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**Environment and Imperialism:
Why Colonialism Still Matters**

Joseph Murphy

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Sustainability Research Institute (SRI), School of Earth and Environment,
The University of Leeds, Leeds, LS2 9JT, United Kingdom

Tel: +44 (0)113 3436461

Fax: +44 (0)113 3436716

Email: SRI-papers@see.leeds.ac.uk

Web-site: <http://www.see.leeds.ac.uk/sri>

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Environment and Imperialism: Why Colonialism Still Matters

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Email: j.murphy@ leeds.ac.uk

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Abstract

This paper explores the relationship between environment and colonialism and argues that the insights are important for understanding contemporary imperialisms. By focusing on key themes such as 'business and trade', 'technology and infrastructure', 'government and policy' and 'knowledge and expertise' it shows that the study of colonialism is important for a least four reasons: (i) a more accurate account of the origins of environmentalism which emerged in the colonies and not in the imperial centre; (ii) understanding the legacies of colonialism and how these continue to shape contemporary environmental challenges; (iii) insights into generic processes of imperialism which might be operating through the environment today; (iv) a deeper understanding of the contemporary environmental crisis and how it might be overcome. In relation to the last of these I suggest that contemporary environmental problems require us to confront imperialism with a sophisticated understanding of freedom and what it takes to achieve it.

Key words: environment, conservation, colonialism, imperialism.

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About the Author

Joseph Murphy is RCUK Academic Fellow in Social Response to Environmental Change in the Sustainability Research Institute at the University of Leeds. He has published widely on environmental issues including *Regulatory Realities: The Implementation and Impact of Industrial Environmental Regulation* (Gouldson and Murphy, 1998), *Exploring Sustainable Consumption* (Cohen and Murphy (eds), 2001), *Governing the Transatlantic Conflict over Agricultural Biotechnology* (Murphy, 2006) and *Governing Technology for Sustainability* (Murphy (ed.), (2007). *At the Edge: Walking the Atlantic Coast of Ireland and Scotland* is his most recent book (2009).

1 Introduction

Environmental problems such as climate change, rainforest loss, collapsing fisheries and water scarcity represent some of the most serious challenges facing society and it seems likely that many will get worse in the future. The seriousness of the situation is illustrated by the growing number of reports highlighting environmental problems as threats to the national security of the richest countries (CAN Corporation, 2007; Council on Foreign Relations, 2007). Such reports are not significant only because they add weight to the argument that these problems must be taken more seriously but also because they might herald an era where environmental problems are used to justify military interventions around the world.

In this context social scientists face a serious challenge. We must understand the relationship between society and environment and suggest ways in which the most destructive processes can be modified or overcome. Some of the necessary assumptions and characteristics of this research agenda are already apparent. It must accept that environmental problems are not simply physical or technical challenges and engage instead with their underpinning social, cultural, political, economic, psychological and geographical aspects. It must focus not only on extraction and production but also on consumption in the richest countries. Empirical and local studies are important but the effort must also be theoretical and global, exploring particularly the relationship between north and south.

Recent research linking environment and imperialism – past and present – is one of the most promising starting points. Imperialism, according to Said (1994: 8), refers to ‘...the practice, the theory, and the attitudes of a dominating metropolitan centre ruling a distant territory’ or ‘... an ongoing contest between north and south, metropolis and periphery, white and native’ (Said, 1994: 8, 59). Although the concept is used to label everything from the Imperial Roman Empire (1st-4th centuries) to the United States as the world’s only super-power today, its focus is always the relationship between core and periphery and associated asymmetries of power. Scholars and activists have explored many dimensions of imperialism but its environmental aspects have attracted more attention recently, particularly in disciplines like environmental history and ‘green’ postcolonial studies (see Crosby, 1986/2004; Grove, 1995; Beinart and Hughes, 2007; Huggan and Tiffin, 2007).

In this paper I distil and build on some of the key insights from research which links environment and imperialism. I focus on colonialism, one form of imperialism, for a number of reasons. First, as Drayton (2000: xi) says, ‘Empires, the children of the medieval world, were the midwives of the modern.’ The relationship between society and environment around the world was profoundly changed during the colonial period and its legacies are important today. Second, although colonialism is unique in many ways it has generic characteristics in common with imperialisms operating today. Focusing on colonialism is therefore an opportunity to identify processes which might be important for understanding contemporary challenges. This paper, therefore, although it explores the past, is part of an effort to understand the present.¹

¹ For convenience I refer to colonialism in the past tense but many writers are uncomfortable with the idea that the colonial era is behind us. As McClintock (1992) argues the concept of ‘postcolonial’ is ‘prematurely celebratory’ and for some a ‘monumental affront’.

In broad terms this paper follows the time-line of colonialism with the first section focussing on conquest and dispossession and the final section on resistance and freedom. Between these I focus on cross-cutting themes such as 'business and trade', 'technology and infrastructure', 'government and policy' and 'knowledge and expertise'. I draw on a wide range of examples including 'plantations' in Gaelic Ireland and Scotland, production of sugar in the Caribbean and trade in bird of paradise feathers from the Netherlands East Indies (Indonesia today). In the conclusion I argue that studying the relationship between environment and colonialism is important for at least four reasons:

1. A more accurate account of the origins of environmentalism which emerged in the colonies and not in the imperial centre.
2. Understanding the legacies of colonialism and how these continue to shape contemporary environmental challenges.
3. Insights into generic processes of imperialism which might be operating through the environment today.
4. A deeper understanding of the contemporary environmental crisis and how it might be overcome.

Before starting it is important to make clear that colonialism was not a simple case of coloniser versus colonised. Many indigenous communities cooperated with colonial powers often to gain an advantage in relation to other indigenous communities.² Similarly, environmental destruction occurred around the world before colonialism and therefore cannot be explained in simple terms as a consequence of imperial attitudes to nature. That said, colonialism did have devastating consequences for indigenous people and nature around the world.

2 Conquest and dispossession

In popular discourse the term colonialism refers to a period when a small number of European countries extended formal political control over land on other continents. The starting point is widely understood as the arrival of Columbus off the coast of the Bahamas on 12 October 1492 although Portugal already controlled parts of West Africa by this date. In the 17th century the British and French occupied Australasia and North America and Europe took control of much of Asia, Africa and Latin America in the 19th century. This history is useful but one important limitation is that it ignores England's earlier conquest of Gaelic Scotland and Ireland where many policies which came to define colonialism were implemented for the first time. This period of expansion is important because it provides some of the first evidence of how colonialism and environment were linked.

