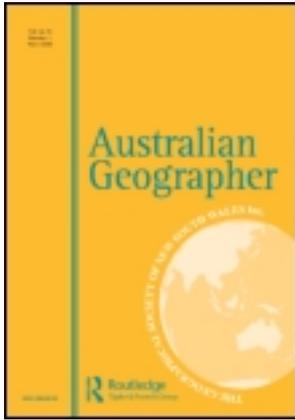


This article was downloaded by: [University of Wollongong]

On: 19 May 2013, At: 19:54

Publisher: Routledge

Informa Ltd Registered in England and Wales Registered Number: 1072954 Registered office: Mortimer House, 37-41 Mortimer Street, London W1T 3JH, UK



Australian Geographer

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/cage20>

Diversifying Ethnicity in Australia's Population and Environment Debates

Natascha Klocker^a & Lesley Head^a

^a Australian Centre for Cultural Environmental Research, School of Earth & Environmental Sciences, University of Wollongong, Australia

Published online: 26 Feb 2013.

To cite this article: Natascha Klocker & Lesley Head (2013): Diversifying Ethnicity in Australia's Population and Environment Debates, *Australian Geographer*, 44:1, 41-62

To link to this article: <http://dx.doi.org/10.1080/00049182.2013.765347>

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: <http://www.tandfonline.com/page/terms-and-conditions>

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae, and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.

Diversifying Ethnicity in Australia's Population and Environment Debates

NATASCHA KLOCKER & LESLEY HEAD, *Australian Centre for Cultural Environmental Research, School of Earth & Environmental Sciences, University of Wollongong, Australia*

ABSTRACT *Population–environment debates in Australia are at an impasse. While the ability of this continent to sustain more migrants has attracted persistent scrutiny, nuanced explorations of diverse migrant cultures and their engagements with Australian landscapes have scarcely begun. Yet as we face the challenges of a climate changing world we would undoubtedly benefit from the most varied knowledges we can muster. This paper brings together three arenas of environmental debate circulating in Australia—the immigration/carrying capacity debate, comparisons between Indigenous and Anglo-European modes of environmental interaction, and research on household sustainability dilemmas—to demonstrate the exclusionary tendencies of each. We then attempt to reorient them in productive ways, by attending to the complexity of environmental sustainability in a context of immense ethnic diversity. Attentiveness to ethnic diversity offers three important insights: (1) Anglo-European Australian understandings of nature and environmentalism are culturally specific, but other perspectives are possible; (2) tensions can arise when ethnic differences in environmental attitude or practice come into contact; and (3) cultural environmental research offers scope to identify ethnically diverse vernacular sustainability practices that should be supported. Each of these threads requires attention in a context where population–environment debates often overlook cultural complexity, and readily spiral into strident anti-immigration sentiments.*

KEY WORDS *Population; environment; immigration; ethnic diversity; cultural environmental research; sustainability.*

Introduction

In Australia, environment, population and sustainability swirl around three related but largely separate discussions: the immigration/carrying capacity debate, comparisons between Indigenous and Anglo-European¹ modes of environmental interaction, and research on household sustainability dilemmas. Each of these strands attends in its own way to comparison and difference, and each has recognised that ethnicity plays an important role in shaping individuals' worldviews, including their attitudes towards nature, environmentalism and sustainability

(Thomas 2001; Head *et al.* 2005). Yet they all demonstrate exclusionary tendencies. Debates over immigration and carrying capacity focus on the numerical rather than the cultural, often positioning migrants as an environmental liability—particularly when they settle in already heavily populated urban areas (CSIRO 2002; Betts 2004; Carr 2010). Opportunities to explore the diverse environmental capacities they bring with them have thus been sidelined. Meanwhile, with important exceptions (Thomas 2001, 2002; Cadzow *et al.* 2010; Goodall *et al.* 2012), discussions of how Australians interpret and engage with this continent's 'natural' landscapes and resources have scarcely looked beyond the Indigenous/Anglo-European binary, to the diverse knowledges brought by migrants from the Pacific, Asia, the Indian subcontinent, the Middle East and Africa. Thus, the Commonwealth government's recently launched *Sustainable Population Strategy* explicitly noted the role of Indigenous knowledges in environmental and planning policy, but not those of diverse migrants (Department of Sustainability, Environment, Water, Population and Communities 2011). And, while cultural environmental research in (sub)urban Australia has made important progress in shifting the focus of environmental debates from 'out there' to the household scale, it has remained predominantly (albeit implicitly) focused on the Anglo-European ethnic majority.

The aim of this paper is to bring together these three strands of debate and reorient them in productive ways *around* ethnic diversity. More than a decade ago, Head (2000, pp. 236–7) drew attention to a gap in knowledge about different 'ways of seeing the Australian natural world' brought by diverse migrant groups. But, in order to take full advantage of the opportunities afforded by ethnic diversity, environmental research and policy needs to display far greater dexterity and openness to difference (Thomas 2001). Here, we argue for greater recognition of the cultural capital offered by diverse Australians, as our society confronts a range of complex and pressing environmental challenges. In doing so, we also seek to shift the population–environment debate from the numerical to the cultural.

The structure of the remainder of the paper is as follows. We first discuss each of the three arenas of debate around human–environment interactions outlined above, highlighting their cultural specificity. We then call for greater consideration of ethnic diversity in these debates, through a review of international and Australian literature. Attentiveness to ethnic diversity reveals tensions arising from differences in environmental values, attitudes and practices; at the same time as it offers opportunities to progress environmental debates by providing evidence of diverse sustainabilities. We argue that cultural environmental research approaches—while only starting to be attuned to ethnicity as a variable—offer an important framework for opening Australian environmental debates and policy to difference. Of course, Australians from migrant backgrounds are not a coherent group. They are distinguished not only by ethnic differences but also by religious, cultural and linguistic heterogeneity; visa status and duration of residence in Australia. Migrant groups are also internally diverse according to attributes such as age, socio-economic status and gender. Cultural environmental research needs to be attuned to these various axes of difference—between and within broad ethnic groupings.

Immigration, carrying capacity and the environment

Neo-Malthusian debates over the optimal population size for this continent have been a preoccupation of Australian academics and policy makers since Griffith

Taylor. Discussions have focused on the environmental sustainability of Australia's overall immigration intake, as well as its distribution across the continent (Cocks 1996; Fincher 1998, 2011; Hugo 2010, 2011; Walker 2010; McGuirk & Argent 2011). Concerns over the size of Australia's population were reinvigorated with predictions in the 2010 *Intergenerational Report* that there would be 35 million of us by 2049 (Commonwealth of Australia 2010). This prediction prompted a glut of media attention and public debate (Kelly 2010; Smith 2010a), which saw the designation of a Federal Minister for Population for the first time in 2010 and the release of Australia's first *Sustainable Population Strategy* in 2011 (Department of Sustainability, Environment, Water, Population and Communities 2011).

Immigration has indeed made a sizeable contribution to Australia's population. According to the 2011 Census of Population and Housing, one quarter of all Australians are first-generation migrants and a similar proportion have overseas-born parents (ABS 2012a). The ethnic mix of the Australian population has changed substantially over time, and by 2011 only 57.7 per cent of Australian residents claimed solely Anglo-Celtic/Saxon ancestry (ABS 2012b). The top 10 source countries of migrants to Australia in 2010–11 reflect this increasing diversity: New Zealand, China, UK, India, Philippines, South Africa, Malaysia, Vietnam, Sri Lanka, South Korea and Ireland (DIAc 2011). Net overseas migration has contributed anywhere between 43.1 and 66.2 per cent of the total annual population increase since 2000 (see Table 1). Significantly, 80 per cent of new migrants settle in Australia's capital cities (Hugo 2010), which already face a range of 'liveability' challenges and population pressures such as urban sprawl, traffic congestion, pressure on water resources and housing affordability. Critics of population growth have apportioned much of the responsibility for these challenges on immigration² (Betts 2004; Australian Conservation Foundation 2009; Carr 2010; Smith 2010a, b). Population policy mechanisms have also focused (arguably disproportionately) on immigration—not only because of its numerical significance but also because these are the easiest levers to adjust (Hugo 2010). The fertility rates and settlement patterns of the existing population are far harder to shift.

