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Australia Under Construction

Nation-building past, present and future

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6. Populate, parch and panic: two centuries of dreaming about nation-building in inland Australia

Introduction

This chapter represents one facet of a more extensive research project on the historical development and future prospects of the Australian inland, especially the area that lies between the Great Dividing Range and the deserts of Central Australia. The question I will attempt to answer here is that of why a grandiose 'nation-building' solution to the perceived problems of the inland has retained a significant presence in public debate for more than seven decades, even though it has repeatedly and convincingly proved to be impractical and financially unviable.

My broader research project focuses principally on perceptions and understandings of the inland, both from those who have lived and continue to live there and from the overwhelming and growing majority of Australians who live along the coastal strip of the continent. I have also paid particular attention to the perceptions and policies of governments at all levels as they affect the inland.

Over much of the twentieth century and into the twenty-first, the inland and northern areas of Australia have been widely perceived as being in a state of 'decline' or, at the very least, as languishing due to our collective failure as a nation to take action to release their untapped potential. Federal, state and local governments have produced myriad plans for improving the lot of inland and northern Australia, including monumental, 'nation-building' solutions, some of which — such as the Snowy Mountains Scheme, the Ord River Scheme and the Alice Springs to Darwin railway — have been completed after many decades of deliberation, while others have never left the drawing board because they have been perceived to be overly expensive and/or impractical.

Of those monumental 'nation-building' projects that have not proceeded to an implementation stage, perhaps the most celebrated and controversial is that which is known as the Bradfield Scheme for diverting water from the rivers of the tropical north to those of western Queensland. While it has been subject to frequent and intensive criticism from scientists and other experts, the Bradfield Scheme has had an enduring appeal among some politicians and other public figures, and has had at least two major revivals in public debate since it was developed in its current form during the 1930s: most recently in 2007, as I will now discuss.

Part 1 — Raising the ghost of Bradfield

Queensland farmers were relatively late entrants into large-scale irrigation activity on the Murray-Darling Basin, with Queensland having played no part in the major intergovernmental agreements about the Basin prior to 1996, when it joined the Murray-Darling Basin Agreement. In the 1980s, Queensland irrigators were using less than 1% of the total water extracted from the Basin for human purposes, but this proportion was to rise rapidly to 5% by 2007. Although the use of Murray-Darling water by Queensland farmers remains low compared to the other states, this fivefold increase in their relative share has drawn considerable attention, and some criticism, from political leaders and the media, in light of a growing national concern about the long-term sustainability of the current level of irrigated farming taking place across the Basin.

In early 2007, against the background of this growing criticism and in the context of intergovernmental discussions about the Howard Government's newly announced \$10 billion 'National Plan for Water Security', Queensland Premier Peter Beattie chose to revive the 'Bradfield Scheme': a nation-building proposal from 70 years earlier that was devised by John Jacob Crew ('Jack') Bradfield (1867-1943), the Queensland-born chief engineer of the Sydney Harbour Bridge and Brisbane's Story Bridge. In the late 1930s and early 1940s, Bradfield had developed and promoted the idea of building a network of dams, pipes and channels to bring water from the Tully, Herbert and Burdekin rivers (which flow into the Pacific Ocean in tropical north Queensland) across the Great Dividing Range and south to the arid plains of western Queensland and NSW and north-eastern South Australia. Beattie's 2007 version of the Bradfield Scheme, which he presented in an 'open letter to all Australians', was tailored specifically to address growing national alarm about the long-term health of the Murray-Darling system. Beattie proposed to take the water further south than Bradfield envisaged; all the way to the Warrego River, a tributary of the Darling. He claimed that this would increase the flow through the Darling and Murray into western New South Wales and South Australia by up to 1000 gigalitres per annum: approximately the same amount drawn from the system by Queensland irrigators.[1]

Beattie's proposal gained widespread attention, and provided media outlets with an opportunity to display photos and archival footage of Jack Bradfield supervising the construction of the Sydney Harbour Bridge. However, within a few days, the proposal had faded from public debate. During its fleeting time in the spotlight, the Beattie version of the Bradfield Scheme was subjected to criticism from engineers, economists, environmental scientists and other experts on the basis of the same objections that had been repeatedly raised since it was first promoted by Bradfield in the late 1930s.[2]