² Crosby (1986/2004: 236) gives the example of New Zealand Maoris trading with European whalers: "What would motivate the Maori to chase down thousands of pigs, burn off and strip whole hillsides to cultivate tubers, grains, cabbages, and other vegetables for these customers who had crossed half a world to seek them out? The usual truck – blankets, calico, mirrors, beads, tobacco, and whisky – was insufficient to turn a Maori into the Economic Man so dear to contemporary British economists. Muskets did that." The profits accumulated by Maoris were returned to Europe as payment for weapons which flooded into New Zealand and fuelled conflicts between indigenous tribes, allowing those who owned them to dominate others.

Gaelic Scotland and Ireland were profoundly affected by the arrival of Anglo-Normans in the 11th and 12th centuries although in different ways. In Scotland Anglo-Norman culture replaced Gaelic culture in trade, politics and at court and by 1380 the status of Gaelic society had declined so far that John of Fordun could write: 'The highlanders and people of the islands... are a savage and untamed nation, rude and independent...' (from McInnes, 2006: 100). As McInnes comments, 'This description... is one of the earliest stereotypes of an 'Aboriginal people'.' In Ireland in contrast the Anglo-Normans were absorbed into Gaelic society and over time this loosened England's grip on the country. By the mid- to late 1400s English control had been reduced to Dublin and its surroundings which became known as 'the Pale'. Despite the differences between Ireland and Scotland the same labelling of Gaels occurred with all the land beyond Dublin being 'beyond the pale', a phrase which entered the English language as a reference to anything and everything unacceptable.

These developments established the context within which many of the 'ethnocidal policies' which became synonymous with colonialism could emerge. These targeted everything from the dress and music of Gaelic people to their language. One of the signature processes of colonialism made an early appearance in this context; the 'plantation' of settlers on land which used to belong to indigenous people. In Ireland 'exemplary plantations' involved small colonies of English (or lowland Scots) settlers operating model farms which it was hoped the native Gaels would choose to mimic. More common punitive plantations involved settlers occupying land confiscated after rebellions and uprisings. Plantations were less common in Scotland although the policy was applied by the Duke of Argyle on Kintyre in mid-1600s.³

The history of Gaelic Ireland and Scotland therefore provides some of the first evidence of the relationship between colonialism and the environment. The land as a resource was central because it conferred wealth and strategic advantages. Violence was one of the most straightforward ways of taking ownership although bribery and coercion of all kinds were used. In Ireland it was primarily the more fertile and strategically important land which was appropriated from the Gaelic population. A series of conflicts in the 16th and 17th centuries left the native Gaelic population largely dispossessed. As the contemporary Irish Gaelic poet *Aogán Ó Rathaille* (Egan O'Rahilly) reflected in *Cabhair ní Ghairfead* or No Help I'll Call (Ó Tuama and Kinsella, 1981: 164-167):

*ár bhfonn, ár bhfothain, ár monga 's ár mírchóngair
i ngeall le pinginn ag foirinn ó chrích Dhóbhair.*

Our land, our shelter, our woods and our level ways
are pawned for a penny by a crew from the land of Dover.

John of Fordun's description of Gaels in the Highlands and Islands of Scotland hints at the way conquest and dispossession were legitimised. Colonialism relied on frontiers beyond which everything was wild and barbarous. In this sense the idea of Ireland 'beyond the pale' was the same as 'the dark continent' of Africa and 'the wild west' in the United States. Framing everything beyond the frontier in this way helped

³ Several men involved in establishing these plantations were later involved in building colonies on the Atlantic seaboard of North America.

to legitimise conquest. This does not mean that colonisers thought or pretended the regions they wanted to possess were unpopulated. There were almost always indigenous people present and this was well known. The indigenous people were labelled at the same time – as less than human – and this helped to make most arguments about prior claims and methods of conquest irrelevant.⁴

A more recent example of conquest and dispossession can add an additional dimension. Aboriginals arrived in Australia at least 50,000 years ago and the pre-colonial population may have reached 1.5 million. By the 1930s, however, census counts put the population as low as 77,000-80,000. As Beinart and Hughes (2007: 95) say 'There were few other places in the British Empire where the indigenous population was so quickly dehumanized, and so systematically dispossessed and displaced.' Aboriginals suffered countless individual killings and massacres and the rapid expansion of sheep farming in particular was facilitated by the appropriation of their land. That said, other processes were operating at the same time.

In *Ecological Imperialism* Crosby (1986/2004) argues that disease played an important role in the colonisation of Australia by undermining the indigenous population often before they even saw a European. It seems likely that the problems began in April 1789 when English settlers began finding bodies near Sydney harbour. The cause was smallpox or something like it. From here the disease spread throughout most of Australia, often spread by indigenous people who were trying to escape infected areas. One estimate from the 19th century suggests that smallpox might have killed one-third of the native population. In this case conquest and dispossession were assisted by processes which were unplanned and unforeseen and the environment played a central role – social factors were still important, of course, such as a world transformed by trade and travel.⁵

The scale of colonialism was staggering. At its height in 1922 the British Empire included around 458 million people, one-quarter of the world's population at the time, and covered more than 33,670,000 km², approximately a quarter of the planet's land area. The empires of other European powers were also vast, including the Spanish (20 million km²), French (12.3 million km²), Portuguese (10.4 million km²), Italians (3.8 million km²) and Dutch (3.7 million km²). This section has drawn attention to one of the most important processes which linked colonialism and environment – the alienation of people from their land and resources. The precise mechanisms varied from place to place but often it involved '... the implanting of settlements on distant territories', a signature activity of the colonial form of imperialism (Said, 1994: 8).

3 Business and trade

The role of commerce in colonialism was primarily to convert raw materials into profitable products which would enrich the colonial power whilst at the same time

⁴ An example is Edmund Spenser's (1596) *View of the Present State of Ireland* which proposed that since the Irish were barbarians most of them should be exterminated (see Said, 1993: 268).

⁵ A more recent and in many ways more complicated example is the failure of the potato crop in Ireland in 1845-46 and 1847 when *An Gorta Mór* or 'The Great Hunger' took hold. Ultimately the Famine killed around 1 million people. Leaving aside the question of what caused the Famine, which is different to the question of what caused the failure of the potato crop, it is the case that the ability of people in Ireland to resist colonialism was reduced for a period as a result.

helping to secure new territories. For hundreds of years a wide range of commodities were transported from the colonies to Europe where they became consumer goods and in many cases were shipped back again to satisfy growing demand on the periphery. The list includes spices, sugar, tobacco, cotton, tea, wool, coffee, furs, feathers, timber, gold, diamonds and rubber. Perhaps the most important process which linked commerce, environment and colonialism was the commodification of nature, something that was often unfamiliar to indigenous people.

To capture the first stages of this process Beinart and Hughes (2007: 2) use the concept of 'commodity frontier':

We use the term 'commodity frontier' to suggest meanings that are spatial, environmental, and socio-economic. It refers to the results of expanding European commercial activity, productive enterprises, and sometimes settlement, which targeted raw materials and land in overseas territories.