The Commonwealth government's *Sustainable Population Strategy* and the *Demographic change and liveability panel report* informing that strategy (Hugo 2010)

TABLE 1. Contribution of net overseas migration to annual population increase, Australia, 2000–10

Year	Net overseas migration (No.)	Net overseas migration (as percentage of total population increase)
2000–01	135 700	52.2
2001–02	110 600	46.4
2002–03	116 500	47.7
2003–04	100 000	43.1
2004–05	123 800	46.3
2005–06	146 800	48.4
2006–07	232 800	62.2
2007–08	277 300	65.1
2008–09	299 900	66.2
2009–10	215 600	57.2

Source: ABS (2011).

endeavoured to introduce some balance into Australian population–environment debates, by acknowledging that immigration and population growth bring both challenges *and* opportunities, and that ‘[p]opulation is not the cause of, or solution to, all of Australia’s challenges’ (Department of Sustainability, Environment, Water, Population and Communities 2011, p. 27). Yet population–environment debates continue to attract ‘heated discussion, emotion, and too often bigotry and racism’ (Hugo 2010, p. 46). In Australia, as in North America, environmental advocates of reduced immigration have been accused of racism—or, at the very least, of playing into the hands of groups with openly racist agendas (Ehrlich 2002; Flannery 2003; Betts 2004; Neumayer 2006). Meanwhile, academics and commentators concerned by the potential for anti-immigration sentiments to flourish in the name of environmentalism have been charged with inappropriately playing the racism card in an ‘objective’ environmental debate (Ehrlich 2002; Flannery 2003; Betts 2004; Neumayer 2006). Whilst this impasse is undoubtedly frustrating, it would be naïve to anticipate that debates over the environmental impacts of immigration could sidestep such accusations—given the historical and contemporary racialisation of immigration debates and the Anglo/Eurocentrism of mainstream environmentalism. Western environmental movements have been widely criticised for the lack of ethnic diversity in their leadership structures; the Anglo/Eurocentric, middle-class environmental concerns and understandings of nature that they prioritise; their failure to acknowledge other forms of environmental expertise; and for blaming environmental destruction on immigration rather than Western lifestyles (Salazar & Hewitt 2001; Jones 2002; Neumayer 2006; Davison 2008; Bradley 2009; Haluza-DeLay & Fernhout 2011).

The positioning of immigration as an environmental issue in Australia clearly has important ramifications for ethnic minority migrants³—whose right to occupy the national space has been continuously questioned on cultural grounds, and who are now confronted with the additional burden of blame for environmental woes in slogans and catchcries such as ‘f**k off we’re full’ and ‘we grew here, you flew here’. A resurgent Australian nationalism and contemporary population–environment debates are intrinsically linked (Burnley 2003). Environmental concerns have been all too readily exploited by those with more nefarious objectives, as ‘an embattled environment becomes a metaphor for embattled Australianness’ (Thomas 2001, p. 27; Anderson 2005). Thus, the anti-immigration stances of hardcore racist organisations have been bolstered by recourse to environmental arguments. In March 2010, Australian white supremacist group ‘Stormfront’ (which subscribes to the slogan ‘White Pride, World Wide’) used its website to actively promote the documentary *Dick Smith’s Population Puzzle*, which has argued (albeit in colour-blind terms⁴) for immigration reduction on environmental grounds. Perhaps recognising the inherent risk of acquiring such unsavoury supporters, several of Australia’s leading environmental groups (including the Australian Greens and Friends of the Earth) have been more reticent to name immigration-led population growth as the cause of environmental degradation (Betts 2004; Walker 2010; Fincher 2011). There is thus something of an impasse, which will only intensify as climate change contributes to the many other factors driving human mobility. In such a context we hope that cultural environmental research provides something of a circuit-breaker. While not a panacea, such research holds considerable potential to uncover, and in turn herald, the unique environmental values, knowledges and skills of diverse migrant groups. It offers opportunities to

disrupt the ‘problem’ status so often ascribed to migrants in environmental debates, and to undermine the legitimacy of those who exploit environmental concerns to foster prejudice.

Entanglements with ‘natural’ landscapes and resources: the Indigenous/Anglo-European binary

Where ethnicity has been discussed in relation to Australian environmental issues, it has been mostly to compare Indigenous and Anglo-European attitudes and actions. Indigenous environmental interactions are widely seen as being adapted to Australian conditions, albeit hewn into that relationship over a long time period. Anglo-European Australians, on the other hand, are argued to have misread the Australian environment, attempting to impose a European sensibility and mode of operation onto it (Lines 1991). There are several variations within this theme. Indigenous hunter-gatherer stewardship over tens of thousands of years has been contrasted with the massive and rapid changes wrought by Anglo-European agricultural occupation over the last 200 years (Australian State of Environment Committee 2011). Indigenous impacts via hunting, gathering and the use of fire have stimulated fierce debate and critique (Jones 1969; Flannery 1994; Langton 1998; Head 2000; Horton 2001). Others have pointed to evidence of strong environmental engagement by some colonial settlers (Bonyhady 2000). Debates were heated partly because both the categories ‘Indigenous’ and ‘Anglo-European’ are too broad. The former encompasses and glosses over considerable spatial and temporal variability (Lourandos 1997; Keen 2003). So too, the category Anglo-European includes at least two quite different environmental sensibilities; the anti-human wilderness and conservation-focused ethic of colonising New World societies such as the USA (Nash 2001), and the more human-inclusive view of nature characteristic of Britain and north-west Europe (Saltzman *et al.* 2011). Ethnic minority migrants’ views of the Australian environment and understandings of ‘nature’—including some with long-standing presences in Australia (Chinese, Indian and Afghan)—have largely been omitted from environmental research framed within this binary (exceptions are: Thomas 2001, 2002; Cadzow *et al.* 2010; Goodall *et al.* 2012).

Similarly, while rural geographers in Australia (as in the UK) have begun to debunk suggestions that rural areas are devoid of ethnic diversity (Askins 2009; Panelli *et al.* 2009; Dufty & Liu 2011), research on sustainable land and natural resource management practices has scarcely engaged with this theme (Stratford & Davidson 2002; Missingham *et al.* 2006). Yet, as Alston (2004, p. 40) has noted, ‘there is a great deal of ethnic diversity in [Australian] farm families’, and this has been present for some time. Stratford and Davidson (2002, p. 433) used the example of a nineteenth-century Chinese settler who wrote, in 1903, about his experiments exploring the climatic suitability of Tinaroo (Queensland) for rubber and cotton growing—but such records are scarce. Today, ethnic minority groups have a tendency to cluster in particular rural locations: ‘Indian growers on the NSW north coast and in northern Victoria, and Vietnamese farmers around Perth’ (Alston 2004, p. 40). The numbers involved are not insignificant. In 2001, 40 per cent of horticulturists in Victoria’s Goulburn Valley, and 33 per cent of those in Sunraysia (spanning south-west NSW and north-west Victoria) spoke a language other than English at home (Missingham *et al.* 2006). And, if we shift attention to

the peri-urban fringe of Australia's capital cities, ethnic minority farmers represent 80–90 per cent of the market gardening and cut-flower sector (Missingham *et al.* 2006). The persistent exclusion of these diverse groups' knowledges from environmental and natural resource management debates signifies a stubborn Anglo/Eurocentric myopia. Efforts to learn from the environmentalisms of these diverse groups may help to foster innovative and adaptive land and resource management practices in the context of climate change. This is likely to be of growing importance given government policies encouraging migrants and refugees to settle and work in rural and regional Australia on a permanent or temporary basis (e.g. the Pacific Seasonal Worker Scheme and the Temporary Skilled Migration (457) Visa Scheme). Government schemes have introduced substantial numbers of migrants and refugees into areas of Australia with minimal recent exposure to migration. The Regional Sponsored Migration Scheme offered 16 000 places in 2011–12 (Department of Sustainability, Environment, Water, Population and Communities 2011); the State Specific and Regional Migration Scheme accounted for 21.2 per cent of the 2008–09 migration intake (Hugo 2010); and about 20 per cent of the annual refugee intake is now being settled outside of capital cities (DIAc 2009). Better engagement with non-Anglo/European environmental knowledges and values in rural Australia is also likely to be critical given the recently launched *National Food Plan: Green Paper* which pitched an Australian agricultural future more open to Asian investment and markets (Commonwealth of Australia 2012).

Cultural environmental research and household sustainability

If we shift attention to the sustainability of (sub)urban landscapes, communities and households—and the quotidian attitudes, habits and practices of the people inhabiting them—cultural environmental research in Australia, as elsewhere, remains largely an Anglo-European affair. Geographers have recently expressed a renewed interest in 'how the material culture of the home is performed' (Nansen *et al.* 2011, p. 693; see also Blunt 2005; Gregson 2007; Reid *et al.* 2010; Gibson *et al.* 2011); highlighting the pivotal role of culture in influencing domestic sustainability (Lane & Gorman-Murray 2011; Gibson *et al.* 2013). The environmental implications of the culturally specific rhythms, routines, habits and practices of householders have attracted attention in diverse studies focusing on: cultures of automobility (Urry 2004; Sheller 2004); the organisation and structure of dwellings, and composition of households (Jarvis 2011; Klocker *et al.* 2012); water use, showering and expectations of cleanliness (Shove 2003; Askew & McGuirk 2004; Allon & Sofoulis 2006); gardens and gardening (Head *et al.* 2004); waste production and divestment (Bulkeley & Gregson 2009); and energy use (Lutzenhiser 1992; Gibson *et al.* 2013)—among other things.

This shift in focus to the household scale has been prompted, in part, by the growing focus of Western policy makers on individual/household responsibility for sustainability, and awareness that households contribute a large share of carbon emissions. In Australia, calculations of household greenhouse gas emissions vary depending on where responsibility is attributed: 13 per cent if only direct energy use within the household is considered, and 56 per cent if the emissions embedded in externally produced goods and services consumed in the household context are included⁵ (ABS 2003). But programs and policies promoting sustainable consumption have done little to factor in the immense ethnic diversity of the Australian

population, and we currently know very little about how ethnically diverse Australians ‘conceptualise issues such as sustainability, climate change and waste, and how they use resources such as energy and water in the home’ (Maller 2011, p. 237). A shift in focus towards sustainable consumption also raises thorny questions over what happens when migrants, particularly from the Majority (developing) World, move to the industrialised West—most crucially, do they then adopt the high-consuming lifestyles of their Western counterparts? (Chatman & Klein 2009; Squalli 2010). Of course, we cannot assume that all migrants have low-consumption lifestyles. Given Australia’s current preference for skilled migration, many are likely to have been comparatively high-consuming elites well before settling here. Such complexities require empirical investigation.