It is not my intention here to explore in detail the various criticisms that have been made of the Bradfield Scheme over the past 70 years. Interested readers can access these in many other published works. Typically they have

revolved around concerns that the massive costs of the Scheme would outweigh any conceivable benefits and that evaporation and other technical problems would mean that little of the water taken from the northern rivers would ever reach those further south and west.[3] Recently, Tom Griffiths and Tim Sherratt have produced an alternative 'what if' history in which the Commonwealth Government is imagined to have chosen to invest in the Bradfield Scheme rather than the Snowy Mountains Scheme as a centrepiece of post-World War II reconstruction. Griffiths and Sherratt have painted a fairly grim picture of both the environmental and economic consequences of such a decision, illustrating the spurious nature of many of the scientific claims underpinning Bradfield's proposals.[4]

Instead of criticising Bradfield's proposal, I will attempt to identify those aspects of the national psyche to which it most appealed. My thesis is that the short-lived resurrection of the Bradfield Scheme in political debate during 2007 is a symptom of a longstanding tendency for grand hydraulic engineering or land redistribution schemes to come to the forefront of public consciousness at times of major uncertainty about the long-term economic, social and environmental sustainability of our inland communities. Such periods of uncertainty have typically coincided with periods of drought and economic downturn in inland areas; as was the case in early 2007, when most parts of rural Australia were entering a sixth successive year of major drought, a drought which former Prime Minister Howard described as 'the worst in living memory' and which South Australian Premier Mike Rann claimed was a 'one in 1,000 year' event.[5]

There appears to be a longstanding tendency for Australians and those who govern them to panic about the future prosperity of inland Australia during periods of drought and economic uncertainty and to reach out for grandiose, expensive and unrealistic nation-building schemes which will allegedly secure that prosperity. Psychiatrists and psychologists describe a personality that veers between despair and unrealistic optimism as labile, and our shifting attitudes towards the inland over the past two centuries has warranted the use of this term.

For the most part we have perceived the inland areas of Australia as having almost unlimited potential as future sites for nation-building projects such as dams, irrigation areas, railways, roads, new towns and cities and vast mining and industrial projects. However, during times of drought or uncertainty, our optimism has rapidly dissipated and we have become haunted by apocalyptic visions of decline and despair which we have attributed to our own selfish and heedless actions in neglecting or unsustainably exploiting the environment. At these times, we have demonstrated an urge to reach for all-embracing solutions; the grander and more unrealistic they are, the better we seem to like them. As I will now discuss, the most popular of these possible solutions has always been that of building dams, channels and pipelines to bring water from where it is plentiful to where it is scarce.

[1] The Hon John Howard, Prime Minister of Australia, 'Address to the National Press Club', Parliament House, Canberra, 25 January, 2007; Australian Government, A National Plan for Water Security 25 January 2007, Canberra 2007; Peter Beattie, Premier of Queensland, 'Open letter to Australians', February 2007; Australian Broadcasting Commission, 'Beattie suggests redirecting Queensland river water' (Reporter: Tony Eastley), AM, 19 February 2007; Australian Broadcasting Commission, 'Beattie denies water proposal far-fetched' (Reporter: Kerry O'Brien), 7.30 Report, 19 February 2007; 'Inland lake aired again', Courier Mail, February 20, 2007.

[2] Australian Broadcasting Commission, 'River plan divides farmers, scientists', (Reporter: Louise Willis) The World Today, 19 February 2007; Australian Broadcasting Commission, 'Environmentalists react to Beattie's water proposal' (Reporter: Kathryn Roberts), PM, 19 February 2007; Rosemary Odgers and Stephen Wardill, 'Experts balk at scheme', Sunday Mail, February 20, 2007.

[3] For example, G.W. Leeper, 'Restoring Australia's parched lands, a comment', Australian Quarterly, June 1942, 50-2; Ann Marshall, 'Climactic Aspects of the Bradfield Scheme', Journal of the Australian Institute of Agricultural Science, 10, 4, 1944, pp. 165-8; Commonwealth Meteorological Bureau, 'Bradfield Scheme for watering the inland, meteorological aspects', Commonwealth Meteorological Bureau Bulletin, 34, Commonwealth of Australia, Melbourne, 1945; Rural Reconstruction Commission, Irrigation, Water Conservation and Land Drainage, Eighth Report to the Honourable J.J. Dedman MP, Minister for Post-war Reconstruction, Commonwealth of Australia, Canberra 1945; Queensland Government, Bureau of Investigation under the Land and Water Resources Development Act of 1943, 'Third Annual Report' (1946) in Queensland Parliamentary Papers 1947-48, Volume II, Government Printer, Brisbane 1947, pp. 639-59; Bruce Davidson, Australia Wet or Dry? The physical and economic limits to the expansion of irrigation, Melbourne University Press, Carlton 1969; J.M. Powell, Plains of Promise, Rivers of Destiny, water management and the development of Queensland 1824-1990, Boolarong Publications, Brisbane 1991; Fereidoun Ghassemi and Ian White, Inter-Basin Water Transfer, case studies from Australia, United States, Canada, China and India, Cambridge University Press, New York 2007.