As they say, '... the idea of a frontier is ubiquitous in the literature on empire, and retains a value and resonance'.⁶

Colonial commodity frontiers in practice were diverse. In North America, for example, there was an extractive frontier where largely indigenous hunters trapped and traded beaver pelts with English, French and Dutch settlers. This allowed First Nation communities to shape colonialism for a period, even as they were drawn into an unsustainable activity. As Beinart and Hughes (2007: 43) point out:

Beavers did not migrate and their lodges were easy to find. Once iron implements were introduced for breaking them open, and survival in their terrain was mastered, they were relatively easy to hunt and trap. Beavers also took time to reproduce and as soon as the trade achieved any volume, the demand could not be met from renewable resources. The fur trade therefore produced a continually moving boundary of exploitation. Its direction was shaped by the sequential involvement of First Nation communities, by the location of prime beaver habitats, by constraints and opportunities of transport, and by competitive strategies of fur trading companies.

Although this business was not as economically significant as tropical plantation agriculture it was transcontinental in scope and came close to destroying beaver populations completely.

Colonial plantation and pastoral enterprises formed productive frontiers which also impacted on local people and nature although in diverse ways. After comparing the sugar plantations of the Caribbean and the rubber plantations of Malaysia Beinart and Hughes (2007: 234) suggest:

⁶ The concept of 'commodity frontier' raises the problem of environmental determinism. The environment certainly helped to shape empires. Soil and climate meant that plantations could be established in the Caribbean and Malaysia which could not have been located in Europe. It is not the case, however, that the environment determined colonialism. It was at least as important and probably more so that some products became objects of desire and this draws attention to European consumption and lifestyles rather than the environmental conditions of the colonies.

... rubber did not require such massive alienation of land and displacement of indigenous populations that was characteristic of Caribbean plantations. Malays were not decimated by disease, nor did the rubber industry spawn a significant settler population... in comparative terms the social and environmental impact of this plantation complex was constrained.

One difference between Malaysia and the Caribbean which is worth noting is that the production of rubber on small holdings developed alongside industrial scale plantation production. The impacts of both sugar and rubber plantations were less than the sheep farming pastoral frontier of Australia which involved appropriation of land on a vast scale and wholesale modification of the indigenous ecology.

Colonialism's transformation of the world through commerce was not restricted to locations where resources and commodities were actually located. Commerce depended on trade and this involved ports and stopping-off points. Crosby (1986/2004) gives an interesting example. During the early colonial period European sailors used the Azores in the mid-Atlantic to restock as they sailed home from the Canaries or West Africa and the islands were modified for this purpose. Sheep were introduced and feral herds were grazing as early as 1439, apparently before permanent settlers arrived from Europe. With no large predators and plenty of lush vegetation, sheep, cattle and goats thrived. Crosby (1986/2004: 74) suggests that 'The archipelago's significance in history is not as a source of wealth, but as a way station on the routes to and from colonies...'.

To a large extent the social and environmental impacts of resource frontiers were shaped by markets, innovation and industrialisation. It was the rise of the motor car and mass production which ensured that Malaysia became Britain's most valuable tropical colony (Beinart and Hughes, 2007: 233-250). If the utility of rubber had been limited to balls and raincoats it would not have become so important. Tyres for cars and bicycles, however, vastly increased demand in Europe and North America. The names of European innovators like Charles Goodyear, John Dunlop and the Michelin brothers quickly became synonymous with tyres as the link between rubber as a commodity and cars as a consumer good. In Malaysia in 1905 20,000 ha was under rubber but by 1922 this had increased to over one million (nearly 40% grown on small holdings). In time, however, synthetic rubber and competitors undermined the market and Malaysia moved on to exporting timber and palm oil.

This section has focussed on commerce but business could not exploit nature in the colonies on its own. It depended on royal and then governmental authority and required a mercantile legal framework. The East India Company and The Hudson's Bay Company, for example, both emerged in the 17th century with state authority. More recently Cecil Rhodes created the De Beers Mining Company and the British South Africa Company to exploit gold and diamond resources in Southern Africa with the help of the British Government. This draws attention to the interaction between business and government in the commodification of nature and the exploitation of commodity frontiers which was required for businesses to operate beyond the crudest level of piracy and plunder.

4 Technology and infrastructure

The image of European ships arriving off the coast of the 'the new world' in 1492 draws attention to the relationship between technology and colonialism. As Adas (1998: 2) explains '... their superior manoeuvrability and armament permitted the Europeans to explore, trade and conquer all around the world'. Other technologies followed in their wake and despite being mundane from a contemporary European perspective many had profound consequences. In *The Tentacles of Progress* Daniel Headrick (1988) emphasises railways, telegraph and sanitation, amongst others. Much of the research which explores the relationship between technology, colonialism and environment draws attention to the way in which technology allowed colonial powers to modify social and physical spaces around the world. More profoundly it highlights how technology acted as a vehicle for colonial politics and ideology.

The use of technology and infrastructure to control the flow of water is a useful starting point not least because it continues to be controversial today. Throughout the colonies of the various European powers water engineers used dams, ditches and sluices to control the flow of water and claimed that their approach to water management was more rational and efficient than existing indigenous approaches. In practice, however, outcomes were mixed. Beinart and Hughes (2007: 130-147) argue that irrigation works in India contributed to food insecurity by reorienting domestic agriculture towards overseas markets. In Egypt large dams contributed to salination problems and created a dependency on agricultural chemicals because they prevented the Nile's annual inundation of surrounding land and silt deposition.

The wider story of water technology and infrastructure in the colonies was often that ideas like rationality and efficiency disguised the political agendas involved. New waterways and canals were built to enhance communications and thus make colonies easier to control and defend. From a colonial perspective irrigation was useful because it encouraged nomadic people to become sedentary and thus easier to govern. It also helped to draw them into wage labour and orientate agriculture towards overseas markets thus making colonies more profitable.

