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Before and after climate change: the snow country in Australian imaginaries

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Andrew Gorman-Murray

Country(side) in the Context of Climate Change

The theme of this issue of *M/C Journal* is 'country', with a remit to contemplate the multifaceted and pliable deployment of that term. Notably, 'country' can be used synonymously with both 'the rural' and 'the nation', and in many contemporary western societies these evocations are not so far apart. Indeed, they often overlap: countryside landscapes (which may be either pastoral or wilderness) are frequently used as symbolic sites to encapsulate broader national imaginaries and thus project a wider sense of national identity and belonging. As David Bell argues, the (rural and/or 'natural') countryside is often deployed as a storehouse for cultural meanings associated with national values that "shor[e] up what it means to be English, or Dutch, or whatever" (151). This association is apparent in Australia too, where interleaving the countryside and nation-state is long-standing in settler (i.e. Anglo-Australian) landscape tropes, notably 'the bush', 'the outback' and the wheat/sheep farming belt (Gorman-Murray et al; Ward; Sarah Bell).

My entry into this theme is through what might seem, at first glance, an obscure avenue: I provide a case study of the place of "Australia's snow country" (AALC 16) - the Australian Alps - in national imaginaries. On the one hand, the snow country may appear marginal to national landscape tropes, in which images of the bush, beach, outback, desert and tropical islands dominate. This is perhaps most apparent in images used to 'sell' Australia in international tourism campaigns (Gorman-Murray et al; Waitt). But on the other hand, I argue, the snow country is also prominent in Australian lives, lifestyles and mythologies, evinced through several measures. At one level, the Australian Alps in New South Wales and Victoria, in particular, are widely known for winter ski and snow sports tourism, with alpine resorts generating \$1.318 billion in economic activity and 17,030 jobs in 2005 (NIEIR). At another level, the Australian Alps have been a focus of national socioeconomic development through the Snowy Mountains Scheme's massive engineering project, completed between 1949 and 1974. Apart from national development goals around power generation and farmland irrigation, the Scheme also brought large-scale non-British migration with far-reaching implications in shaping modern Australian society (Lennon). And from yet another perspective, the Australian Alps have their own particular place in settler mythologies through narratives of the cattlemen and stockmen of 'the high country' (a settler descriptor for the Alps) (Lennon; Truscott). The snow country, then, and especially the Australian Alps, does play a significant role in discourses of Australian nationhood, belonging and identity.

I argue that the importance of the Australian Alps in national imaginaries is heightened in the current context of societal and political apprehension about the effects of human-induced climate change on Australia. Already the warmest and driest continent, modelling suggests the effects of global warming on Australia will be severe, with south-east Australia – the most temperate part of the continent, where both the Alps and the bulk of the population are located – becoming even drier and warmer (Lowe). The Garnaut Climate Change Review (www.garnautreview.org.au) indicates that without immediate measures, many of Australia's fragile landscapes will be radically altered as soon as 2050, including the Murray-Darling Basin, the Great Barrier Reef, the Kakadu Wetlands and the Australian Alps (Garnaut, Draft Report; Garnaut, National Press Club Address; Peatling). With regard to the snow country, research from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) indicates imminent significant reduction in the area, depth and duration of snow cover in the Alps as a result of warming and drying, with high impact scenarios estimating more than 90% shrinkage

in snow cover by 2050 (Hennessey et al). This will have severe impacts on local ecosystems (Pickering et al) and ski tourism (Bicknell and McManus). But what effect might this have on the cultural significance of the snow country in national imaginaries? How will the Alps be re-valued in light of climate change? Equally, this demands consideration of how the Alps are currently, and have previously been, placed in discourses of nationhood and identity, and whether these tropes are reflected, enhanced and/or transformed in the context of climate change.