Bringing ethnic diversity into Australian sustainability debates

Our brief overview of these three key arenas of environmental debate demonstrates their cultural specificity and the extent to which they have been boxed-in by a focus on immigrant numbers. But we want to look beyond this to ask what other perspectives are possible. Our motivation is two-fold: to intervene productively in the anti-immigration rhetoric that has arisen in the name of environmentalism, and to foster a mode of environmental thinking that is open to difference, contingency and surprising possibilities. We concur with Heather Goodall (2008, p. 16) that we need to ‘open up the cultural constraints of western philosophies and colonial legacies’ that frame Australian environmental thinking, and gather all of the cultural insights we can muster in order to ‘change the world’. Even Paul Ehrlich (2002, p. 32), author of *The Population Bomb* (1968)—a renowned neo-Malthusian and vociferous critic of population growth at the national and global scale—has acknowledged the importance of a cultural perspective:

[W]hat is desperately needed now is much better understanding of the ways in which culture evolves and determines . . . humanity’s treatment of its life support systems. We need to comprehend how cultural evolution produces the vast diversity of human natures—different fundamental attitudes, beliefs, proclivities, preferences . . . and behaviours. That should help us discover how to reconfigure social, political and economic incentives and cut through barriers of ignorance and denial, allowing society to turn onto a path toward sustainability.

In the remainder of this paper we gather together insights gleaned from environmental research that has paid attention to ethnic difference. Given our focus on the Australian context, we necessarily restrict this review to research conducted here and in other Western countries of high immigration. This paper cannot account for the enormous range of ethnically diverse sustainabilities being practised throughout the Majority World. Much existing research is US based and has occurred within the fields of leisure studies, environmental psychology and environmental justice/racism. Examples from other contexts (including Australia) are scarce. Our review reveals both tensions and possibilities; and shows the importance of shunning essentialising tendencies and reductive thinking when bringing ethnic diversity into environmental debates.

Diverse environmental values and practices: understanding tensions

Research on ethnic diversity and sustainability has regularly questioned the level of environmental concern present among ethnic minority groups living in the industrialised West, with a particular focus on African Americans (and to a lesser extent Latinos) in the US-dominated fields of leisure research and environmental psychology (Mueller & Gurin 1962; Washburne 1978; Lynch 1993; Jones 2002). A key point of departure for such concerns was evidence of low national park visitation rates by ethnic minority groups, taken to signify their ambivalence about nature and (by extension) the environment (see Askins 2009; Bradley 2009; Taylor 2011 for critiques). This view underpinned suggestions that ethnic minority groups be encouraged to spend more time 'in nature' to develop a sense of environmental responsibility and appreciation mirroring that of the (Anglo-European) ethnic majority (Gentin 2011; Larson *et al.* 2011). But the presence of ethnic minority groups in 'nature' is only tolerated when they live up to the normative behaviours governing these spaces; and tensions arise when this does not occur. Criticisms have surrounded the fishing and shellfishing practices of Vietnamese migrants in Australian national parks and urban bushland (Thomas 2002; Cadzow *et al.* 2010). And unique tensions exist between migrant groups and Indigenous traditional owners when both seek to access the same natural resources for cultural or economic reasons. For instance, Hansis (1996) noted conflicts between Native Americans and Southeast Asian and Latino migrants over the harvesting of 'special forest products' (such as mushrooms, beargrass, huckleberries and medicinal herbs) in US forests.

Tensions between ethnic majority and migrant environmental values, uses and modes of stewardship have also been documented in rural landscapes, although such research is sparse. Mountjoy (1996) critically compared the 'high-risk' farming practices of Mexican strawberry farmers in California to the more careful soil erosion and control practices of Anglo-American and Japanese growers. Closer to home, Parker (2000) criticised Sydney's Asian market gardeners for a lack of technical knowledge and poor practices in applying chemicals. While such concerns may be legitimate, there is a problem in suggesting that good environmental practices necessarily diffuse from the (Anglo-European) ethnic majority to ethnic minority groups (Missingham *et al.* 2006); without acknowledging the potential for reciprocal learning (Stratford & Davidson 2002). The importance of reciprocity has, of course, been acknowledged in literatures on everyday multiculturalism and interculturalism, which recognise that there is much to be gained when cultural differences are negotiated (rather than erased) and when dialogue, exchange and transformation occur in all directions, between and across diverse migrant and host communities (Amin 2002; Wise & Velayutham 2009). Environmental research and policy would benefit from such an engagement with cultural difference. But this has seldom been the case. Instead, stereotypes surrounding ethnic minorities' perceived lack of environmental understanding and concern have been bolstered by attitudinal studies.

Who cares about the environment?

Environmental psychologists have argued that values are deeply influenced by ethnicity, with implications for the levels and types of environmental concern

expressed by various ethnic groups (Schultz *et al.* 2000; Johnson *et al.* 2004; Deng *et al.* 2006; Li & Wehr 2007). This is certainly a valid starting point. However, such research has tended to pit ethnic groups against one another for the title of most (and least) environmentally concerned, based upon standardised scales that purport to capture individuals' adherence to particular sets of environmental values; most frequently the New Environmental/Ecological Paradigm (NEP).⁶ These exercises usually demonstrate that the (Anglo-European) ethnic majority is more environmentally engaged and concerned than ethnic minority groups, including African Americans, Latinos and Asians (Johnson *et al.* 2004; Deng *et al.* 2006). In the only study of its kind that we know of in Australia, Leung and Rice (2002) found that Anglo-European Australians were more likely to endorse NEP values than Chinese-Australians. Environmental psychologists have also regularly compared the environmental behaviours of ethnic groups via a small number of indicators—usually a combination of household recycling, environmental group joining, environmental reading, green consumption and participation in nature-based outdoor recreation (Leung & Rice 2002; Johnson *et al.* 2004; Larson *et al.* 2011). In such studies the (Anglo-European) ethnic majority, and the most acculturated migrants, have typically 'performed' most highly (Leung & Rice 2002; Johnson *et al.* 2004). Again, the suggestion here is that environmentally beneficial attitudes and behaviours diffuse from the (Anglo-European) ethnic majority to ethnic minority groups over time. Such arguments risk positioning ethnic diversity as a threat to the maintenance of particular natural environments—and to environmentalism itself—and as a challenge to be overcome through assimilation.

Questions have circled around a perceived lack of environmental activism and environmental group joining among ethnic minority groups in diverse places including: New York (Pfeffer & Stycos 2002); the south of England (Clarke & Agyeman 2011); NSW (Department of Environment and Conservation 2005); and rural Australia (Hogan & Cumming 1997). But disengagement, where it does exist, may reflect language barriers and the exclusionary Anglo/Eurocentrism of mainstream environmentalism. In a study of environmental sustainability and faith communities in Victoria, Australia, Lawson and Miller (2011) reported that Muslims were hindered from joining local environmental groups by their choice of meeting venue: the pub. In other instances, a lack of engagement may reflect a culturally ingrained discomfort with activism (Department of Environment and Conservation 2005); or cultural differences in perceptions of who (e.g. the government, or the individual) is responsible for the environment (Clarke & Agyeman 2011). Studies measuring a wider range of attitudes, values and behaviours—beyond the limiting quintet of recycling, environmental activism, environmental reading, green consumerism and nature participation—have challenged myths that ethnic minority groups are environmentally ambivalent, instead reporting equal or higher levels of concern and engagement (Schultz *et al.* 2000; Jones 2002; Whittaker *et al.* 2005). A recent study of 805 persons from eight migrant backgrounds in NSW (Arabic speaking, Chinese, Greek, Italian, Korean, Macedonian, Spanish and Vietnamese) found that they were more likely to be 'very concerned' about environmental problems than a NSW community-wide sample (1421 persons) surveyed in 2003 using the same instrument (42 per cent *vs* 31 per cent; Department of Environment and Conservation 2003, 2005). Ethnic minority respondents were also more likely to identify the environment as a very important

personal priority (71 per cent *vs* 54 per cent; Department of Environment and Conservation 2003, 2005). Differences also emerged between the various migrant groups included, although such detail is beyond the scope of this paper. While there are clear limitations in making such comparisons—given the time-lag between the community-wide and minority language surveys—the Department of Environment and Conservation study is the first of its kind (of which we are aware) to be conducted in Australia. It undoubtedly points towards some interesting areas for future exploration and clarification. In addition, decades of work in the fields of environmental racism and justice has shown that—far from being ambivalent about environmental issues—ethnic minorities may be concerned about *different* environmental issues than the majority. Ethnic minority groups have consistently expressed concern about environmental matters directly related to quality of life in the context of their ‘daily living space’, such as air pollution (Clarke & Agyeman 2011, p. 1778; Reed & George 2011). Meanwhile, middle-class Anglo-Europeans often express greater concern about ‘remote’ environmental issues (such as species extinction), and have a greater propensity to self-identify as environmentalists (Jones 2002; Mohai 2003; Department of Environment and Conservation 2005; Whittaker *et al.* 2005; Clarke & Agyeman 2011). These findings underscore the important point that ethnicity not only affects environmental attitudes and values but also affects individuals’ ‘performance’ on standardised instruments of environmental concern and engagement. Latent constructs may also be understood differently across ethnic groups—including, for instance, whether they relate to the label ‘environmentalist’—and how they define environmentalism (Li & Wehr 2007).