Beneath the immediate social and physical impacts of new technologies and the medium term agendas of colonial powers more fundamental processes linked technology, environment and colonialism. As the Pitt-Rivers museum in Oxford illustrates, many colonial scientists were curious about indigenous technologies. Some engineers admired them and argued that traditional practices were superior to ones which colonial powers wanted to introduce – Beinart and Hughes (2007) give the example of the hydraulic engineer William Willcocks. More commonly, however, and particularly from the mid-18th century, Europeans took the view that their technology was superior and that their society was superior as a result.⁷ Not only that, they believed they had an obligation to 'improve' the world and technology was central (alongside science and new management practices). Drayton (2000: xvii)

⁷ This was a significant shift. Throughout most of the pre-industrial age religion, behaviour and appearance had been the basis on which colonials made comparisons across societies but as the industrial age dawned the greater capacity of colonial technology to modify the world became central to cross-cultural comparisons (Adas, 1998).

argues that technology, improvement and agriculture made a particularly powerful combination. As Adams and Mulligan (2003: 3) explain:

... alongside this mercantile agenda, the British imperial project also reflected the values of the broader European Enlightenment that had unfolded during the 18th century... [This] placed faith in the capacity of the rational human mind to order and conquer all – suggesting a superiority of mind over matter and of humans over ‘non-rational’ nature. In its imperialist vision, ‘civilized’ Europe, bearing the torch of reason, had a duty to enlighten the rest of the world, conquering wildness and bringing order and rationality to ‘uncivilized’ peoples and nature. The mission of British Colonialism was not only to enrich the imperial metropole, but also, in so doing, to ‘improve’ the world.

This suggests that technology was central to a colonial ideology and played a key role in transforming society and environment in relation to it.

Drawing the conclusion that colonial society was superior, at least in part because of their technologies, had profound implications during the colonial era and the consequences of some are with us today. As Adas (1998: 15-16) says:

...evidence of scientific and technological superiority has often been put to questionable use by European and North Americans... It has prompted disdain for African and Asian accomplishments, buttressed critiques of non-Western value systems and modes of organization, and legitimized efforts to demonstrate the innate superiority of the white “race” over the black, red, brown and yellow. The application of technological and scientific gauges of human potential has also vitally affected Western policies regarding education and technological diffusion which go far to explain the varying levels of underdevelopment in the Third World today.

The misuse of these standards has not only impeded and selectively channelled the spread of Western knowledge, skills, and machines; it has also undermined techniques of production and ways of thinking about the natural world indigenous to African and Asian societies. Concern for the decline of these alternatives is not simply a matter of relativistic affirmation of the need to preserve difference and heterogeneity. Their demise means the neglect or loss of values, understandings, and methods that might have enriched and modified the course of development dominated by Western science and technology... As we better understand the attitudes toward the environment and material acquisition that were fostered by non-Western philosophical and religious systems, we also appreciate how they might have tempered the Western obsession with material mastery and its consequences: pollution, the squandering of finite resources, and the potential for global destruction.

Less arrogance and greater sensitivity to African and Asian thought systems, techniques or production, and patterns of social organization would also have enhanced the possibility of working out alternative approaches to development in non-Western areas, approaches that might have proved better suited to Third World societies than the scientific-industrial model in either its Western or its Soviet guise.

It is possible to list positive and negative consequences of colonial technologies and many of the most obvious examples of the latter are environmental. Some judgements depend on perspective and cultural location whereas others are supported by a widespread consensus. Such judgements, however, are separate to the observation that colonial technologies implemented colonial political agendas. Societies and environments were modified by technologies and over time the changes were normalised thus contributing to the hegemony of colonialism. Beyond medium term politics the ideology of 'improvement' also shaped the deployment of technologies. Colonial powers rarely stepped back to ask what the local perspective on improvement might be and because alternative technologies were largely sidelined opportunities for fertile encounters were missed. Today governments make technological interventions in the name of 'development' and in many cases there are similarities with those that accompanied 'improvement'.

5 Government and policy

The relationship between colonial powers and their colonies changed over time. Initially nature was destroyed or plundered but in many places this gave way to early efforts at environmental protection and management. The story of colonial conservation, however, is not straightforward. Novel policies were a response to emerging environmentalism and the declining legitimacy of rapacious colonialism. At the same time, however, nature conservation gave additional momentum to existing processes, particularly the alienation of land from indigenous people.

Trade in bird-of-paradise feathers between the Netherlands and Netherlands East Indies (Indonesia today) in the second half of the 19th century is a useful starting point (Cribb, 2007). At this time feathers were widely used in European fashion but indiscriminate slaughter of birds in the colonies led to local outrage. When this spread overseas the resulting international concern placed the Dutch government under pressure to show they were good colonialists. Policies to protect the bird-of-paradise followed and Cribb (2007: 54) suggests that 'The movement to limit the plumage trade was the first case in which public opinion in developed countries was mobilized to influence environmental policy elsewhere in the world'.⁸ At least in this case, therefore, early conservation policies were motivated by legitimacy problems rather than enlightened self-interest or some sense of doing the right thing.

More broadly interactions between the core and periphery of colonial empires helped to forge modern European ideas, visions, strategies of conservation (Randeria, 2007). As Adams and Mulligan (2003: 5) say:

... an impetus to conserve nature began when colonial authorities grew alarmed at the speed of environmental degradation in colonized lands. Somewhat paradoxically, while ideas about exploitation of nature moved with the colonizers from the centre to the periphery of old empires, ideas about the conservation of nature circulating in the periphery were brought back to the centre. However, it is important to recognize that both the exploitation of

⁸ Grove suggests that environmental policy emerged first on Mauritius: '... the emergence of a conservation policy related to a perception by the colonial authorities of the unacceptable risks implied in retaining an unrestricted status quo' (Grove, 1995: 479)

nature in the colonies and the impetus to conserve nature for longer-term human use were a product of the colonial mind-set...

Conservation organisations emerged in the centre and the periphery in the second half of the 19th century and protected areas like forest reserves or national parks have their origin at this time.

Although conservation and environmental management was a new and unexpected obligation for colonial states it spread quickly for various reasons.⁹ As Grove (1995: 15) observes:

Colonial states increasingly found conservationism to their taste and economic advantage, particularly in ensuring sustainable timber and water supplies and in using the structures of forest protection to control their unruly marginal subjects.

Thus early environmental policy played a role in managing colonial subjects as well as managing colonial nature. There are many examples of such management leading to further alienation of the land through a process which might be called ecological enclosure. Cribb (2007) (following Doughty 1975) identifies one of the ways in which this was legitimised; local people were increasingly identified as being at fault for environmental destruction and incapable of managing their resources effectively.¹⁰

The conflict between conservation and preservation shows that environmental degradation in colonised lands could result in competing visions of environmental protection. Advocates of the first understood the goal of effective environmental management to be the production of the maximum amount of useful resources over the long term. The second emphasised maintaining nature in its natural state regardless of its utility. This schism features in the classic conflict between Gifford Pinchot and John Muir in the United States at the turn of the 19th and 20th centuries. Significantly, from a colonial perspective, both strategies served to further marginalise the claims of the indigenous people in a 'neo-Europe' or 'settler society'. In many ways Muir's preservationism, which informed the policy of national parks, was the most problematic. As Cribb (2007: 50-51) notes:

The very notion of a 'national park' was coined in the second half of the nineteenth century in the United States and New Zealand, both of them settler societies in which the newcomers had a powerful interest in asserting a quasi-spiritual guardianship of the land in order to counter the older claims of indigenous inhabitants.