To address these issues, this essay provides three narratives about how the Australian Alps have been viewed and valued in national imaginaries, each focusing on past, present and 'future' visions of the snow country. I begin with the present, noting how the Alps are currently figured discursively as a unique national landscape. Present evocations are, of course, based on past practices, lives and mythologies, and so in the second narrative I turn to the Alps' settler histories. I focus on the town of Kiandra, its association with snow and alpine imagery, and the way it provided a vector for further settlement and use of the Alps. But Kiandra is now a ghost town, serving as a harbinger of possible alpine futures. So the last narrative turns to concerns about the future of the Australian Alps, and what lessons could be learnt from the expected impact of climate change on the snow country. As this ordering suggests, rather than a presenting a wholly linear argument, these narratives bounce off each other, constellating temporally and spatially diverse perspectives on the Australian Alps. The data interpreted in this essay are drawn from current media commentaries, archival sources, landscape photography (of Kiandra), and a survey on the cultural significance of the Australian snow country in the light of climate change. Throughout the discussion I use a range of descriptors for the snow country - countryside, landscape and environment, for instance. While I recognise that some of these terms have distinct definitions in certain disciplines - e.g. contentions within cultural geography about the application of 'landscape' (Merriman et al) - I employ them in an interchangeable and non-technical manner to describe the snow country.

The Australian Alps: a Unique National Landscape

The Australian snow country comprises the alpine and sub-alpine bioregions – a particular group of landscapes with distinct flora and fauna determined by a combination of climate, altitude and seasonal snow cover, and thus restricted to the more mountainous terrain in the continent's south-east corner (AALC). As Figure 1 below indicates, the largest (and most famous) zone of snow country is the Australian Alps, which stretch across NSW, Victoria and the Australian Capital Territory (ACT). Roughly 90% of this landscape is sub-alpine snow gum woodland, while the remaining 10% is the true alpine zone above the treeline, comprising herbaceous plants, shrubs and grasses. Snow cover in both the alpine and sub-alpine zones is seasonal, lasting from roughly May to October, but longer at higher altitudes and latitudes. Overall, the snow country makes up less than 1% of Australia's land area, and over half of this is in the mainland Alps. Despite its limited range, this countryside is a critical component of wider ecological and hydrological conditions: the small area of high rainfall and snow cover comprising the Australian Alps "determine[s] the distribution of water to rivers, and therefore to people, in a way that affects the whole of south-eastern Australia" (Slattery 5).

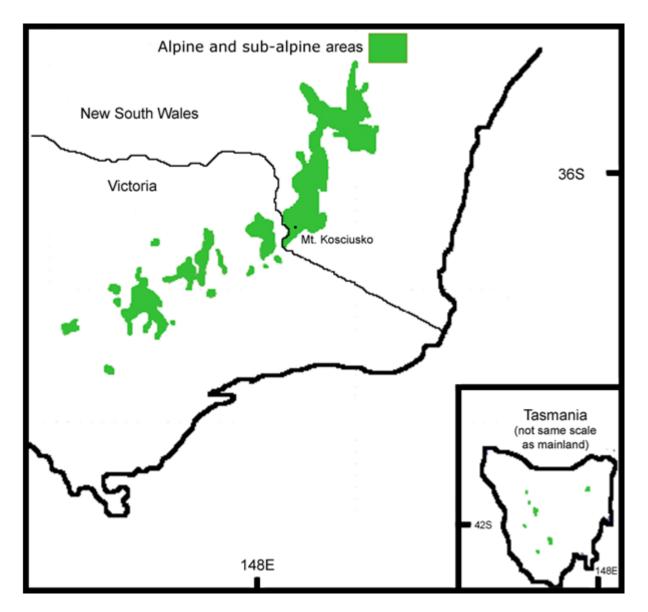


Figure 1: Australian alpine and sub-alpine areas.