[4] Tom Griffiths and Tim Sherratt, 'What if the northern rivers had been turned inland?' in Stuart Macintyre and Sean Scalmer, eds., What if? Australian history as it might have been, Melbourne University Press, Carlton, 2006, pp. 234-54.

[5] A one-in-1000 year drought', The Age, 8 November 2006.

Part 2 — Bradfield's 'hydraulic dreaming'

Advocacy on the part of politicians and enthusiasts of the idea of bringing water from the north of Australia to the inland, and of the related idea of permanently filling Lake Eyre by fresh or sea water, dates back to the 1870s and 1880s. Interest in such massive hydraulic projects appears to have been originally inspired by contemporary French proposals to using seawater to flood inland depressions in the Sahara desert. The proposal to build a canal from the Upper Spencer Gulf to flood Lake Eyre with seawater was seriously considered by South Australian Parliament in 1883 and was raised again in 1905, but was rejected on the basis of impracticality and cost.[6]

In this same period, a young engineer named Jack Bradfield was working for the New South Wales Government Engineer for Water Conservation, Hugh McKinney, on a proposal to build a network of locks and weirs along the Barwon and Darling Rivers. An experimental, and rather leaky, wooden panel weir was constructed at Bourke in 1897, but the New South Wales Government eventually abandoned the scheme for a number of reasons: in particular, because it considered that the improvement in navigation on the rivers would benefit South Australian paddle steamer operators over the NSW Railways, and that the commercial prospects for irrigated farming in western NSW were slight, given the time and cost involved in transporting produce to major markets. Bradfield later claimed that he began to contemplate the broad outline of his inland water scheme while he was working on the Barwon-Darling project during the 1890s.[7]

Bradfield retained his enthusiasm for hydrological projects, and moved on to work on the construction of Burrinjuck Dam on the Murrumbidgee, which enabled the establishment of the Murrumbidgee Irrigation Area during the 1910s. He then left the field of water engineering to work on the Sydney underground railway, the Sydney Harbour Bridge and the Story Bridge across the Brisbane River. While working on the latter project in the late 1930s, he formed a friendship with John Douglas Story, the senior Queensland public servant after whom the bridge was later named.[8]

Through his friendship with Story, Bradfield was able to gain the ear of the Labor Premier, William Forgan Smith, and was given a brief to work clandestinely on a proposal to divert water from the northern coastal rivers to the inland. Bradfield's assistant, Jack Snowdon, later recalled a day in 1937 when Bradfield (who was now 70) was enjoying his normal post-lunch nap at his desk when he suddenly jumped out of his chair and said:

Snowdon, I want you to drop everything and work on this water scheme for Queensland! He produced a map that he had drawn on in blue pencil. There was a ring around the watershed of the Herbert River in the north linked to Wairana on the Burdekin and the Clarke rivers, through the Great Dividing Range to the Flinders, under the railway line at Jardine Valley railway station and into the Thompson River which ran into Lake Eyre. This was Bradfield's inland water scheme.[9]

Snowdon was required to travel incognito across the entire region that would be affected by the proposed scheme; a task which he completed through a combination of rail travel, hitchhiking and on foot. In February 1938, Bradfield presented Story with a ten page paper entitled 'Queensland, The Conservation and Utilisation of her Water Resources' for the Premier's perusal. Forgan Smith was then in the middle of an election campaign but, once this was concluded, he arranged a face-to-face meeting with Bradfield. According to Jack Snowdon, Forgan Smith's first question to Bradfield was 'How much?'