Acknowledging diverse ‘natures’ and environmentalisms

From a social scientific perspective it is clear that there are diverse ‘ways of seeing the same natural phenomenon, event or environment’ (Whatmore 1999, p. 7); and that ethnic background partially conditions individuals’ perceptions of, and propensity to engage with, ‘nature’ (Buijs *et al.* 2009; Jay & Schraml 2009). The foundations of Western environmentalism (and in particular, the ‘New World’ national parks movement of the USA, Canada and Australia) lie in the Cartesian dichotomy of nature–culture, which is far from a universal norm (Lynch 1993; Buijs *et al.* 2009). Critics have charged that the wilderness concept and conservation ethic reflect the interests of predominantly Anglo-European and middle-class environmentalists and their cultural, social and political priorities (Merchant 2003; Baldwin 2009). The meanings that diverse migrant groups attach to ‘natural’ places—such as European or North American forests and the Australian bush—are shaped profoundly by experiences and values from their countries of origin (Thomas 2001, 2002; Byrne *et al.* 2006; Goodall *et al.* 2009; Cadzow *et al.* 2010). Ethnic minority groups’ diverse engagements (or, in some cases, non-engagements) with particular ‘natural’ places and environmental issues can be attributed to alternative understandings of nature and different environmental priorities rather than a lack of concern *per se*. Any efforts to bring ethnicity into Australian environmental debates will need to occur with sensitivity to such differences in order to avoid comparing diverse environmentalisms on purportedly universal (but, in reality, culturally loaded) measures.

In Australia and North America, the ‘New World’ wilderness ideal is firmly entrenched. However, studies conducted with a range of migrants in North

America, Europe and Australia have found that many groups hold a more functional image of 'nature' and express a preference for managed landscapes where they can engage in large group activities such as picnics and barbecues (Thomas 2002; Stodolska & Livengood 2006; Buijs *et al.* 2009; Goodall *et al.* 2009; Jay & Schraml 2009; Gentin 2011). This view is prevalent among many European migrants to Australia, thus serving as an important reminder that the term 'Anglo-European' encompasses considerable diversity and that there is no single Western environmentalism (Thomas 2001; Drozdowski 2007). From such a perspective, humans are fully imbricated within nature and are responsible for (carefully) managing it. This view of nature—which contributes to the aforementioned conflicts surrounding fishing and forest product harvesting—is also attributable to the rural origins of many migrants; thus ethnicity is just one of many variables affecting environmental values (Thomas 2001, 2002; Buijs *et al.* 2009; Gentin 2011). Of course, cultures of nature are highly dynamic. Perceptions shift within and between immigrant generations, as the children of migrants (and the migrants themselves) assume some of the values and norms of their adopted country (Thomas 2001, 2002). It is thus crucial to avoid the formulation of 'nature myths' about diverse ethnic groups, through reductive understandings of the role played by ethnicity (Askins 2009). Only a smattering of research has moved beyond quantitative measurements that pit diverse groups' environmentalisms and sustainabilities against Western norms (see, for instance, Thomas 2001, 2002; Byrne *et al.* 2006; Askins 2009; Bradley 2009; Goodall *et al.* 2009; Cadzow *et al.* 2010). In the remainder of this paper we wish to shift attention towards the role that cultural environmental research could play in revealing unheralded ethnically diverse everyday sustainabilities, and thus in dissipating some of the tensions we have discussed.

Ethnically diverse vernacular sustainabilities: untapped potential?

Depending on how we look at it, culture can present either an obstacle or a resource for attempts to shift towards more environmentally sustainable lifestyles. While cultural proclivities and norms can present a stumbling block between environmental concern and sustainable practices, they also contribute to a whole host of diverse (and at times unexpected and unintentional) sustainabilities (Seyfang 2005; Allon & Sofoulis 2006; Bulkeley & Gregson 2009; Klocker *et al.* 2012). Cultural environmental research thus offers great potential for moving beyond normative, Western assumptions of what it means to be 'green', and allows alternative pathways for action to be imagined (Gibson *et al.* 2011; Waitt *et al.* 2012). Recently, much cultural environmental research has focused on unpacking everyday domestic routines. Somewhat surprisingly, such scholarship has had little yet to say about ethnic diversity. In the remainder of this paper we draw attention to promising signals emerging from the limited research on ethnically diverse household sustainabilities that does exist, and explicate the need for further research in this vein.

Water has been a common theme in research on ethnically diverse household sustainabilities. In New York, Pfeffer and Stycos (2002) observed that immigrants were significantly more likely than the US-born to constrain their personal water consumption for environmental reasons. Similarly, in Australia, Allon and Sofoulis (2006, p. 50) found that suburban do-it-yourself water recycling practices were most often attempted by research participants with 'some memorable prior

experience of living where water was supplied and used differently—whether rural Australia or overseas. Many immigrants bring with them exposure to diverse ‘regimes of water’ and thus hold an ‘imaginative capacity’ to use water differently, and to shift dominant cultures of water use; especially during times of water scarcity/restrictions (Allon & Sofoulis 2006, p. 51; Maller 2011). These types of everyday skills, knowledges and adaptive capacities have been largely overlooked in policy. It is worth noting again that the Commonwealth government’s recent *Sustainable population strategy* failed to acknowledge this potential.

The NSW Department of Environment and Conservation’s (2005) findings on ethnic diversity and household sustainability were mixed—and contingent upon the particular practice being measured. Ethnic minority participants were less likely (than the total community sample) to buy environmentally friendly products and re-use items, but *more* likely to claim that they saved water and purchased energy-efficient light-bulbs (Department of Environment and Conservation 2003, 2005). Ethnic minority respondents who were born in Australia were less likely to indicate that they ‘often’ reduced their energy consumption (by turning off lights, using heating/cooling more efficiently), than those born overseas (51 per cent *vs* 69 per cent; Department of Environment and Conservation 2005). These observations suggest that acculturation to Western patterns of domestic consumption post-migration may, in some instances, be an environmental liability—contrary to the assertions made in the environmental psychology literature discussed earlier (see also Maller 2011). In addition, half of the ethnic minority participants in the NSW Department of Environment and Conservation’s survey grew vegetables, fruit and/or herbs in their gardens, with Italians and Vietnamese being the most likely to do so. Comparative figures on garden food production were not provided for the total community sample, although Head *et al.* (2004) observed that Vietnamese and Macedonian migrants living in Australia generally grew more food in their backyards than those from British backgrounds, although this practice declined across generations. At a time when consumers are being urged to shift towards more sustainable food systems by purchasing organic and local produce, the (often unintentional) sustainability benefits of these self-provisioning practices should not be overlooked (Jehlička & Smith 2011). This is not to say that food provisioning skills are absent in the non-migrant population; witness, for example, the history of food production in twentieth-century suburbs (Gaynor 2001) and the contemporary community and urban gardening movements (Bartolomei *et al.* 2003; Mason & Knowd 2010). Food self-provisioning is also dependent, of course, upon the availability of land, which is more challenging in contexts of apartment-living. According to the 2011 Australian census (ABS 2012c), migrant households reside in apartments, flats or units at nearly twice the rate of the Australian-born (15.2 per cent compared to 8.7 per cent); and those who arrived in Australia between 2005 and 2010 are even more likely to do so (35.4 per cent). While this likely raises barriers for household food production, apartment-living may also generate sustainability benefits through reduced (sub)urban sprawl and road space, and fewer metres of living space per capita—although the jury is still out on whether apartment-living is inherently more environmentally sustainable than detached housing, given concerns around energy use in common areas (hallways, foyers, lifts, car parks, gyms) of modern apartment complexes (Moriarty 2002; Blundell 2010; Tony Arnel—Chair of the World Green Building Council and Green Building Council of Australia—cited in Australian Design Review 2011). Complex tradeoffs

shape the calculus of household sustainability and these require further exploration (Gibson *et al.* 2013).