Hydrological importance aside, the Australian Alps are also culturally significant in national imaginaries. In June 2008, the Alps were chosen as one of only eight 'national landscapes' to be featured in Tourism Australia's new eponymous marketing initiative, pitched as a "unique Australian destination" to international tourists (Talip 4). The 'National Landscapes' campaign explicitly links the snow country with national identity, configuring the Alps as an archetypical Australian landscape. Peter Jacobs, the Australian Alps Region National Landscapes Steering Committee chairman, explained the connection between the landscape and a unique Australian experience:

Touring in the high country and experiencing the vast alpine landscapes, the beautiful, majestic snow gum forest is a feature that really stands out for people. And the other thing that people often find a bit odd about the Australian Alps, especially from overseas, is the snow experience and although we're not necessarily trying to compete with international larger resorts, the whole concept of snow in Australia and being able to ski and see a snow-covered alpine landscape is very unique. (Talip 4)

Snowy climatic conditions, then, are a critical element in the Alps' national importance. But at the same time, the significance of the Australian Alps as a national landscape is not due simply to winter ski tourism. Other cultural narratives render the snow country central to Australian

nationhood and cultural identity. These are also iterated by Peter Jacobs: "It's a lot to do with the stories of [...] early settlers like cattlemen and miners, the Man from Snowy River. There's a real cultural link to the adventure of the Alps" (Talip 4). Jacobs thus draws attention to the place of the Alps in some of the central motifs of Australia's defining bush mythologies – the pioneering cattlemen and stockmen, their role in domesticating the countryside, and their memorialisation in the well-known narrative of *The Man from Snowy River* (Truscott). While these configurations are white and masculine, certainly not all-inclusive or mindful of Indigenous displacement, they have been nevertheless fundamental in framing the cultural heritage and legacy of the Australian Alps. *The Man from Snowy River*, written by Banjo Paterson, was first published in *The Bulletin* on 26 April 1890. The poem "recounts the heroic ride of young cattleman to catch an escaped stallion" (Hodges 111), paying homage to the alpine cattlemen and the way they 'read' and understood the landscape and climate of the high country through practicing transhumance grazing (Merritt). It has subsequently become one of the literary 'lynchpins' of Australia's bush mythology (Hodges; Ward), thus deeply entwining the 'taming' of the snow country with national cultural identity (Dominy; Lennon).

Remembering Kiandra: An Australian Feeling for Snow

We are now moving from the present to the past, contemplating how the legacy of settler histories of the Australian Alps ensconces this particular countryside within broader national imaginaries. In the second narrative, then, I consider the history of alpine settlement, use and imagery. Specifically, I focus on the central role of the town of Kiandra in past alpine imaginaries: Kiandra is synonymous with the mainland Australian snow country. The countryside around Kiandra was one of the early snow leases used by the cattlemen, with outstations in the vicinity dating from 1833 (Hueneke; Merritt). But in 1859, the discovery of gold in the area that would become Kiandra brought the first large-scale European settlement of the Australian Alps. A village quickly sprang up around the site known as the Snowy River Diggings on the Eucumbene River (which was then called the Snowy River). The village became a town, and the town became known as Kiandra. By April 1860, Kiandra had a reported population of 10,000 (Hueneke; Moye).

Kiandra is integral to the imaginaries, described above, which link settler use and modification of the countryside to national identity. Banjo Paterson, for instance, had close associations with the town. In the 1880s Paterson became a member of the Kiandra Snow Shoe Club; in 1896 he was elected to the Club's executive; and in 1898 he became Vice President of the Club (Clarke). His affinity with Kiandra and the high country was insinuated in his poetry, such as *The Man from Snowy River*, and also *A Mountain Station*, published in *The Bulletin* on 19 December 1891, which described the melting snows of Kiandra specifically. The alpine scenes permeating his poetry were, in turn, widely disseminated through *The Bulletin* at a particularly crucial moment in the development of Australian nationhood: the late nineteenth century build-up to federation, which was a palpable time of nation-building (Truscott). The rhetoric of Australian federation drove the search for tropes that would bind a new national identity. These iconographic images were found in the bush landscape, linking the countryside with national identity, reinforced through their appearance in nationalistic publications such as *The Bulletin*. In this context, the notable presence of alpine landscapes in Paterson's poetry meant that Kiandra's countryside became an integral element of Australia's national landscapes.