Bradfield did a double shuffle and said '£30,000,000'. That was the end of the inland water scheme from an official standpoint.[10]

Bradfield continued to push his ideas for watering the inland through all the public and private avenues available to him, which — given his celebrity status as the chief engineer of the Sydney Harbour Bridge — were many and varied. In 1938 he gained the ear of Treasurer Robert Casey, who opened the way for him to present his plans to Prime Minister Joseph Lyons. However, following Lyons's death in April 1939, his successor Robert Menzies politely dismissed both Bradfield and his Scheme. Bradfield pressed on, devising ever grander versions of his Scheme, which incorporated not only the waters of tropical north Queensland, but also those of most central and northern Australian rivers, in order to create a network of water-filled gorges leading south to a permanently-filled Lake Eyre.[11]

Bradfield gained support for his Scheme from other public figures, most notably lon 'Jack' Idriess, the journalist and bestselling author who is now best remembered as the author of a number of overwritten but entertaining semi-histories of inland Australia such as *The Red Chief* and *Lassiter's Last Ride*. Idriess had devised his own plan for watering the inland which he presented in a national lecture tour, a newspaper and magazine articles, and in a book entitled *The Great Boomerang* (the title of which refers to the shape of the large inland area which Idriess believed would be 'made bloom' by the diversion of the water.) Another supporter of both Bradfield and Idriess was Fred Timbury, then Mayor of Roma in South-West Queensland, who — like both Idriess and, most recently, Peter Beattie — wished to extend the Bradfield Scheme further south to bring the water not just to the Thompson river but into the Murray-Darling system. Two further contemporaries, Brisbane engineer LBS Reid and his advocate,

former policeman Alfred Noakes — proposed a rival version of the Bradfield Scheme in which water would be drawn, not from the east coast of tropical Queensland, but from rivers flowing north and west into the Gulf of Carpentaria.[12]

These advocates received significant publicity in the press and other public forums during the 1940s, and Idriess's *The Great Boomerang* reached a large readership. Bradfield's plan, along with the rival Ord River Scheme proposed for the Kimberleys, even gained the attention of British Government officials, who saw it as a possible mechanism for opening up hitherto unoccupied territory for the resettlement of the Jewish population of central Europe.[13]

After Bradfield's death, the scheme was given serious consideration on a number of occasions both by the Queensland and Commonwealth governments. In 1945 it was examined by the Chifley Government in the course of its intensive policy deliberations on post-war reconstruction, but was found to be inferior to two other proposals; the Snowy Mountains Scheme and the Ord River Scheme.[14]

In 1947, intoxicated by visions of rapid post-war development, the Queensland Government directed a reluctant bureaucracy to re-examine the Bradfield Scheme in the light of the results of surveying and mapping work undertaken by defence forces in North Queensland during World War II. Once again, the Scheme was found to be overwhelmingly expensive and unlikely to provide anywhere near as much water for irrigation as Bradfield had claimed.[15]

In the early 1980s, the Bjelke-Petersen Government in Queensland proposed a revised version of the Bradfield Scheme as a potential Bicentennial project, and Malcolm Fraser's Federal Government pledged \$5 million to support a feasibility study, a pledge which was not fulfilled due to Fraser's defeat in the 1983 election. Preparatory work undertaken by a consultant for the Queensland Government, which was not released at the time, found that the Scheme was viable in engineering terms at a cost of over \$3.5 billion in current prices; however, the consultant made no recommendations as to the extent to the project could ever be expected to provide an adequate return on such an investment. The then Queensland Minister — and now independent Federal Member for Kennedy — who commissioned the consultant's report in 1982, R. F. Katter Jnr, continues to promote the Bradfield Scheme: calling for it as recently as mid-February 2008, in a speech to the Federal House of Representatives.[16]

The Bradfield Scheme was also briefly examined by the New South Wales Government in the late 1930s, and by the South Australian Government in the late 1980s as a potential solution to Adelaide's water supply problems. During the 1990s and 2000s, it has been propounded by prominent broadcaster Alan Jones, Melbourne businessman Richard Pratt, former National Party Leader Ian Sinclair and various Coalition backbenchers in Federal Parliament, by remnant elements of the One Nation Party and — as we noted at the beginning of this chapter — by former Queensland Premier, Peter Beattie.[17]

It would seem that, despite the periodic floating of the Bradfield Scheme by politicians and other opinion leaders, its massive fiscal weight inevitably causes it to founder among the shoals of bureaucratic resistance. Its fundamental problem is its enormous up-front cost, as appears to have been immediately obvious to Premier Forgan Smith when he rejected Bradfield's first proposal in 1938. The huge investment of taxpayers money in the Scheme could only be recovered over many years through direct charges to water users and indirect economic benefits arising from population growth and increased economic activity in inland areas. Most reliable estimates indicate that these returns would almost certainly fail ever to cover the enormous expense required to implement the Bradfield Scheme.