Practical stumbling blocks exist around numerous other everyday sustainabilities practised by migrant households. Cultural environmental research highlights the need to confront these barriers, and to find ways of supporting the continued existence of diverse sustainable practices. For instance, in a recent study of extended family living in Wollongong, households from Italian migrant backgrounds were over-represented (Klocker *et al.* 2012). Diverse household compositions and formations across ethnic groups require greater attention—particularly given evidence of Australia’s shrinking average household size, and the fact that per capita (direct and indirect) energy and water use are inversely related to the number of people per dwelling⁷ (Keilman 2003; Klocker *et al.* 2012). Yet in Australia, dwelling designs currently do not take diverse household compositions and structures into account (Dowling & Mee 2007; Klocker *et al.* 2012); and thus frustrate the potential for these quotidian sustainabilities to be adopted on a broader scale. But barriers to (more) sustainable living options are not always structural. In the USA, Chatman and Klein (2009) found that the foreign-born were significantly more likely to use public transport, carpool, walk and bicycle than the US-born, particularly during the first few years post-migration. Even after 21 years in the USA, immigrants still used public transport at twice the rate of the US-born (Chatman & Klein 2009). Although much of this discrepancy was attributable to socio-economic position; the authors argued that migrants’ experiences in the home country, household size and cultural identity were also important variables (Chatman & Klein 2009). However, concerns over safety and experiences of racism on public transport were key factors encouraging migrants to increase their personal car use over time; thus social factors may also hinder the maintenance of sustainable behaviours in ways that are readily overlooked when ethnic diversity is not included in analyses. In Australia, 2011 census data indicate that 73.9 per cent of overseas-born persons used private motor vehicles as the sole means of transportation to and from work, compared to 83.7 per cent of the Australian-born. Markedly fewer (66.6 per cent) of those who arrived in Australia after 1992 used private motor vehicles only (ABS 2012d). Important variations also exist depending on the birthplace of migrants, with those born in Asian countries relying least on private motor vehicles for the daily work commute. These examples raise the important question of how policy makers might better support the maintenance (and even expansion) of the vernacular sustainabilities being practised by ethnically diverse groups—particularly in the first few years post-migration. An important first step is surely to acknowledge (and herald) their existence.

In keeping with this logic, Bradley (2009) compared the households of immigrants and Swedish-born residents of Stockholm, and criticised urban sustainability planners for their neglect of ethnically diverse vernacular sustainabilities and prioritisation of neoliberal environmentalism. Government discourses of sustainability encouraged low-income and migrant households (Kurdish-Iraqi and Somali) to recycle, use public transport, buy energy-efficient light-bulbs and keep their local areas clean and tidy—and, ultimately, to meet the environmental sensibilities and practices of ‘well-behaving Swedes’ (Bradley 2009, p. 347). However, these same discourses ignored the implications of lifestyles adopted by the high-income Swedes who participated in Bradley’s research—including large house sizes, dual home ownership, high rates of car ownership and use, frequent air

travel for overseas holidays and shopping activities in heated indoor malls. Conversely, immigrant householders rarely flew or drove (or even owned cars) and lived on far fewer square metres per person (Bradley 2009). While it was true that Swedes recycled more, consumed organic food and expressed more environmental concern—they had larger ecological footprints (Bradley 2009). Because environmental policies in Stockholm were framed according to Swedish norms, the energy consumption of high-income Swedes went unchallenged, while the low-consuming lifestyles of migrants became the (misguided) focal point of policy and intervention (Bradley 2009). This ‘skewed policy focus’ is certainly not unique to Sweden (Bradley 2009, p. 359; Head 2012).

These studies raise important questions about the types of sustainability that are acknowledged and valued; and whether the trajectory of migrant households must be to acculturate to increased consumption patterns post-migration, or what alternative pathways could be imagined (Maller 2011). As the vernacular sustainabilities of some migrant households may also be associated with socio-economic disadvantage, it may be challenging to find ways of maintaining low-consumption lifestyles that do not depend upon their remaining ‘poor’. There is then an additional question of how these sustainabilities may be promoted as an aspiration for the Anglo-European majority—and how we may foster a sense of ‘keeping up with’ the Nguyens, Lis, Singhs and Ismails rather than the Joneses, with respect to at least some elements of household sustainability. Of course, some quotidian sustainabilities are likely to be less common in migrant households; including practices such as composting, which may be hindered by comparatively high rates of apartment living; or reduced toilet-flushing, which may seem anathema according to some cultures of cleanliness (Medd *et al.* 2007). The re-use and exchange of items may also be difficult for migrants (particularly the recently arrived), as these processes often rely upon well-established social networks (Watson & Lane 2011). We also do not wish to imply that the practices of diverse migrant households are necessarily and of themselves more sustainable than others, and some culturally different practices are likely to be in conflict with one another. A further role for cultural environmental research is thus to clarify the bases of conflict in order to help resolve them (Gill 1994); and to better understand the points of friction and traction afforded by ethnic diversity.

The literature reviewed here has focused largely on urban households, but potential undoubtedly also exists to apply ethnically diverse knowledges to complex environmental challenges surrounding land and natural resource management; although examples of such research are even thinner on the ground. The rural has often been imagined as ethnically homogeneous, constructed in stark opposition to urban multiculturalism. Contesting such discourses may offer scope for imaginative possibilities to emerge (Askins 2009), thus promoting: ‘more and potentially improved information on which to base decisions and policy . . . improved adaptive capacities in relation to changing environmental parameters; and possibly a greater ability to address major and complex land and water degradation issues’ (Stratford & Davidson 2002, p. 431). As argued by Cadzow *et al.* (2010, p. 137) in relation to management of Sydney’s George’s River, which is used extensively by a number of ethnic minority groups, these groups are ‘not empty vessels waiting to be filled with environmental ideas’, rather, their ‘environmental knowledge needs to be valued and used more [and] could be used in looking after river areas’. Cultural environmental research, with its focus on everyday *practices* of sustainability, has

a great deal to offer any attempts to shift towards more expansive conceptualisations of ethnicity, nature and environmentalism across all of these diverse scales and landscapes.

Concluding remarks

In this paper, we have sought to position ethnic diversity at the forefront of cultural environmental research and debates over household sustainability. Our motivation for doing so has been two-fold. First, it is clear that ethnically diverse Australians constitute a rich source of knowledge and practice. Second—and returning to the opening pages of this paper—a focus on the quotidian sustainabilities of ethnic minority groups may act as a circuit-breaker in existing debates that simplistically blame migrants for environmental harm, and struggle to envision these diverse individuals and groups as more than numbers. Of course, cultural environmental research is not a panacea to the complex intertwining of nationalism and environmental concern in contemporary population debates and this approach does not displace the ongoing need for broader, concerted anti-racism scholarship, policy and activism. But greater openness to diverse sustainabilities may help us to ‘overcome the stale binaries and blindspots of a population–environment debate that will not go away’ (Anderson 2005, p. 280). Nor do we suppose that cultural environmental research will reveal that ethnic minority practices are always more sustainable than others, or that ethnically diverse sustainabilities can entirely temper the environmental impacts of immigration. Rather, we have argued that this is an empirically open question and that such practices are a source of cultural variability yet to be fully analysed. As we grapple with a range of complex environmental challenges, here in Australia and globally, we ought to tap into all of the creative capacities and possibilities at our disposal. Migrants are much more than numbers added onto the Australian population annually, creating national- and local-level population pressures and environmental harm purely by being here. An alternative framing could position them as valuable (and valued) resources for thinking through the ways we organise and run our cities, towns and regions; for how we operate and live in our households and on our farms; and for how we relate to and use our natural resources and environments. Existing research has largely fallen short of demonstrating this complexity. Detailed and sustained ethnographic and quantitative research with a range of migrant groups will be needed to uncover such potential. However, such efforts will also need to be ‘scaled-up’ in policy initiatives that recognise the importance of reciprocal environmental engagement and learning across ethnic (and other) differences.

Cultural environmental researchers have a great deal to offer an expanded research agenda focused on ethnic diversity, environmentalism and sustainability; which avoids reductive and essentialising framings of ethnicity. Existing, narrow understandings of what constitute environmental values, and which behaviours are ‘green’, need to give way to an appreciation of the multiplicity of ways in which resources can be saved—whether intentionally or coincidentally. Many of the environmentally beneficial behaviours practised by ethnic minority and majority groups are not motivated by environmentalism per se but occur as an unintended by-product of other values or proclivities. A whole host of everyday practices undertaken by households may be driven by values such as ‘austerity, hoarding, sharing and charity donations’, which generate sustainability benefits as an

unintended side-effect (Waite *et al.* 2012, p. 54; Shove 2003; Gregson 2007; Klocker *et al.* 2012). These coincidental sustainabilities oftentimes go unnoticed in environmental audits of households or individuals because they are not carried out with the intention of being 'green'. Nuanced, grounded and sensitive studies of how everyday practices are influenced by ethnicity are scarce. However, it is precisely these types of work that have the potential to move beyond simplistic calculations of who cares more or does more for the environment, and to explore the variegated implications of culturally diverse practices for environmental sustainability. If researchers and policy makers were to uplift and herald quotidian sustainabilities that have thus far gone unnoticed (or worse, have been derided), mainstream environmental movements and policies might just become a little less Anglo/Eurocentric, a little less middle class—and a lot less focused on green consumerism, techno-fixes and discourses of neoliberal environmentalism. Such a research agenda would also help to clarify ethics and practices likely to lead to environmental conflicts. The household is not the only place to undertake such a research agenda, but it is a good place to start because of the multiple ways in which households are connected to wider systems of provision and socio-economic networks. Where diverse (and unexpected) sustainabilities are uncovered, policies should acknowledge that people are already making a difference, and campaigns should encourage these existing practices. This is a matter of progressive environmental thinking. And, in a context in which environmental motives have underwritten new expressions of prejudice and discrimination, this is also a matter of anti-racism.

Acknowledgements

We wish to acknowledge Alex Tindale for his research assistance. We also wish to thank two anonymous reviewers and editor John Connell for helpful remarks on an earlier version of this manuscript. Thanks also to our colleagues at AUSCCER for various conversations around this topic, especially Chris Gibson. All errors remain our own.