Indeed, Kiandra provided the first widespread images of an 'Australian snow country'. What set the town apart from other alpine settlements wasn't just its rapid growth and size, but also its elevation. At 1400 metres above sea level, Kiandra was the highest permanent town in Australia, and would remain so until the establishment of nearby Cabramurra (at 1488 metres) by the Snowy Mountains Scheme Authority in 1954. Its high elevation meant that Kiandra was the first Australian town which was snowbound during the winter months. As Hugh Capel notes, this gives Kiandra a 'unique place' in Australia's history: it was the only snowbound gold-mining village during the gold rushes of the mid-nineteenth century, and for a long time

after, well into the twentieth century, the only snowbound alpine town in Australia (http://www.kiandrahistory.net/index.html). Snow is thus typically featured in visions of Kiandra in Australian imaginaries. Publications on the history of the town – such as D. G. Moye's *Historic Kiandra*, Klaus Hueneke's *Kiandra to Kosciusko* and Norman Clarke's *Kiandra: Gold Fields to Ski Fields* – feature photograph after photograph of buildings, residents and visitors against the background of a snow-covered high plain. A typical example, 'Kiandra 1898', is featured below (Figure 2).



Figure 2: 'Kiandra 1898' (Ross Ball; at http://www.kiandrahistory.net/KKiandra1898.html).

The notion of Kiandra as Australian snow country is reiterated and solidified through the activity of skiing: many nineteenth and early twentieth century photographs of Kiandra focus on skiing. Skiing was introduced to the town in 1860 by Norwegian miners, and townsfolk quickly began to utilise it as both a mode of transport and recreational practice (Hueneke). While Banjo Paterson joined the Kiandra Snow Shoe Club in the 1880s, the organisation's origins are older still. The Club was established in 1861, holding annual races from that year. This was the first recreational ski club in the world: "The Holmenkollen Ski Museum confirms that the first two ski clubs in the world were formed by Norwegians in 1861, both in Australia and Norway" (Karin Berg, Director, 2006, in Clarke 28). Kiandra was, then, not only the birthplace of skiing in Australia, but also one of the world's first sites of club-organised skiing (Lennon). As such, this was - and is - a culturally important event, indicating the long-standing significance of the snow country in Australian lives, lifestyles and imaginaries. The Kiandra Snow Shoe Carnival was widely reported in the nineteenth and early twentieth century press in New South Wales, and visitors were attracted from as far as Sydney to spectate and partake in the town's winter activities (Clarke; Hueneke). The picture below (Figure 3) is from the 1900 Kiandra Snow Shoe Carnival. Indeed, winter tourism and skiing was centred on the town up until the 1960s (Clarke).



Figure 3: 'Come to grief' (Charles Kerry, via the National Library of Australia, NL 88/3251; at http://www.kiandrahistory.net/Kcometogrief.html).

Lessons from the Snow Country: Climate Change Threats to the Australian Alps

But Kiandra is now a ghost town, and barely so. The last resident left in 1974, and most of its buildings have been dismantled by human intervention or natural elements. The remains – an old homestead, the stone Court House (now an equipment store for the Department of Main Roads) and some ruins – are protected cultural heritage under the stewardship of the National Parks and Wildlife Service of New South Wales (Figure 4 below shows the ruins of the Kiandra Store in 1983). Likewise, the natural environment of the Australian Alps is designated as a series of national parks, managed through the national parks services of NSW, Victoria and the ACT. The competing demands of natural and cultural heritage protection, ski tourism and the Snowy Mountains hydro-electric scheme means that the Alps must be carefully managed. But a more serious threat has now emerged to the preservation of this national landscape and its natural and cultural heritage. If the Alps are framed as a 'unique' national landscape by Tourism Australia, simultaneously they are tagged as seriously endangered by the CSIRO.