Bradfield himself recognised this drawback, and consequently sought to justify his scheme not just as a means of bringing additional irrigation water to inland areas, but also as a mechanism for promoting favourable climate change across a vast area of the inland. Bradfield, drawing on the 1920s work of E.T. Quayle, a former employee of the Commonwealth Meteorological Bureau, claimed that a permanent increase in the area of the interior covered by surface water — possibly including a permanently filled Lake Eyre — would raise the humidity of the atmosphere through evaporation, leading to a higher average rainfall across the inland. Quayle's work purported to show that farms lying to the south-west of large bodies of water receive, on average, three inches more rain per annum than other parts of the same regions, and Bradfield used these findings to contend that his Scheme would bring greater fertility to vast areas of the inland that were not directly watered by his proposed river diversions.

Quayle's theories were derived from those that had underpinned the nineteenth century proposals to flood the Sahara and Lake Eyre, which I have already discussed. Such ideas were also put forward in relation to the plan to lock and weir the Barwon and Darling Rivers in the 1890s, when they were debunked by the esteemed NSW Government Astronomer, Henry Chamberlaine Russell, who observed that — as the upper atmosphere shifts at the rate of hundreds of miles a day — any water evaporating from inland lakes and pools is over the Pacific Ocean by the time it might develop into rainfall. Quayle's theories, as they were re-presented by Bradfield, were comprehensively dismissed by other prominent meteorologists in the 1940s. A recent study looking specifically at

Lake Eyre has suggested that its permanent filling may slightly raise the average level of precipitation directly above the lake itself, but would have little or no effect on rainfall levels across the surrounding region.[18]

Wherein lies the explanation for the continuing support for the Bradfield Scheme, in spite of the strong criticisms that have been made by scientists, economists and other experts? Historians and other writers have generally interpreted the ongoing interest in the Scheme in the manifestation of a longstanding tendency for Australians to identify the idea of 'nation-building' with major hydraulic engineering schemes such as dams and irrigation works: the Mulwala Canal, the Snowy Mountains Scheme, the Ord River Scheme and so forth. This 'water dreaming', as Tom Griffiths and Tim Sherratt have termed it, has led Australians to have faith that hydraulic engineering schemes will return a form of psychic income over and above any tangible commercial and economic benefits. This attitude was perhaps typified in the comments made by New South Wales parliamentarian E.W. O'Sullivan in the early 1900s in relation to the proposal to construct Burrinjuck (then 'Barren Jack') Dam:

"I would like to say that I consider it is a terrible mistake to attempt to reduce land settlement to a commercial basis. You have something far more important than the obtaining of profit out of the people to consider when promoting land settlement. You are making homes for them, and adding to the resources of the country, and incidentally to the revenue of the country, and above all you are giving the people something which they can cherish as their own, whether it is theirs by leasehold or freehold.[19]"

Historians have identified this attitude towards economic development as lying at the heart of many of the major irrigation and water supply schemes constructed in twentieth century Australia. The Bradfield Scheme is seen as having a particularly romantic appeal due to its evocation of the 'quest for the inland sea' that helped to inspire the nineteenth-century exploratory expeditions across the Murray-Darling Basin and northwest into Central Australia led by John Oxley, Thomas Mitchell and Charles Sturt. It has been suggested that the emotional legacy of the quest for the inland sea influenced the post-World War I flowering of the 'Australia Unlimited' school of writing that promoted the rapid development of the 'red centre' (a term used in preference to the more negative 'dead heart') and the tropical north.[20]

By the 1930s and 1940s, it has been argued, the idea of 'opening up' and irrigating the dry interior of Australia had gained further inspiration from major 'nation-building' hydrological schemes in the emerging world superpowers, the United States of America and the Soviet Union: in particular, Franklin Roosevelt's Tennessee Valley Scheme and Stalin's Dnieper River project. The intellectual climate underpinning the advent of the Bradfield Scheme was then topped off by the southwards military push by Japan after Pearl Harbour which promoted the 'populate or perish' imperative to develop rapidly the unoccupied central and northern areas of the continent or risk losing them to Asiatic invaders.