Correspondence: Natascha Klocker, Australian Centre for Cultural Environmental Research (AUSCCER), School of Earth & Environmental Sciences, University of Wollongong, Wollongong, NSW 2522, Australia.

E-mail: natascha_klocker@uow.edu.au

NOTES

- [1] Throughout this paper, we adopt the term Anglo-European to broadly encompass Australia's (white) ethnic majority population, stemming largely but not exclusively from the British Isles. Despite acknowledging the diversity of ethnicities and cultures incorporated within this broad grouping, we prefer the term Anglo-European (rather than Anglo-Celtic/Saxon or Anglo-Australian) because constructions of Anglo-Australianness expanded (in the post-Second World War period) to incorporate first Northern and Western, and then Southern and Eastern, Europeans into an 'imaginary and centred' (white) Australian 'Self' (May 2003, p. 67; Stratton 1999; Schech & Haggis 2001).
- [2] Of course, migrants are regularly blamed for a whole host of social problems, not just environmental ones—for instance: exacerbating crime rates, introducing health problems and 'stealing' residents' jobs, among other things (Babacan *et al.* 2010;

- Esses *et al.* 2001; Khan & Pedersen 2010; Windle 2008). A comprehensive discussion of these issues is beyond the scope of this paper.
- [3] We use the term 'ethnic minority' to refer to migrants from non-Anglo-European backgrounds, and their descendants. The term is not used to incorporate Indigenous Australians, nor do we use it when referring specifically to migrants from European backgrounds. To be of European background in contemporary Australia signals a position of 'cultural compatibility and privilege' vis-à-vis the Anglo-Celtic/Saxon core (Larbalestier 1999, p. 150) that remains unavailable to 'Third World-looking migrants' (Hage 1998). Ethnic minority status (which implies a certain degree of marginalisation and perceptions of social and cultural incompatibility) cannot be applied equally to all migrant groups. When referring to US-based literature, the term ethnic minority is used somewhat more expansively to incorporate African Americans as well as migrants.
- [4] In his documentary, Smith (2010b) explained that he was opposed to substantial immigration irrespective of ethnicity.
- [5] This figure is based on calculations that include the emissions embedded in externally produced goods and services consumed in the household context, and also includes household consumption of motor vehicle fuels (ABS 2003).
- [6] According to Johnson *et al.* (2004, p. 159), the New Environmental Paradigm (sometimes referred to as the New Ecological Paradigm) is
- thought to measure generalized beliefs about the biophysical environment and the human relationship to it. The NEP challenges the Dominant Social Paradigm, which ... pervaded Western societies until the 1960s with its anthropomorphic emphasis on nature domination and resource extraction.
- [7] Based on 2011 census data, the fertility rate for Australian-born and overseas-born residents was roughly equal, at 1.62 and 1.67 children per female aged 15 and over (ABS 2012e). Thus there is no evidence to support the idea that migrants live in larger households as a result of higher fertility levels.

REFERENCES

- ALLON, F. & SOFOULIS, Z. (2006) 'Everyday water: cultures in transition', *Australian Geographer* 37(1), pp. 45–55.
- ALSTON, M. (2004) 'Who is down on the farm? Social aspects of Australian agriculture in the 21st century', *Agriculture and Human Values* 21(1), pp. 37–46.
- AMIN, A. (2002) 'Ethnicity and the multicultural city: living with diversity', *Environment and Planning A* 34(6), pp. 959–80.
- ANDERSON, K. (2005) 'Australia and the "State of Nature/Native"', *Australian Geographer* 36(3), pp. 267–82.
- ASKEW, L. & MCGUIRK, P. (2004) 'Watering the suburbs: distinction, conformity and the suburban garden', *Australian Geographer* 35(1), pp. 17–37.
- ASKINS, K. (2009) 'Crossing divides: ethnicity and rurality', *Journal of Rural Studies* 25(4), pp. 365–75.
- AUSTRALIAN BUREAU OF STATISTICS (ABS) (2003) *Yearbook Australia, 2003*, Cat. No. 1301, ABS, Canberra.
- AUSTRALIAN BUREAU OF STATISTICS (ABS) (2011) *Migration, Australia, 2009–10*, Cat. No. 3412.0, ABS, Canberra.
- AUSTRALIAN BUREAU OF STATISTICS (ABS) (2012a) *Australian demographic statistics, Dec 2011*, Cat. No. 3101.0, ABS, Canberra.
- AUSTRALIAN BUREAU OF STATISTICS (ABS) (2012b) *Ancestry data generated using ABS TableBuilder*, ABS, Canberra.
- AUSTRALIAN BUREAU OF STATISTICS (ABS) (2012c) *Survey of income and housing and household expenditure survey, 2009–10*, Cat. No. 6503.0, ABS, Canberra.
- AUSTRALIAN BUREAU OF STATISTICS (ABS) (2012d) *Transport data generated using ABS TableBuilder*, ABS, Canberra.
- AUSTRALIAN BUREAU OF STATISTICS (ABS) (2012e) *Fertility data generated using ABS Table Builder*, ABS, Canberra.

- AUSTRALIAN CONSERVATION FOUNDATION (2009) 'Population boom will bust environment and quality of life', available from: <http://www.acfonline.org.au/news-media/releases/population-boom-will-bust-environment-and-quality-life> (accessed 18 June 2012).
- AUSTRALIAN DESIGN REVIEW (2011) 'GBCA chair claims vertical living is a sustainability myth', available from: www.australiandesignreview.com/news/1889-gbca-chair-claims-vertical-living-is-a-sustainability-myth (accessed 29 November 2012).
- AUSTRALIAN STATE OF THE ENVIRONMENT COMMITTEE (2011) *State of the Environment 2011 (SoE 2011)*, independent report to the Australian Government Minister for Sustainability, Environment, Water, Population and Communities, Canberra.
- BABACAN, H., PYKE, J., BHATHAL, A., GILL, G., GROSSMAN, M. & BERTONE, S. (2010) *The community safety of international students in Melbourne: a scoping study*, Institute for Community, Ethnicity and Policy Alternatives, Victoria University, Melbourne.
- BALDWIN, A. (2009) 'The white geography of Lawren Stewart Harris: whiteness and the performative coupling of wilderness and multiculturalism in Canada', *Environment and Planning A* 41(3), pp. 529–44.
- BARTOLOMEI, L., CORKERY, L., JUDD, B. & THOMPSON, S. (2003) *A bountiful harvest: community gardens and neighbourhood renewal in Waterloo*, University of New South Wales, Sydney.
- BETTS, K. (2004) 'Demographic and social research on the population and environment nexus in Australia: explaining the gap', *Population and Environment* 26(2), pp. 157–72.
- BLUNDELL, L. (2010) 'Apartment blocks the missing link in sustainability', *Sustainable Property and News Forum*, available from: <http://www.thefifthestate.com.au/archives/12925/> (accessed 29 November 2012).
- BLUNT, A. (2005) 'Cultural geography: cultural geographies of home', *Progress in Human Geography* 29(4), pp. 505–15.
- BONYHADY, T. (2000) *The colonial Earth*, Melbourne University Press, Melbourne.
- BRADLEY, K. (2009) 'Planning for eco-friendly living in diverse societies', *Local Environment* 14(4), pp. 347–63.
- BUIJS, A., ELANDS, B. & LANGERS, F. (2009) 'No wilderness for immigrants: cultural differences in images of nature and landscape preferences', *Landscape and Urban Planning* 91(3), pp. 113–23.
- BULKELEY, H. & GREGSON, N. (2009) 'Crossing the threshold: municipal waste policy and household waste generation', *Environment and Planning A* 41(4), pp. 929–45.
- BURNLEY, I. (2003) 'Population and environment in Australia: issues in the next half century', *Australian Geographer* 34(3), pp. 267–80.
- BYRNE, D., GOODALL, H., WEARING, S. & CADZOW, A. (2006) 'Enchanted parklands', *Australian Geographer* 37(1), pp. 103–15.
- CADZOW, A., BYRNE, D. & GOODALL, H. (2010) 'Waterborne: Vietnamese Australians and river environments in Vietnam and Sydney', *Transforming Cultures eJournal* 5(1), pp. 112–42.
- CARR, B. (2010) *Sustainable development panel report: an appendix to A Sustainable Population Strategy for Australia issues paper*, Commonwealth of Australia, Canberra, pp. 237–82.
- CHATMAN, D. & KLEIN, N. (2009) 'Immigrants and travel demand in the United States: implications for transportation policy and future research', *Public Works Management and Policy* 13(4), pp. 312–27.
- CLARKE, L. & AGYEMAN, J. (2011) 'Shifting the balance in environmental governance: ethnicity, environmental citizenship and discourses of responsibility', *Antipode* 43(5), pp. 1773–1800.
- COCKS, D. (1996) *People policy: Australia's population choices*, University of New South Wales Press, Sydney.
- COMMONWEALTH OF AUSTRALIA (2010) *Intergenerational Report—Australia to 2050: future challenges*, Commonwealth of Australia, Canberra.
- COMMONWEALTH OF AUSTRALIA (2012) *National Food Plan: Green Paper*, Department of Agriculture, Fisheries and Forestry, Canberra.
- CSIRO (2002) *Future dilemmas: options to 2050 for Australia's population, technology, resources and environment*, CSIRO, Canberra.
- DAVISON, A. (2008) 'The trouble with nature: ambivalence in the lives of urban Australian environmentalists', *Geoforum* 39(3), pp. 1284–95.