Figure 4: 'Kiandra Store, 1983, just before its demolition by the National Parks Service' (Alan Melville; at http://www.kiandrahistory.net/KSnowstore.html).

The Australian Alps are deeply threatened by the effects of climate change, especially given the low relief of the continent (the highest peak, Mt. Kosciuszko, is only 2228 metres above sea level). The CSIRO predicts an imminent and wide-ranging reduction in the area, depth and duration of winter snow cover (Hennessey et al). Their 2003 report found that the area receiving at least 30 days of snow cover will decrease by 14-54% by 2020 and 30-93% by 2050, and the area with at least 60 days of snow cover will decrease by 18-60% by 2020 and 38-96% by 2050, as a result of rising temperatures and decreasing precipitation (Hennessey et al). Maximum snow depths will also be greatly reduced, especially at lower altitudes where snow cover may all but vanish, and accordingly the snowline will rise with global warming. At Mt. Kosciuszko "the snowline elevation on 1 September is predicted to rise from the present average of 1,461 metres to between 1,488 and 1,624 metres by 2020" (Hennessey et al 5). The variation in predictions about snow cover and elevation is due to the application of low and high impact scenarios around temperature and precipitation changes, but clearly the changes will be significant at even the lower end of the spectrum, and devastating at the higher end. I have reproduced the predicted shrinkage in snow cover in the Australian Alps below (Figure 5).

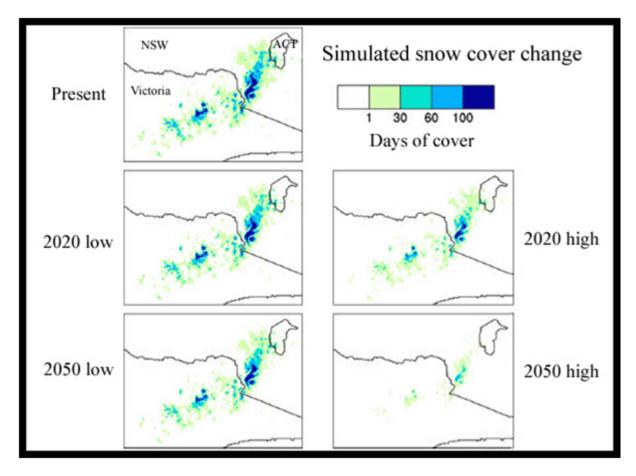


Figure 5: Simulated change in snow cover duration in the Australian Alps for present, 2020 and 2050 (adapted from Hennessey et al).

Such major change in snow cover in Australia's alpine landscapes has a range of effects, including the 'meltdown' of the ski industry (Bicknell and McManus; König) and the destruction of fragile alpine ecosystems reliant on snow cover (Green and Osborne; Pickering et al). But there are further implications, especially for the place of the snow country in Australian imaginaries and memories. As the previous narratives indicate, the Australian Alps have played an important role in settler histories, central to the formation of significant communities and mythologies (Hodges; Hueneke; Lennon; Jacobs in Talip). Climate change also imperils such cultural meanings; if climate change continues unabated it will have a significant impact on elements of cultural heritage that are entwined with particular(ly endangered) landscapes. As Dow and Downing argue:

Climate change is threatening parts of the world's cultural and historical heritage, but the possible loss or damage to these irreplaceable sites is rarely represented in economic estimates of the cost of climate change. [...] [C]hanges in local climate may force adjustments in long-held cultural traditions and relegate to history some climate-related features that once reinforced shared values and memories. (66)

Such is the case with the Australian snow country and its place in national imaginaries. The loss of national cultural heritage through climate change affects on fragile Australian landscapes is only now gaining attention – for instance, in Ross Garnaut's provocations at the 2008 launch of his draft report on the impact of climate change on Australia (Garnaut, *Draft Report*), and subsequent media commentaries. Here, concern for lost cultural heritage emerged most strongly in regard to the Murray-Darling Basin, which was described as "the heartland of old Australia" (Garnaut, *National Press Club Address* 21), "a national icon" (Senator Bob Brown, in Vallejo 4), which had "produced [...] much of the very character of the

nation" (Peatling 6). Rehn and Masters (1) were pointed: "It has been celebrated in film, poetry and song, but today the nation's most iconic river is on the verge of collapse – and does anybody care?"