It would appear that all of these influences were important in firing the enthusiasm of the two Jacks — Bradfield and Idriess — and their like-minded contemporaries for inland hydraulic engineering activities. However, there was another, somewhat darker strand to their thinking that appears to have been neglected by other historians, but which is tied crucially to the limbic tendencies of our national perceptions of the inland described in Part I.

[6] A.W. Noakes, *Water for the Inland, Railings and Railings*, South Brisbane 1947; JW Gregory, *The Dead Heart of Australia, a journey around Lake Eyre in the summer of 1901-1902, with some account of the Lake Eyre basin and the flowing wells of central Australia*, John Murray, London 1906, pp. 342-52; F Ghassemi and I White 2007, op cit, pp. 144-47 and 379-83.

[7] Richard Raxworthy, *The Unreasonable Man, the life and works of JJC Bradfield, Hale and Iremonger*, Sydney 1989, pp. 46-8; Legislative Assembly New South Wales, Parliamentary Standing Committee on Public Works, 'Report relating to the Proposed Construction of Locks and Weirs on the River Darling' in *New South Wales, Votes and Proceedings of the Legislative Assembly during the Session of 1896*, Volume 5, Government Printer, Sydney 1896, pp. 559-61; Legislative Assembly New South Wales, Parliamentary Standing Committee on Public Works, 'Report relating to the Proposed Locks and Weirs on the River Darling between Bourke and Menindee' in *New South Wales, Votes and Proceedings of the Legislative Assembly during the Third Session of 1899*, Volume 5, Government Printer, Sydney 1900, pp. 32-3; JJC Bradfield, 'Address to the Millions Club Luncheon', undated, Bradfield Manuscripts, National Library of Australia (BMNLA).

[8] R. Raxworthy, op cit, pp. 132-4, B Davidson, op cit, p. 62-3.

[9] R. Raxworthy, op cit, p. 136.

[10] Ibid, pp. 136-7.

[11] Bradfield to Lyons, 21 November 1938, 29 November 1938, BMNLA; RG Casey to Bradfield, 29 November 1938, BMNLA; Bradfield to Menzies, 23 May 1939; Menzies to Bradfield, 30 May 1939, BMLNA; Bradfield to ET

Quayle, 29 July 1941, BMNLA; JJC Bradfield, 'Rejuvenating inland Australia', Walkabout July 1941, pp. 7-15 (JJC Bradfield, 1941a); JJC Bradfield, 'Watering inland Australia', Rydges, October 1941, pp. 586-606; JJC Bradfield, 'Restoring Australia's parched lands', Australian Quarterly, March 1942, pp. 27-39.

[12] Ion L. Idriess, *The Great Boomerang*, Angus and Robertson, Sydney, 1941; Ion L. Idriess, *Onward Australia, Developing a Continent*, Angus and Robertson, Sydney 1945; F.R.V. Timbury, *The Battle for the Inland, the case for the Bradfield and Idriess plans*, with Foreword by Ion L. Idriess, Angus and Robertson, Sydney 1944; A W Noakes, *Water for the Inland*, Railings and Railings, South Brisbane 1947; F. Ghassemi and I. White, *op cit*, pp. 135-7.

[13] C.H. Hay New South Wales Government Offices, London to J.J.C. Bradfield, 19 January 1939, BMLNA.

[14] Rural Reconstruction Commission, *op cit*; Commonwealth Meteorological Bureau, 'op cit'.

[15] Queensland Government, Bureau of Investigation, 'op cit'.

[16] F. Ghassemi and I. White, *op cit*, pp. 131-4; Parliament of Australia, Hansard, House of Representatives, Wednesday 13 February 2008, p. 62.

[17] G.W. Watson to J.J.C. Bradfield, 1 March 1939, BMNLA; F. Ghassemi and I. White, *op cit*, p. 134, T. Griffith and T. Sherratt, 'op cit', p. 253, 'Pratt willing to aid Bradfield Scheme' National Nine News, February 23 2007.

[18] E.T. Quayle, 'Possibilities of modifying climate by human agency, with special application to south-eastern Australia', *Proceedings of the Royal Society of Victoria*, XXXIII, 1921, pp. 115-32; E.T. Quayle, 'Local rain producing influences under human agency in Central Australia', *Proceedings of the Royal Society of Victoria* XXXIV, 1922, pp. 89-104; Legislative Assembly New South Wales, Parliamentary Standing Committee on Public Works New South Wales (1896), p. 607; Commonwealth Meteorological Bureau, 'op cit'; A. Marshall, 'op cit'; Pandora K. Hope, Neville Nichols and John L. McGregor, 'The rainfall response to permanent inland water in Australia', *Australian Meteorological Magazine*, 53, 2004, pp. 251-62.

