authority of the metropolis. As information was literally and serendipitously unearthed in the antipodes, colonial institutions began to build up indigenous collections and retain duplicates for trading with other institutions. The roles of patron and client were further destabilised. None of this is latent in the fragmentary remains of a diprotodon’s delicate toes, but the diprotodonts of Lake Callabonna deserve their place in the nation-making project. They shed light on the perception of fossils as a mineral commodity, and on the importance of intellectual capital in late colonial museums in Australia. But the intrusion of Callabonna’s intellectual and geological stories into the socio-political history of the state also introduces the phenomenon of the mobilisation of the deep past, its material remains and its intellectual legacy, in the interests of ‘heritage’ and the establishment of a collective national treasure chest of places worth saving.

Stirling’s dismissive appraisal in 1894 of the scenic merits of the lake as ‘Almost unsurpassable for barrenness and utter desolation’ is tempered considerably by his later statement that

> There is compensation for the uncompromising physical features of Lake Callabonna...in the fact that its bed has lately been shown to be a veritable necropolis of gigantic extinct Marsupials and Birds, which have apparently died where they lie, literally in hundreds.

The site was also the launching pad for a UC Berkeley expedition in 1953 widely regarded by Australian vertebrate palaeontologists as revitalising the discipline. Diprotodon bones and the history of vertebrate palaeontology thus form the connecting threads in an investigation of the power of ‘deep time’ to ‘salvage’ and canonise a landscape. What does this story tell about the way the earth sciences are ‘made’? Geological ‘knowledge’, like all ‘knowledge’, is made in part by processes of negotiation and consensus-making. The contribution of the material landscape of Lake Callabonna to debates about time depth in Australia is partly an artefact of the dependence of earth scientists on the physical remains of the past. The more information physically available to geologists, the more that can be deduced about the material earth. This is not to imply a deterministic Kuhnian progression from state of ignorance to one of enlightenment, simply that in a science such as palaeontology, heavily reliant on field work for its primary data, the discovery of new territory and of new material remains of the past contribute to a fuller, though not necessarily more accurate, understanding of it. Lake Callabonna as a repository of ‘knowledge about the past’ thus becomes a national resource.

Work at Callabonna has been erratic, due to its isolation from Adelaide and the nature of the sediments and climate there, although of course this isolation provides a form of protection from ‘exploitation as well’. The bones are very difficult to extract, the problem of their post-exavation preservation has not been solved and the region is nearly impassable during

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39 Assorted correspondence on museum exchanges and reports of the Museum Board in the *South Australian Register* in E.S. Booth Papers, Box 3, Folder 9, SAM, Adelaide; Callabonna Papers, SAM, Adelaide; E.S. Booth Papers, State Library of South Australia.
40 Ibid., and Pledge, ‘Fossils of the Lake’, 75.
41 Stirling, ‘Fossil Remains’, 185: ‘the occasional character of the surrounding country may be best appreciated by reference to some of the names given by the early explorers and settlers, such as Mount Hopeless, Dreary Point, Illusion Plains, Mount Deception, Mirage Creek’.
anything but the driest season. Perhaps because of this remoteness, fragility and associated obstacles, the lake has shifted in and out of palaeontological obscurity. Nonetheless, its decoding has a genealogy reflecting international intellectual trends, patronage, parochialism and switching allegiances, both personal and national. The desiccated landscape is intellectually beguiling, with this tantalising history, its palaeontological and palaeobotanical richness and the eerie vision of the behemoths of the marsupial world trekking across the surface and dying in droves.

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