- DENG, J., WALKER, G. & SWINNERTON, G. (2006) 'A comparison of environmental values and attitudes between Chinese in Canada and Anglo-Canadians', *Environment and Behaviour* 38(1), pp. 22–47.
- DEPARTMENT OF ENVIRONMENT AND CONSERVATION (2003) *Who cares about the environment?*, DEC, Sydney.
- DEPARTMENT OF ENVIRONMENT AND CONSERVATION (2005) *The environment and ethnic communities in 2004*, DEC, Sydney.
- DEPARTMENT OF IMMIGRATION AND CITIZENSHIP (DIAC) (2009) *Fact sheet 97—humanitarian settlement in regional Australia*, available from: http://www.immi.gov.au/media/fact-sheets/97humanitarian_settlement.htm (accessed 29 November 2012).
- DEPARTMENT OF IMMIGRATION AND CITIZENSHIP (DIAC) (2011) *Trends in migration Australia: 2010–11*, Commonwealth of Australia, Canberra.
- DEPARTMENT OF SUSTAINABILITY, ENVIRONMENT, WATER, POPULATION AND COMMUNITIES (2011) *Sustainable Australia—sustainable communities. a sustainable population strategy for Australia*, Commonwealth of Australia, Canberra.
- DOWLING, R. & MEE, K. (2007) 'Home and homemaking in contemporary Australia', *Housing, Theory and Society* 24(3), pp. 161–5.
- DROZDZEWSKI, D. (2007) 'A place called "Bielany": negotiating a diasporic Polish place in Sydney', *Social and Cultural Geography* 8(6), pp. 853–69.
- DUFTY, R. & LIU, E. (2011) 'Picking blueberries and Indian women go hand in hand': the role of gender and ethnicity in the division of agricultural labour in Woolgoolga, New South Wales, Australia', in Pini, B. & Leach, B. (eds) *Reshaping gender and class in rural spaces*, Ashgate, Aldershot, pp. 73–90.
- EHRlich, P. (1968) *The population bomb*, Ballantine, New York.
- EHRlich, P. (2002) 'Human natures, nature conservation and environmental ethics', *Bioscience* 52(1), pp. 31–43.
- ESSES, V., DOVIDO, J., JACKSON, L. & ARMSTRONG, T. (2001) 'The immigration dilemma: the role of perceived group competition, ethnic prejudice and national identity', *Journal of Social Issues* 57(3), pp. 389–412.
- FINCHER, R. (1998) 'Population questions for Australian cities: reframing our narratives', *Australian Geographer* 29(1), pp. 31–47.
- FINCHER, R. (2011) 'Population growth in Australia: views and policy talk for possible futures', *Geographical Research* 49(3), pp. 336–47.
- FLANNERY, T. (1994) *The future eaters: an ecological history of the Australasian lands and people*, Reed Books, Sydney.
- FLANNERY, T. (2003) 'Beautiful lies: population and environment in Australia', *Quarterly Essay* 9, pp. 1–73.
- GAYNOR, A. (2001) *Harvest of the suburbs: an environmental history of suburban food production in Perth and Melbourne, 1880–2000*, PhD thesis, University of Western Australia.
- GENTIN, S. (2011) 'Outdoor recreation and ethnicity in Europe—a review', *Urban Forestry and Urban Greening* 10(3), pp. 153–61.
- GIBSON, C., FARBOTKO, C., GILL, N., HEAD, L. & WAITT, G. (2013) *Household sustainability: challenges and dilemmas in everyday life*, Edward Elgar, Cheltenham.
- GIBSON, C., HEAD, L., GILL, N. & WAITT, G. (2011) 'Climate change and household dynamics: beyond consumption, unbounding sustainability', *Transactions of the Institute of British Geographers* 36(1), pp. 3–8.
- GILL, N. (1994) 'What is the problem? Usefulness, the cultural turn, and social research for natural resource management', *Australian Geographical Studies* 37(1), pp. 5–17.
- GOODALL, H. (2008) 'Will environmental history save the world?', *History Australia* 5(1), pp. 13–16.
- GOODALL, H., WEARING, S., BYRNE, D. & CADZOW, A. (2009) 'Fishing in the Georges River: cultural diversity and urban environments', in Wise, A. & Velayutham, S. (eds) *Everyday multiculturalism*, Palgrave Macmillan, New York, pp. 177–196.
- GOODALL, H., BYRNE, D. & CADZOW, A. (2012) *Waters of belonging: Al-Miyahu Tajma'unah. Arabic Australians and the Georges River parklands*, Parklands, Culture and Communities Project, Sydney.
- GREGSON, N. (2007) *Living with things: ridding, accommodation, dwelling*, Sean Kingston Publishing, Oxford.

- HAGE, G. (1998) *White Nation: fantasies of white supremacy in a multicultural society*, Pluto Press, Sydney.
- HALUZA-DELAY, R. & FERNHOUT, H. (2011) 'Sustainability and social inclusion? Examining the frames of Canadian English-speaking environmental movement organisations', *Local Environment* 16(7), pp. 727–45.
- HANSIS, R. (1996) 'The harvesting of special forest products by Latinos and Southeast Asians in the Pacific Northwest: preliminary observations', *Society and Natural Resources* 9(6), pp. 611–15.
- HEAD, L. (2000) *Second nature. The history and implications of Australia as Aboriginal landscape*, Syracuse University Press, Sydney.
- HEAD, L. (2012) 'Australia's rich talk about saving the environment; the poor bear the burden of doing it', *The Conversation*, available from: <http://theconversation.edu.au/australias-rich-talk-about-saving-the-environment-the-poor-bear-the-burden-of-doing-it-7693> (accessed 20 July 2012).
- HEAD, L., MUIR, P. & HAMPEL, E. (2004) 'Australian backyard gardens and the journey of migration', *Geographical Review* 94(3), pp. 326–47.
- HEAD, L., TRIGGER, D. & MULCOCK, J. (2005) 'Culture as concept and influence in environmental research and management', *Conservation and Society* 3(2), pp. 251–64.
- HOGAN, L. & CUMMING, B. (1997) *More than a question of numbers: working with women and people of non English speaking backgrounds. Towards total catchment participation*, Commonwealth Department of Primary Industries and Energy, Canberra.
- HORTON, D. (2001) *The pure state of nature: sacred cows, destructive myths and the environment*, Allen & Unwin, Sydney.
- HUGO, G. (2010) *Demographic change and liveability panel report: an Appendix to A Sustainable Population Strategy for Australia issues paper*, Commonwealth of Australia, Canberra, pp. 25–162.
- HUGO, G. (2011) 'Geography and population in Australia: a historical perspective', *Geographical Research* 49(3), pp. 242–60.
- JARVIS, H. (2011) 'Saving space, sharing time: integrated infrastructures of daily life in cohousing', *Environment and Planning A* 43(3), pp. 560–77.
- JAY, M. & SCHRAML, U. (2009) 'Understanding the role of urban forests for migrants—uses, perceptions and integrative potential', *Urban Forestry and Urban Greening* 8(4), pp. 283–94.
- JEHLÍČKA, P. & SMITH, J. (2011) 'An unsustainable state: contrasting food practices and state policies in the Czech Republic', *Geoforum* 42(3), pp. 362–72.
- JOHNSON, C., BOWKER, J. & CORDELL, H. (2004) 'Ethnic variation in environmental belief and behaviour: an examination of the New Ecological Paradigm in a social psychological context', *Environment and Behavior* 36(2), pp. 157–86.
- JONES, R. (1969) 'Fire-stick farming', *Australian Natural History* 16, pp. 224–8.
- JONES, R. (2002) 'Blacks just don't care: unmasking popular stereotypes about concern for the environment among African-Americans', *International Journal of Public Administration* 25(2), pp. 221–51.
- KEEN, I. (2003) *Aboriginal economy and society: Australia at the threshold of colonisation*, Oxford University Press, South Melbourne.
- KEILMAN, N. (2003) 'The threat of small households', *Nature* 421, pp. 489–90.
- KELLY, F. (2010) 'Bring on the population debate', available from: <http://www.abc.net.au/news/2010-04-08/bring-on-the-population-debate/2577832> (accessed 29 June 2012).
- KHAN, S. & PEDERSEN, A. (2010) 'Black African immigrants to Australia: prejudice and the function of attitudes', *Journal of Pacific Rim Psychology* 4(2), pp. 116–29.
- KLOCKER, N., GIBSON, C. & BORGER, E. (2012) 'Living together but apart: material geographies of everyday sustainability in extended family households', *Environment and Planning A* 44(9), pp. 2240–59.
- LANE, R. & GORMAN-MURRAY, A. (2011) *Material geographies of household sustainability*, Ashgate, Aldershot.
- LANGTON, M. (1998) *Burning questions: emerging environmental issues for indigenous peoples in northern Australia*, Centre for Indigenous Natural and Cultural Resource Management, Northern Territory University, Darwin.
- LARBALÉSTIER, J. (1999) 'What is this thing called white?', in Hage, G. & Couch, R. (eds) *The future of Australian multiculturalism*, University of Sydney, Sydney, pp. 145–61.