[19] B. Davidson, *op cit*, p 68.

[20] For further details about this school of thought, see J.M. Powell, *An Historical Geography of Modern Australia, the restive fringe*, Cambridge University Press, Cambridge 1988 and J.M. Powell, 'Griffith Taylor and 'Australia Unlimited'' John Murtagh Macrossan Memorial Lecture 13 May 1992, University of Queensland Press, St Lucia 1993.

Part 3 — 'First parch, then panic!'

It is no accident that the periods of most intense political interest in the Bradfield Scheme — the late 1930s and early 1940s, the early 1980s and, most recently, the 2000s — all coincide with periods of major drought across Australia. Most rural Australians have been aware for many decades that periodic droughts, sometimes lasting five years or more, are an endemic occurrence in most parts of inland Australia. One would think that the prospect of drought would be too familiar to provoke undue panic or despair. However, over the past century or so, a number of politicians, journalists and other opinion leaders have shown a recurring tendency during major droughts to become the harbingers of a future nightmare scenario in which a state of permanent drought will be imposed on inland Australia as a form of divine punishment for the heedless and selfish ways in which we have used resources such as water, soil, forests and native grasslands.

This type of thinking first came to the fore during the Federation Drought of 1895 to 1902, which triggered the collapse of a high proportion of the pastoral enterprises in far western NSW and many other inland areas. The most immediate causes of the catastrophe were the absence of rain for several years, the impact of plagues of rabbits and dingos, and the accentuation of land degradation due to the overstocking of many properties. However, it is likely that an equally important cause of the collapse of many pastoral enterprises was the inevitable bursting of an investment bubble, fuelled by a flood of funds from around the world, which had promoted the over-capitalisation of the sector.

We might, therefore, with some justification, choose to interpret the economic and social catastrophe in the inland during the Federation Drought as being largely the result of a combination of natural causes, undue optimism and inexperience. However, some contemporary observers preferred to adopt a harsher and more judgemental position, tinged with a vision of apocalyptic doom that could only be averted through grand gestures of redemption. One of the foremost of these observers was the journalist C.E.W. Bean, who covered the aftermath of the Federation Drought in the inland for the *Sydney Morning Herald* and who later achieved greater fame as a war correspondent and official historian of World War I.

In an article about the region around the Darling River, which was given the lurid title 'The Rape of the West', Bean wrote of how:

“ ... by 1895 the rabbits and the sheep had got to their work, and the drought was over the land. A series of terrible, lean years saw the West turn into nothing else than a desert. The sheep were held on the runs, in the hope of rain, till they were too weak to travel. There was not a blade of grass on the surface; but the stock walked over it until it was worked into a hard crust. Over parts there swept a loose sand which covered up even the fences, and actually turned patches of grass land into sandy wilderness. When the rain came, it beat off the hard ridges as it sweeps a galvanised roof. Such scrub as the sheep had left, the rabbits ringbarked. Every station was reduced to a tithe of its stock.[21]”

Bean, whose appreciation of environmental issues was advanced for the time, argued that the solution to these problems was for Australians to develop a better understanding of the physical characteristics of the inland, and to adopt farming practices more sympathetic to its cycles of change. However, many of his contemporaries preferred to seek salvation in grand gestures: for instance, the South Australian Parliament, as we have already seen, briefly revived the earlier proposal to flood Lake Eyre with water from the Spencer Gulf. The Burrinjuck Dam and the Murrumbidgee Irrigation Area were also products of the prevailing mentality of this era.

The pastoral industry of the eastern interior had largely recovered from the ravages of the Federation Drought by the time Bradfield was dreaming up his Scheme in 1937, but another major drought began in that year and persisted across much of the country until the mid-1940s. Once again, a strong flavour of much contemporary public debate was that the drought was to a significant extent the result of unsympathetic and unsustainable human uses of the inland. The spectre of the 'dust bowl' that engulfed many North American crop-growing areas from 1933 to 1939 was frequently raised, as was the fact that Lake Eyre and the major rivers feeding it (Coopers Creek, the Georgina and the Diamantina) had been largely dry for many decades.