This discussion begins to show how and why colonialism gave birth to a massive bureaucracy tasked with managing nature which Drayton (2000: xviii) suggests is

⁹ Grove (1995: 7) says: 'Ultimately the long-term economic security of the state, which any ecological crisis threatened to undermine, counted politically for far more than the short-term interests of private capital bent on ecologically destructive transformation.'

¹⁰ Singh and van Houtum (2002) argue that environmental policy is a tool and people derive or lose benefits as a result. In the colonial period it enhanced state control and weakened the authority of colonised people.

one of its most 'enduring legacies'. In almost every explanation the further alienation of indigenous people from their resources accompanies colonial efforts to manage nature more responsibly or profitably. This illustrates that the conflict between nature protection and human rights which continues today has its origins in the colonial period. As Cribb (2007: 50) notes:

The conflict is based on the compelling argument that conservationist measures inevitably focus on areas which have been relatively unaffected by development. These areas are often those parts of the globe where indigenous peoples are struggling to preserve their livelihoods and cultures against external encroachment.

6 Knowledge and expertise

Geography is probably the most obvious example of knowledge and expertise playing an important role in the relationship between colonialism and the environment. Simply knowing the location of islands and continents was necessary before they could be visited regularly, conquered and exploited. Focusing on knowledge and expertise more generally, it is tempting to argue that western forms simply displaced indigenous ones but reality was more complicated. Some indigenous knowledge was valuable to colonisers and was used for an extended period. Other forms helped to shape the emergence of western scientific understandings of nature.

An early example of local knowledge being valued by colonisers (British and French in this case) is provided by Beinart and Hughes (2007: 41) in their discussion of the Canadian fur trade:

In these vast northern reaches, pockmarked by lakes and waterways... the commodification of fur drew deeply on local knowledge. The fur trade gave rise to a different sort of commodity frontier, shaped both by the product its provenance, and the environment. To a greater extent than indigenous peoples further south, and for a longer period, First Nations in what became Canada were able to work with and influence the European intrusion.

In addition to specific knowledge required to hunt beaver effectively, the First Nations knew everything from winter survival techniques to which rivers were navigable. They had also perfected a range of essential technologies such as the canoe and snow shoes which were widely adopted.

This reliance on indigenous knowledge in a specific context – at least for a period – can be contrasted with colonialism's more general dependence on new European forms of knowledge and expertise and the men who could claim them. Adas (1998: 2) refers to a 'compulsion to measure and catalogue' the places that European colonial powers were 'discovering'. A celebrated example is the botanist Joseph Banks (1743–1820) who accompanied Captain James Cook on his first voyage to the Pacific. In *Science in the Service of Empire* Gascoigne (1998) argues that the British

State became increasingly dependent on people like this because they helped to order, classify and manage the Empire.¹¹

Two of the most important drivers appear to have been risk and profit which often interacted. Many of the unfamiliar lands which the colonial powers were occupying were difficult for western Europeans to live in but could be extremely profitable. As Grove (1995: 8) argues:

During the early eighteenth century the urgent need to understand unfamiliar floras, faunas and geologies, both for commercial purposes and to counter environmental and health risks, had propelled many erstwhile physicians and surgeons into consulting positions and employment with the trading companies as fully fledged profession and state scientists long before such a phenomenon existed in Europe.

In the second half of the 18th century and through the 19th century these early scientists were surrounded by a plethora of new academic subjects and institutions which helped to discipline the colonies in different ways (see Brockway, 1979; Said, 1994; Drayton, 2000).

The emergence of early knowledge and expertise about conservation illustrates how core and periphery interacted. Grove (1995: 475) argues that:

... the colonial botanical garden... formed the basis for a new kind of learning, information collecting and networking in the tropical environment. This learning was global in its approach and in its aims. Above all, the colonial botanical garden provided the basis for the institutional emergence of environmentalist ideas.

He suggests that scientists on Mauritius, and above all Pierre Poivre, Philibert Commerson and Bernardin de Saint-Pierre, should be understood as the pioneers of modern environmentalism.

The dynamics of the interaction between core and periphery were complicated. At the end of *Green Imperialism* Grove argues that non-European epistemologies of nature helped to shape early conservation science and scientists promoted their own agenda as much as being in the service of the state or business.

Colonial environmental policies arose, therefore, between 1650 and 1850, as a product of highly structured tensions between colonial periphery and metropolitan centre and between the insecure colonial state and the climactic environmentalism of the new scientific conservation elites. In recognising the contradictions which arose in this way, one needs to reconsider the nature of the early colonial state and its relationship with science. It may also seem prudent to question some of the simplistic assumptions that have been made about the degree to which science itself has genuinely been subordinated to

¹¹ Chaplin (2003: 128) says that: "... before professional scientists existed and before the creation of a true bureaucracy that could integrate experts into government office, the state found it necessary to maintain less formal connections to men like Banks."

the interests of capital and the colonial state. Clearly in so doing one needs to be aware of the variety of levels of discourse, disguise and argument with which scientific elites have historically encountered the problem of influencing governments about environmental risk. (Grove, 1995: 485-486)

These complex dynamics have continued to the present day with conservation linking scientific knowledge generated by botany, zoology and increasingly ecology with legal, aesthetic and commercial agendas in ways which nevertheless are able to carry the authority of science (Toogood, 2003).

7 Understanding and ideology

Beyond knowledge and expertise, although related to it, colonialism's encounter with indigenous peoples was also an encounter between alternative epistemologies of nature. Despite widespread claims about objective and rational ways of understanding and managing nature the European colonial project was inspired at least in part by Christian theology. At the same time, however, alternative epistemologies also shaped ideas helping to produce what Grove (1995: 5) refers to as an 'imaginative hegemony' of nature. Today one of the most important epistemological legacies of the colonial era might be the idea of 'environment' itself, as a realm external to people and society which requires institutions and policies to manage it.

In *Nature's Government: Science, Imperial Britain and the 'Improvement' of the World* Drayton (2000) highlights the Garden of Eden in Genesis as one of the ideas which shaped colonialism's engagement with nature. Eden is important, he argues, because it '... explains men and women's place in nature, both the potential scope of human power, and our actual predicament' (Drayton, 2000: 3). In Christian thinking God gave Man knowledge and dominion over all things but Adam and Eve's fall from grace meant that their knowledge became partial and that human beings became mortal and were thrown into a struggle for survival against nature. Significantly, however, the loss of Eden contained within it the promise of redemption at some point in the future, when God would welcome the descendents of Adam and Eve back into a second Garden of Eden.