Such concerns and questions can also be raised in regard to the Australian Alps, especially given the imminence of climate-and-landscape change. In a modest attempt to address the issue of lost cultural and historical heritage (through the loss of fragile landscapes) in the wake of global warming, I am currently engaged in a project on the cultural significance of the Australian snow country in the light of climate change. This essay is an outcome of that project. Alongside interpreting media and archival sources, another central component of the work is a nationwide, qualitative survey about cultural histories and geographies of the Australian snow country. As part of the survey, I put to participants the CSIRO predictions about the loss of snow and alpine country in the Australian Alps, asking for their responses to these scenarios, how they felt in response, and whether they thought it mattered to Australia, our culture and identity. Seventy-five people have responded to this particular question so far. Only four have been climate change sceptics, opposing the CSIRO predictions. The other 95% have expressed varying degrees of disappointment and dismay at the demise of Australia's alpine countryside and its cultural heritage, and iterated a range of ways in which the loss would affect lifestyles, memories and national imaginaries.

One might expect from Tourism Australia's 'National Landscapes' campaign, and older settler histories described earlier, that the heritage of high country cattlemen and *The Man from Snowy River* would be noted as examples of cultural legacies which would be lost through climate change. While they were discussed at other points in the survey (Gorman-Murray), they weren't raised in direct response to the CSIRO predictions. However, in reply to the CSIRO scenarios presented, the snow country was configured as culturally significant in Australian imaginaries in several other ways. Reflecting the place of Kiandra in Australian cultural history, the legacy of skiing was prominent in responses; many expressed regret that this and similar snow-based activities would be unavailable for themselves and, more importantly, their children and grandchildren:

I am very sad to hear this as I gain a significant amount of pleasure and joy from both skiing related activities and appreciating the snow in its natural setting. (male, 30, NSW)

It breaks my heart that my kids won't experience it as I did. (male, 28, Victoria)

Saddens me in many ways. I would love to take my sons skiing here in Australia, but may not be able to in 20 years. (male, 36, Victoria)

I'm lucky, my old bones will probably not see me skiing by that time, but I'll be sad for my kids because it is part of our family identity – family holidays. (female, 47, NSW)

Disaster scenario. Whilst I only spend 10 to 15 days a year in the alpine country, for me it would be dreadful to lose this unique part of Australia. (male, 44, NSW)

As the last response indicates, many comments echoed the central thrust of Tourism Australia's 'National Landscapes' campaign: respondents asserted disappointment over the loss of the 'unique' alpine landscape from the Australian continent:

The alpine area is a very special part of Australia – there is a freshness and authenticity about the area. The obvious change in climate will be unnerving. (female, 54, NSW)

The alpine environment is too precious to lose. (male, 68, Tasmania)

It would be almost tragic for a country like Australia to lose some of its diversity, which is what appeals to so many. When we have so little alpine country, the bits we have are precious. (male, 42, WA)

This last comment points to another key element of cultural significance wrought in the responses. As the only country coterminous with a continent, many respondents indicated that continental-scale landscape-and-ecosystem diversity was something unique to Australia which would be lost through climate change. This natural diversity was, in turn, tied to Australian cultural identity, with some respondents suggesting that our cultural heritage and identity would be altered by the diminution of the snow country:

The Australian identity will be changed forever. The diversity of environments will be diminished. (male, 34, NSW)

Very sad and disappointed. The country will lose its diversity. (male, 40, NSW)

In terms of snow and that region being part of Australia, it's still important. All regions and ecosystems are important! (female, 22, NSW)

It saddens me very much to think that this is happening so quickly, in my lifetime! I think the landscape won't be as interesting if everywhere looks the same – hot and dry. (male, 32, Tasmania)

The responses indicate that alpine landscapes are highly symbolic of a culturally-definitive environmental diversity and, in turn, figure considerably in Australian imaginaries. Subsequently, the loss of the snow country would compromise Australia's entwined environmental diversity and national identity.