- LARSON, L., WHITING, J. & GREEN, G. (2011) 'Exploring the influence of outdoor recreation participation on pro-environmental behaviour in a demographically diverse sample', *Local Environment* 16(1), pp. 67–86.
- LAWSON, J. & MILLER, K. (2011) 'Green revelations in a country of drought, flood and fire: a case study of Abrahamic faith communities and sustainability', *International Journal of Environmental Studies* 68(6), pp. 965–79.
- LEUNG, C. & RICE, J. (2002) 'Comparison of Chinese-Australian and Anglo-Australian environmental attitudes and behavior', *Social Behavior and Personality* 30(3), pp. 251–62.
- LI, T. & WEHR, K. (2007) 'The validity of the factor structure of the general social survey environmentalism scales across gender and ethnicity in the United States', *Organization and Environment* 20(3), pp. 367–85.
- LINES, W. (1991) *Taming the Great South Land: a history of the conquest of nature in Australia*, Allen & Unwin, Sydney.
- LOURANDOS, H. (1997) *Continent of hunter-gatherers*, Cambridge University Press, Cambridge.
- LUTZENHISER, L. (1992) 'A cultural model of household energy consumption', *Energy* 17(1), pp. 47–60.
- LYNCH, B. (1993) 'The garden and the sea: US Latino environmental discourses and mainstream environmentalism', *Social Problems* 40(1), pp. 108–23.
- MALLER, C. (2011) 'Practices involving energy and water consumption in migrant households', in Newton, P. (ed.) *Urban consumption*, CSIRO, Melbourne, pp. 237–50.
- MASON, D. & KNOWD, I. (2010) 'The emergence of urban agriculture: Sydney, Australia', *International Journal of Agricultural Sustainability* 9(2), pp. 62–71.
- MAY, H. (2003) 'Australian multicultural policy and television drama in comparative contexts', thesis submitted to Queensland University of Technology, Brisbane.
- MCGUIRK, P. & ARGENT, N. (2011) 'Population growth and change: implications for Australia's cities and regions', *Geographical Research* 49(3), pp. 317–55.
- MEDD, W., WATSON, M., HOPKINS, P. & OLSON, E. (2007) *Cultural diversity and sustainable water management in Greater London: the research agenda*, report prepared for the Greater London Authority, London.
- MERCHANT, C. (2003) 'Shades of darkness: race and environmental history', *Environmental History* 8(3), pp. 380–94.
- MISSINGHAM, B., DIBDEN, J. & COCKLIN, C. (2006) 'A multicultural countryside? Ethnic minorities in rural Australia', *Rural Society* 16(2), pp. 131–50.
- MOHAI, P. (2003) 'Dispelling old myths: African American concern for the environment', *Environment* 45(5), pp. 11–26.
- MORIARTY, P. (2002) 'Environmental sustainability of large Australian cities', *Urban Policy and Research* 20(3), pp. 233–44.
- MOUNTJOY, D. (1996) 'Ethnic diversity and the patterned adoption of soil conservation in the strawberry hills of Monterey, California', *Society and Natural Resources* 9(6), pp. 339–57.
- MUELLER, E. & GURIN, G. (1962) *Participation in outdoor recreation behavior: factors affecting demand among American Adults*, Outdoor Recreation Resources Review Commission (ORRRC), US Government Printing Office, Washington, DC.
- NANSEN, B., ARNOLD, M., GIBBS, M. & DAVIS, H. (2011) 'Dwelling with media stuff: latencies and logics of materiality in four Australian homes', *Environment and Planning D: Society and Space* 29, pp. 693–715.
- NASH, R. (2001) *Wilderness and the American mind*, Yale University Press, New Haven.
- NEUMAYER, E. (2006) 'The environment: one more reason to keep immigrants out?', *Ecological Economics* 59(2), pp. 204–7.
- PANELLI, R., HUBBARD, P., COOMBES, B. & SUCHET-PEARSON, S. (2009) 'De-centring white ruralities: ethnic diversity, racialisations and Indigenous countrysides', *Journal of Rural Studies* 25(4), pp. 355–64.
- PARKER, F. (2000) *The safe use of farm chemicals by market gardeners of non-English speaking background: developing an effective extension strategy for the Sydney Basin*, Rural Industries Research and Development Corporation, Canberra.
- PFEFFER, M. & STYCOS, J. (2002) 'Immigrant environmental behaviors in New York City', *Social Science Quarterly* 83(1), pp. 64–81.
- REED, M. & GEORGE, C. (2011) 'Where in the world is environmental justice?', *Progress in Human Geography* 35(6), pp. 835–42.

- REID, L., SUTTON, P. & HUNTER, C. (2010) 'Theorizing the meso level: the household as a crucible of pro-environmental behaviour', *Progress in Human Geography* 34(3), pp. 309–24.
- SALAZAR, D. & HEWITT, J. (2001) 'Thinking globally, secure the borders: the Oregon environmental movement and the population/immigration debate', *Organization and Environment* 14(3), pp. 290–310.
- SALTZMAN, K., HEAD, L. & STENSEKE, M. (2011) 'Do cows belong in nature? The cultural basis of agriculture in Sweden and Australia', *Journal of Rural Studies* 27(1), pp. 54–62.
- SCHECH, S. & HAGGIS, J. (2001) 'Migrancy, multiculturalism and whiteness: re-charting core identities in Australia', *Communal/Plural* 9(2), pp. 143–59.
- SCHULTZ, P., UNIPAN, J. & GAMBA, R. (2000) 'Acculturation and ecological worldview among Latino Americans', *Journal of Environmental Education* 31(2), pp. 22–7.
- SEYFANG, G. (2005) 'Shopping for sustainability: can sustainable consumption promote ecological citizenship?', *Environmental Politics* 14(2), pp. 290–306.
- SHELLER, M. (2004) 'Automotive emotions: feeling the car', *Theory, Culture and Society* 21(4–5), pp. 221–42.
- SHOVE, E. (2003) *Comfort, cleanliness + convenience*, Berg, Oxford.
- SMITH, D. (2010a) 'The people have spoken: halt population growth', available from: <http://www.crikey.com.au/2010/04/01/dick-smith-the-people-have-spoken-halt-population-growth/> (accessed 29 June 2012).
- SMITH, D. (2010b) *Dick Smith's Population Puzzle* (DVD), Australian Broadcasting Corporation, Screen Australia.
- SQUALLI, J. (2010) 'An empirical assessment of US state-level immigration and environmental emissions', *Ecological Economics* 69(5), pp. 1170–5.
- STODOLSKA, M. & LIVENGOOD, J. (2006) 'The influence of religion on leisure behaviour of immigrant Muslims in the United States', *Journal of Leisure Research* 38(3), pp. 293–320.
- STRATFORD, E. & DAVIDSON, J. (2002) 'Capital assets and intercultural borderlands: socio-cultural challenges for natural resource management', *Journal of Environmental Management* 66(4), pp. 429–40.
- STRATTON, J. (1999) 'Multiculturalism and the whitening machine, or how Australians become white', in Hage, G. & Couch, R. (eds) *The future of Australian multiculturalism*, University of Sydney, Sydney, pp. 164–88.
- TAYLOR, D. (2011) 'The evolution of environmental justice activism, research and scholarship', *Environmental Practice* 13(4), pp. 280–301.
- THOMAS, M. (2001) *A multicultural landscape: national parks and the Macedonian experience*, NSW National Parks and Wildlife Service and Pluto Press, Sydney.
- THOMAS, M. (2002) *Moving landscapes: national parks and the Vietnamese experience*, NSW National Parks and Wildlife Service and Pluto Press, Sydney.
- URRY, J. (2004) 'The "system" of automobility', *Theory, Culture and Society* 21(4–5), pp. 25–39.
- WAITT, G., CAPUTI, P., GIBSON, C., FARBOTKO, C., HEAD, L., GILL, N. & STANES, E. (2012) 'Sustainable household capability: which households are doing the work of environmental sustainability?', *Australian Geographer* 43(1), pp. 51–74.
- WALKER, M. (2010) 'Population growth in Australia: how environmental groups are responding', *People and Place* 18(1), pp. 39–48.
- WASHBURNE, R. (1978) 'Black under-participation in wildland recreation: alternative explanations', *Leisure Sciences* 1(2), pp. 175–89.
- WATSON, M. & LANE, R. (2011) 'Mapping geographies of reuse in Sheffield and Melbourne', in Lane, R. & Gorman-Murray, A. (eds) *Material geographies of household sustainability*, Ashgate, Aldershot, pp. 133–55.
- WHATMORE, S. (1999) 'Culture-nature', in Cloke, P., Crang, P. & Goodwin, M. (eds) *Introducing human geographies*, Arnold, London, pp. 4–11.
- WHITTAKER, M., SEGURA, G. & BOWLER, S. (2005) 'Racial/ethnic group attitudes toward environmental protection in California: is "environmentalism" still a white phenomenon?', *Political Research Quarterly* 58(3), pp. 435–47.
- WINDLE, J. (2008) 'The racialisation of African youth in Australia', *Social Identities* 14, pp. 553–66.
- WISE, A. & VELAYUTHAM, S. (eds) (2009) *Everyday multiculturalism*, Palgrave Macmillan, New York.