The bible is important because it can be understood as giving Colonialism a mission which involved more than just economic and strategic advantage. As Drayton (2000: 3) says:

... the gate to that second garden lay in the four corners of the mortal world outside of Eden, throughout which were scattered the descendents of Adam, Eve, and the plants and the animals they had once commanded.

Through science, technology, government and colonialism itself, it seemed to many that human beings might assist the work of redemption, by recovering some of the lost power and wisdom, and, more practically, returning wilderness back to a realm of order and abundance. Drayton (2000: xvii) argues that:

Christian assumptions about man's place in nature played a central role in the making of Imperial Britain well into the nineteenth century. Ideas of

Providence, and of Adamic responsibilities and prerogatives, were the ideological taproot of the First British Empire and, translated into political economy, they underpinned the Second, and the nation-states which were its successors.

Grove (1995:4) identifies a specific development in Europe as being important:

... the advent of Calvinism in seventeenth-century Europe seems to have lent a further impetus to the Edenic search as a knowledge of the natural world began to be seen as a respectable path to seeking knowledge of God.

As was the case with western science and indigenous knowledge it is tempting to argue that European epistemologies of nature simply displaced alternatives as part of the process of empire building but research suggests that reality was more complicated. Particularly as the need to react to environmental destruction grew, a space opened for a complex range of ideas about nature to come together. In *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism* Grove (1995) emphasises the importance of this:

... the historically decisive diffusion of indigenous, and particularly Indian, environmental philosophy and knowledge into western thought and epistemology after the late fifteenth century has been largely dismissed. Instead, it has simply been assumed that European and colonial attempts to respond to tropical environmental change derived exclusively from metropolitan and northern models and attitudes. In fact the converse was true. The available evidence show that the seeds of modern conservationism developed as an integral part of the European encounter with the tropics and with local classifications and interpretations of the natural world and its symbolism. As colonial expansions proceeded, the environmental experiences of Europeans and indigenous people living at the colonial periphery played a steadily more dominant and dynamic part in the construction of new European evaluations of nature and in the growing awareness of the destructive impact of European economic activity on the peoples and environments of the newly 'discovered' and colonised lands. (Grove, 1995: 3)

And elsewhere:

To summarise, the ideological and scientific content of early colonial conservationism as it had developed under early British and French colonial rule amounted by the 1850s to a highly heterogeneous mixture of indigenous, Romantic, Orientalist and other elements. (Grove, 1995: 12)

Grove (1995) suggests that these processes produced a new 'imaginative hegemony' with profound implications for colonisation.¹²

¹² Grove (1995) emphasises the importance of the images and metaphors used by Europeans to understand nature at the expanding colonial periphery. He argues that islands were physically and metaphorically important because environmental destruction could be witnessed and understood as something which raised questions about man's place in the world. Tropical islands became metaphors for the newly discovered world and places onto which discontent and utopias could be projected.

The imaginative hegemony implied by new valuations of nature, which had themselves been stimulated by the encounter with the colonial periphery, had enormous implications for the way in which the real – that is, economic – impact of the coloniser on the natural environment was assessed by the new ecological critics of colonial rule. (Grove, 1995: 5)

8 Consumption and lifestyle

The theme of consumption and lifestyles focuses attention on the relationship between nature in the colonies and the changing character of everyday life in Europe. There are important economic and material dimensions to this. European countries enriched themselves by exploiting resources in the colonies and this wealth helped to increase domestic demand for the products of empire. In concert with such economic and material processes, however, relatively novel social-psychological ones were operating and became embedded. Focusing on these draws attention particularly to the ways in which the environment in the colonies became integrated in the way of life of Europeans.

Wool illustrates how changing consumption and lifestyles in Europe transformed the relationship between people and nature in the colonies. Increasingly during the 19th century industrial innovations enabled much larger quantities of cloth to be produced. Prices across Europe fell and wool exports from Australia boomed to satisfy the demand.¹³ Merino wool was particularly important because it produced smoother, lighter, worsted cloth which in turn led to products which could be marketed in new ways for clothing and coverings. Beinart and Hughes (2007: 96) argue that:

As in the case of other colonial products, such as sugar and beaver skins, wool consumption in the nineteenth century was intimately linked to changing consumer tastes. With growing populations and rising incomes, more Europeans purchased a wider range of garments – effectively a wardrobe.

As mentioned above the impact of wool production on the indigenous population in Australia was profound as it provided the economic impulse to open up the continent. The environment was transformed at the same time. Twenty fine-wooled merino sheep were introduced in 1797 and by the last decade of the 19th century there were over 100 million. When natural pastures were exhausted efforts were made to intensify production such as fencing and rotation. Sheep were more aggressive grazers than indigenous animals and large numbers compacted and exhausted the soil. Some farmers used fire to burn off grass and trees to encourage new grass but torrential rain brought severe run-off and erosion. Bare soil provided a place for alien species to invade and when rabbits were introduced they thrived on the grass which had been cut short by the sheep.

Sugar also illustrates how European consumption and lifestyles modified the environment in the colonies. Until the 17th century most people in Northern Europe used honey as a sweetener and very few were even aware of sugar. By 1650, however, following the creation of Caribbean plantations, the English aristocracy

¹³ In the Highlands and Islands of Scotland 1792 was labelled 'the year of the sheep'. In a form of internal colonialism the indigenous Gaelic population was cleared to make way for flocks and lowland shepherds.

were using it regularly. By the 1800s sugar was part of everybody's diet and by the 1900s it was providing one-fifth of the average person's calories. One of the most penetrating analyses of these developments is provided by Mintz (1985) in *Sweetness and Power: the Place of Sugar in Modern History*. He describes it as 'the first exotic luxury transformed into a proletarian necessity' and explains this change through the dynamics of capitalism and imperialism.

The profound changes in dietary and consumption patterns in eighteenth- and nineteenth-century Europe were not random or fortuitous, but the direct consequence of the same momentum that created the world economy, shaping the asymmetrical relationships between the metropolitan centres and their colonies and satellites, and the tremendous production and distributive apparatuses, both technical and human, of modern capitalism. But this is not to say that these changes were intended, or that their ancillary consequences were well understood. The ways in which the English became the biggest sugar consumers in the world; the relationships between the colonial loci of sugar production and the metropolitan locus of its refining and consumption; the connections between sugar and slavery and the slave trade... these and many other aspects of sugar's history must not be thrown together and labelled 'causes' or 'consequences' by themselves. But it is possible to point to certain long-term trends the general consequences of which are readily discernable. (Mintz, 1985: 158)¹⁴

The environmental and social impacts of sugar production were considerable. Drummond and Marsden (1999) (see also Watts, 1987) provide a detailed account focusing particularly on Barbados where English colonists established the first permanent settlement in 1627 and which remained a British colony until 1966. Sugar began to dominate the island's economy as early as the 1640s and environmental impacts became clear around the same time. Forest clearance came first leading to soil erosion and soil nutrient loss. More generally, in order to be commercially viable plantations needed to be of a particular size and this pattern of land holding was inscribed into the physical environment. Of course, the use of coerced labour transported from West Africa became the defining characteristic of plantation agriculture in the Caribbean.