Consequently, many suggested that the climate change threat to the Australian Alps could be culturally significant itself, not only in terms of the direct impact on the natural environment and its cultural heritage, but also with regard to immediate, wider responses to climate change. From this perspective, the Australian Alps serve as an example for governments to introduce policies, and citizens to change their lifestyles, to mitigate the effects of global warming:

I think the danger to snowy regions of Australia from global warming should be used as a case to promote the immediacy of the global warming issue. Anyone who has been skiing will appreciate losing the snow and it may convince people to act. The visible signs of global warming are bound to hit these regions first and people can relate to a loss of snow and ecosystem more than a few centimetres of sea level rise. (male, 34, NSW)

CSIRO reports on the impacts of climate change should be motivating Australians to rethink their ways of life. (female, 33, Victoria)

Considering that our snowy areas are so small and under threat it would be good to see a government take assertive and clear action against global warming. (male, 41, Victoria)

It matters to the country because it shows we need to be more proactive in combating environmental issues. (female, 22, NSW)

I think the disappearing snow will be a symbol of Australian laziness, carelessness and disregard for future generations. (male, 28, NSW)

The 'lesson' from the climate change threat to the Australian snow country, then, is two-fold. On the one hand, unabated global warming threatens the alpine landscape and its cultural heritage. On the other hand, the immediacy of the threat to the Australian Alps – a 'unique

national landscape' – urges both policy-makers and people to take action against climate change.

Past, Present and Future: Entwining the Snow Country, National Imaginaries and Climate Change Action in Australia

Country is a multi-layered concept. It can refer to the rural, the nation, countryside and homeland. In this essay I have explored the imbrication between country-as-nation and country-as-rural. The rural, as pastoral countryside and/or wilderness, is often configured in national imaginaries as a powerful site for national identity and belonging. In this essay I have contemplated how this connection unfolds with regard to the Australian snow country, investigating the place of the Australian Alps in national imaginaries. This discussion demonstrates that, at the same time, the Australian Alps are a multi- faceted landscape, insinuating into Australian lives, memories and identities in multiple ways. These overlapping perspectives have shifted back and forth over time. To try to capture the broad and fluid cultural significance of the Australian Alps, I arranged this discussion into three narratives of present, past and future views and values associated with the alpine landscape. In doing this, the aim was not to present a linear story suggesting each trope succeeded previous relationships; rather, they flow into and influence each other. My aim, instead, was to juxtapose multiple and shifting views of the Australian Alps in national imaginaries, suggesting how these valuations are interleaved and layered in national memories and identities.

What makes this a critical investigation is the context of climate change, and insufficient consideration of cultural heritage and significance within climate change arguments. Shifting from a focus on discrete economic or environmental losses, scholars and commentators have begun to recognise that climate change threatens important sites of cultural heritage as well, especially where these values and memories are entwined with fragile landscapes susceptible to the affects of global warming. The Australian Alps are one such landscape, and I hope that consideration of their cultural significance - and that of other threatened regions, such as the interconnected Murray-Darling Basin – adds to demands to address climate change. There is potential to lose the countryside associated with The Man from Snowy River and the legacy of the high country cattlemen, where skiing was 'born' in Australia, and where snow-based activities continue to hold fascination, value and meaning. These cultural losses offer a warning to arrest climate change. But at the same time, as the survey results indicate, this warning adds to the cultural importance of the Australian Alps. The immediacy of the threat to this culturally and ecologically significant national landscape might be used to prompt wider lifestyle changes in Australia culture, encouraging government policies and everyday practices which mitigate climate change effects. In this way, the countryside, national values and climate change action also entwine in important ways, which may provoke culturally-charged responses to global warming.

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