This was a period in which the first glimmerings of what were to become the Australian environmental movement could be detected in the pages of magazines such as *Walkabout* and *Wild Life*. Intellectuals and scientists began to express concern about the role played by deforestation in promoting salinity and soil erosion, and Bradfield himself began to refer to these issues in his public speeches, as well as becoming increasingly preoccupied with a rather fanciful notion that, because the palaeontologic record of the eastern interior showed that much of it was once covered by a vast inland sea this, rather than desert, was its natural state and that his Scheme therefore represented nothing less than a means of restoring the inland environment to its authentic state.[22]

Bradfield always presented his views in measured prose, but his supporters and fellow travellers — particularly Idriess — could at times work themselves up into a state of hysteria. The *Great Boomerang* contains many instances of such purple prose, but my personal favourite is the following evocation of an Old Testament prophet in the form of a shepherd who allegedly spoke to Idriess during the dark night of the western plains of NSW:

“... the shepherd says 'Listen!' There was no sound. 'It is too small for an ordinary man to hear....A few of us hear it. It is what is going to move a thousand leagues of sandhills. To make a sea of sand and dust to smother a generation to come ... Teeth ... millions and millions of teeth. And the years go on. And millions and millions more teeth are born eating, eating, eating. Eating down into the scanty grass-roots, killing the binding that binds the sandhills together. And every year the winds keep on blowing.'[23]”

Bradfield, Idriess and some of their contemporaries had convinced themselves that the impact of grazing in the interior had turned marginal land into permanent desert that could only be redeemed by vast irrigation works. This pessimistic perception was dispelled by the impact of several years of heavy rain in the late 1940s and early 1950s, which filled Lake Eyre several times and submerged large areas of western Queensland and New South Wales for periods of six months or more, following which the formerly arid lands bloomed with grass, wildflowers and other flora. This was the prelude to three decades of above average rainfall and high fertility in the eastern interior during which the Australian wool industry reached its economic apogee.

This golden post-war era for the inland began to draw to an end in the late 1970s and was largely extinguished in the short, but severe drought of the early 1980s, at which time the Queensland Government and others chose once again to promote the Bradfield Scheme. Then, during the more prolonged drought which commenced in 2001, Alan Jones, Richard Pratt, Peter Beattie and others once again raised the idea of 'turning the coastal rivers inland' to 'drought proof this great brown land'.

[21] C.E.W. Bean, *On the Wool Track*, Angus and Robertson, Sydney, 1963 (originally published 1910), p. 48.

[22] 'Developing Australia by J.J.C. Bradfield CMG' undated, BMNLA; J.J.C. Bradfield (1941a); J.J.C. Bradfield (1942).

[23] I.L. Idriess (1941), p. 14.

Conclusion

It would appear that the level of fear of an ecological apocalypse in the Australian inland — and the level of faith in the possible panacea of a vast irrigation scheme of the type proposed by Jack Bradfield — waxes and wanes in a labile fashion that parallels the tendency for inland Australia to shift in and out of periods of major drought over the medium to longer term. In the first decade of the twenty-first century, we are once again in a period in which political, media and public interest in the state of our inland waterways has intensified during a prolonged drought. Have we simply descended once again into a state of panic, which will be dispelled as soon as the drought breaks, or have we managed this time to instigate a national policy process, which will lead us to an objective and emotionally balanced approach to managing the land and water of inland Australia? It is too early to say for certain, but we can perhaps be encouraged by how rapidly the proposition was removed from the table after being raised by Premier Beattie in February 2007.

It is impossible not to be impressed, and perhaps even inspired, by the grandeur and daring of Bradfield's Scheme as a nation-building vision for the future of Australia, and by the energy and enthusiasm with which he and others promoted it. But, as is the case with many other problems facing inland Australia, the issue of how to manage — and possibly augment — its limited supply of water is far too intricate and complex to be fixed simply by reaching out for a grand solution: no matter how tempting this might be to us in our urgent need to quell a rising state of panic.

The dilemmas currently facing inland Australia arise from aspects of the physical environment which date back many millennia (and, in some cases, millions of years), combined with problems of our own making which have arisen over the past two hundred years. Having taken a long time to develop, these problems are not capable of being solved through a single engineering blueprint. They will only be overcome through the slow growth of insight and a sustained and concerted effort on behalf of governments and the inland's inhabitants.