The overarching observation that can be made is that empire literally became a way of life. Although there were important material dimensions to this process it was also profoundly cultural. Ideas of what is essential to live a normal life shifted and new ideas of what is pleasurable emerged. This is seen particularly in big game hunting and exotic travel which have their origins in the colonial period.¹⁵ Consumerism itself

¹⁴ Building on this broad position Mintz wonders if sugar had unique political and military significance for the emerging capitalist class in the metropolis: "... the hypothesis offered here is that sugar and other drug foods, by provisioning, satiating – and, indeed drugging – farm and factory workers, sharply reduced the overall cost of creating and reproducing the metropolitan proletariat" (Mintz, 1985: 180).

¹⁵ It is worth drawing attention to developments in the area of recreation. Beinart and Hughes (2007) argue that Africa's significance in the story of environment and colonialism was not as a site of extraction or production but of recreation. Extraction certainly took place. Gold and diamonds were mined in south Africa and animals were hunted for commercial reasons, particularly elephants for ivory which became billiard balls and piano keys. At the same time, however, this was one of the places where the recreational hunter and recreational traveller emerged as key characters of colonialism.

emerged in this era and most consumer products were implicated in colonialism in some way. This suggests another way of understanding Said's (1994) observation that colonialism was an affliction for the coloniser as well as the colonised.

9 Resistance and freedom

Colonialism encouraged resistance more or less from the outset. Much of this was a response to its violence and brutality and in many cases was an ultimately unsuccessful fight for survival. As colonial powers tightened their grip colonised people became more aware of the cultural and psychological damage being inflicted on them in addition to the physical harm. Frantz Fanon focused on this in *Black Skin, White Masks* and *Wretched of the Earth* and played a part in inspiring what might be described as cultural nationalism as a form of resistance to colonialism. A significant strand of resistance also emerged in relation to land and resources and particularly who controlled them and who benefitted as a result.

An early and important example of land as a focus for resistance emerged in Ireland. By the 19th century and after years of occupation the vast majority of land in Ireland belonged to the protestant Anglo-Irish ascendancy class. The tenants and landless agricultural labourers who worked on the estates were largely Catholic and Gaelic. In the mid-19th century this group was devastated by the potato famine and life for those he did not die or emigrate remained appalling for decades to come. This led ultimately to the formation of *Conradh na Talún* or the National Land League in 1877 which became one of the most important mass social movements in Europe.

The Land League was established by Michael Davitt and Charles Stewart Parnell to mobilise tenant farmers against unfair rents and evictions. Mass protests were organised at every eviction, shaming landlords, their agents and the British government which legitimised the system. Replacement tenants were shunned and the refusal to pay rents to Captain Charles Boycott in west Mayo gave all the social movements that followed a name for one of their most important protest strategies. The British government's initial response was internment without trial and nearly 1000 members of the Land League were imprisoned. The organisation was banned at the end of 1881 but by then many landlords had given up and were asking the British government to buy them out. The government agreed and a massive transfer of land followed.¹⁶¹⁷

Trophies and travelogues were increasingly consumed in Europe and for many came to represent the colonies.

¹⁶ The change brought about by the Land League can be seen in figures for land ownership. In 1870 only 3% of Irish farms were held by former tenants but by 1908 that figure stood at 46%. David Cannadine charts the decline of the Irish landed class in *The Decline and Fall of the British Aristocracy*: "In scale, this was land reform on a par with Bolshevik Russia: the hereditary owners, who had held the land for centuries, now held it no more. It took three decades rather than three years, and the owners were bought out, not expropriated. To that extent, the nationalists were correct in describing the demise of the Irish landowners as 'a bloodless revolution'. But it was a revolution, none the less" (Cannadine, 1990/1996: 105).

¹⁷ The conflict over land in Ireland became known as 'the Land War' and it lasted from 1879 to 1882. To a significant extent the success of the Land League is explained by the threat of a much wider conflict, linking rural Gaelic communities in Ireland and Scotland. As the Irish land protest gathered pace Davitt and Parnell travelled to Scotland particularly to address tenant farmers (also Gaelic) in the highlands and islands. The same protest movement in this location became known as 'the Crofters War' but there it was resolved in a different way. A commission of enquiry was set up which led

Elsewhere resource management and conservation became a focus for resistance. The spark was often a colonial government introducing policies which impacted unfairly on indigenous people. Beinart and Hughes (2007) focus on forest policies in India and game reserves in Africa where there are striking similarities. In both cases officials tried to fix the fluid and porous boundaries of indigenous communities and efforts were made to make migrant people more sedentary. From the colonial government perspective this would make protected areas easier to manage. Indigenous people were undermined in other ways too. There was an assumption that pastoralists competed with wildlife for water and pasture and rule changes recast Indigenous hunters as 'poachers'.

Resistance was often triggered by the feeling that colonial and commercial interests were being prioritised over subsistence needs and although focused on particular grievances it was often linked to wider concerns about dispossession. In some cases resistance was motivated by the belief that ecological controls threatened spiritual well-being as much as livelihoods. Beinart and Hughes (2007: 283) make an important observation when they point out that what began as local and community focussed resistance to conservation measures was '...increasingly connected with nationalist and anti-colonial movements around the mid-twentieth century.' A similar link can be drawn in Ireland from land reform and *Conradh na Talún* through the cultural nationalism of the Gaelic revival to independence.

Overall this discussion draws attention to the importance of resistance and grass-roots activism. Often this was peaceful, such as the refusal to pay rents in the Ireland's land war, at other times it was violent. An important example of the latter, because it targeted that which was being prioritised by colonial powers, is the killing of wildlife. Beinart and Hughes (2007) suggest that some of the most effective resistance involved massive withdrawal of compliance. Overall contesting aspects of colonialism which impacted on the environment became part of the wider fight against colonialism itself. Resistance was part of the process of liberation and contributed by empowering people. Beinart and Hughes (2007: 287) suggest that:

There is a direct line to be drawn between the alienation of people from forests and communally held land, and the development of political struggle and consciousness in the colonized world.

10 Conclusion: why colonialism still matters

This paper suggests that colonialism is important for understanding the relationship between society and environment today for at least four reasons: (i) a more accurate account of the origins of environmentalism which emerged in the colonies and not in the imperial centre; (ii) understanding the legacies of colonialism and how these shape contemporary environmental challenges; (iii) insights into generic processes of imperialism which might be operating through the environment today; (iv) a deeper understanding of the environmental crisis and how it might be overcome. In this conclusion I discuss each of these in turn.

ultimately to the first crofting legislation which gave tenants on estates in the Highlands and Islands new rights.

A more accurate account of the origins of environmentalism

Formerly colonised people regularly take opportunities to remind colonial powers about the past. For example, when the Irish Prime Minister Bertie Ahern visited the British Foreign and Commonwealth Office in 1997 to meet the Foreign Secretary Robin Cook he saw a painting of Oliver Cromwell hanging on the wall. Reports suggest that he promptly walked out and refused to return until the portrait of ‘that murdering bastard’ had been removed.¹⁸ More recently, in 2009, when Colonel Gaddafi of Libya met President Berlusconi of Italy he wore a photograph of the freedom fighter Omar al-Mukhtar. Also in 2009 Hugo Chávez took the opportunity of meeting Barack Obama for the first time to give him a copy of Eduardo Galeano’s *Open Veins of Latin America: Five Centuries of the Pillage of a Continent*. Encounters like these are important because colonial powers often try to forget the past or provide partial accounts of history including their own.

During colonialism changes in metropolitan centres were just as profound as changes in the colonial periphery and interactions between the two were important (Drayton, 2000). Environmentalism is a good example. As discussed above the origins of conservation and environmentalism are found in the colonies where environmental destruction accompanied the efforts of imperial powers to exploit the periphery. This context gave birth to new ways of thinking about nature and its value – including scientific – which travelled back to the imperial core. This has been sidelined, downplayed or largely forgotten. As Grove (1995: 485-486) suggests:

... our older assumptions about the philosophical and geographical origins of current environmental concerns need to be entirely reconsidered. It is now clear that modern environmentalism, rather than being exclusively a product of European and North American predicaments and philosophies, emerged as a direct response to the destructive social and ecological conditions of colonial rule. Its colonial advocates, and their texts, were deeply influenced by a growing European consciousness of natural processes in the tropics and by a distinctive awareness of non-European epistemologies of nature.

This can come as a surprise to those who think environmentalism has its origins in industrial revolution and European Romantic thought. This in turn illustrates how imperial powers tend to understand their histories as resulting from purely internal processes.¹⁹

Understanding the legacies of colonialism

Many of the legacies of colonialism have implications for the way society understands and responds to contemporary environmental challenges. Building on the previous paragraphs, one of the most obvious examples is conservation and environmentalism more broadly. It is difficult to overstate the importance of this when Randeria (2007) argues that the idea of ‘the environment’ did not exist in a conceptual sense in most parts of the world before colonialism. It rests on a division between nature and culture which spread with colonial officials and scientists or was

¹⁸ The Sunday Times August 17, 2008.

¹⁹ Drayton (2000: xiii) says ‘We are beginning, just barely, to recognize modern Britain to be as much a product of processes of empire as modern India, Nigeria, New Zealand, Barbados, or Guyana.’

an outcome of interactions between the coloniser, the colonised and nature. Today 'the environment' frames the way most interactions between people and nature are understood, providing what Grove (1995) might call an 'imaginative hegemony'.

Another colonial legacy with implications today is the experience and memory of exploitation. Around the world colonialism became synonymous with the alienation of people from their land and resources, first as colonial powers enriched themselves and later as they pursued conservation objectives. This means that there are places where colonialism exists as one of the key political experiences through which people interpret contemporary threats and opportunities. An example is Bolivia and the vast lithium deposits in Boliva at Salar de Uyuni which might be globally important in a transition to a low carbon economy. The President Evo Morales (an Aymara Indian) has made it clear that he wants the resource to be developed in Bolivia. Bolivia's minister for mining, Luis Alberto Echazu, said recently that 'We will not repeat the historical experience since the fifteenth century: raw materials exported for the industrialisation of the west that has left us poor.'²⁰

Insights into generic processes of imperialism

The third reason for exploring the relationship between colonialism and environment is to help with the task of understanding contemporary processes. Although colonialism in its strictest sense has largely been consigned to history this does not mean that imperialism has. Indeed, recent research and writing suggests that imperialism is becoming important once again. In *Empire* Hardt and Negri (2001) suggest that a new form of imperialism has taken root, located beyond individual countries in the market and economic institutions which operate at the global level. More recently Noam Chomsky (2004) (*Hegemony or Survival*) and David Harvey (2005) (*The New Imperialism*) have been critical of the United States as the world's hegemonic power. In many formerly colonised countries so-called post-colonial governments are pursuing national development strategies which exploit their peripheries and can be labelled 'internal colonialism'.

The study of colonialism and the environment is valuable in this context because it indicates where critical attention should be directed. For example, the alienation of resources continues even if it is achieved by different means today – the market or intellectual property rights having replaced colonial armies. This is the signature process of imperialism. Today it is widespread in relation to food production where poorer countries increasingly provide food for rich consumers in Europe, North America and elsewhere. Climate change and the world's response is another example. As the richest countries fail to act because *real politik* makes it impossible to question the profligate lifestyles of their citizens they undermine the environments of poorer countries and life-chances of poorer people. At the same time, strategies adopted to 'solve the problem of climate change' might burden the marginalised disproportionately, raising the spectre of ecological imperialism.

A deeper understanding of the environmental crisis

²⁰ 'Bolivia holds key to electric car future', BBC News, 9 November 2008, Damian Kahya.

Perhaps the most important reason for studying the relationship between environment and colonialism is that it implies a more challenging explanation of the current 'environmental crisis'. As Grove (1995) points out in relation to colonial period, concern over the environment reflected concern over colonial society. 'Thus, while the environment may be at risk, it is the social form which demands inspection' (Grove, 1995: 482). If this observation is extended to the present day then contemporary environmental problems direct our attention not to 'multi-level governance', 'market mechanisms' and 'technical solutions' but to contemporary imperialisms and how to overcome them. As much as a politics of participation and consensus environmental problems suggest a politics of resistance and conflict. Hegemony and legitimacy become key issues.

In the 20th century colonialism came to end when resistance gained momentum and led to nationalist freedom/liberation movements around the world. The outcomes were mixed at best. The new superpowers of the USA and USSR began to meddle in 'post-colonial' countries and a range of home-grown tyrants and despots replaced colonial powers and in many cases were at least as bad as their predecessors. Frantz Fanon, perhaps the greatest anti-colonial/imperial voice, said this would happen unless resistance movements which achieved national independence moved immediately on to the task of real emancipation for people and communities. In most cases post-colonial governments simply adopted the ideas, practices and institutions of the colonial powers instead. Perhaps contemporary environmental problems are an opportunity for the world to confront imperialism again but this time with a more sophisticated understanding of freedom and what it takes to achieve it.

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