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Environmental Connections: Europe and the Wider World

KEYNOTE ADDRESS

'ENVIRONMENTAL HISTORY: REVITALISING CONNECTION, CONTEXT AND COHERENCE IN HISTORICAL STUDIES'

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I am deeply conscious of what a great honour it is for an African to be invited to present the keynote address for this 4th conference of the European Society for Environmental History. Thank you for this privilege. Thank you, too, to the Society's committees and the team put together by the Vrije Universiteit for hosting such a large number of environmental historians in order to deliberate our discipline over a number of days. Arranging such a gathering of eminent scholars is an achievement indeed and the organisers are to be congratulated on this.

AMSTERDAM/NETHERLANDS

Contributing to the delight of this meeting is that it is being held in one of the great cities of the world. For many centuries Amsterdam has been among the most significant urban centres in Europe and, situated on the edge of the Atlantic Ocean in an extremely low-lying region, it has been shaped by its situation in a particular natural environment. Amsterdam and indeed the whole of this area bear historical witness to human invention in coping with, adapting to and learning about environmental challenges and opportunities, while employing risk management and scientific and technological innovation.

Equally importantly, the international reach of Netherlanders has been enduring. During the high point of the age of European expansion, the Netherlands was the most powerful seafaring community on earth, responsible for exporting European ideas and lifestyles to the rest of the world and, in turn, becoming an entrepôt for the importation of ideas and resources from Africa, the Americas, Australasia, Asia and the East Indies into Europe. Even today, the environmental reach of the Netherlands is exceptional, its ecological footprint being almost fifteen times larger than the country itself.[1] It is therefore entirely appropriate to hold this conference in Amsterdam for the city itself is an inspiration, example and focus of environmental history at its most striking.

The premise of my address is to assert that the theme of this conference is superbly chosen because 'connections' lie at the core of environmental history and provides its direction and its strengths. In speaking to this line of thinking, I am building on the views of Donald Worster, one of the most influential historians of our time – and who I am delighted to see in the audience today – that the connection between nature and

culture is central to history and pivotal to any understanding of the past.[2] This also echoes the opinions of John MacKenzie, who is, unfortunately, not able to attend this conference, that '… here are histories which rely on cross fertilisation in techniques, ideas, and modes of operation'.[3]

Environmental history has been the major catalyst for suggesting and providing connections between the pasts of different biological and physical places in the world. It has created fresh intellectual links in regional, national and world histories, and it has invigorated and reconfigured much of our understanding about connections between the periphery and the metropole, the developing and developed world, and between traditional disciplinary boundaries. Refracting our understanding about the past through the prism of the environment around us has added excitement and relevance to modern historical studies generally, and encouraged innovative research in many previously neglected areas of study. To quote John MacKenzie again, the conversations within environmental history 'not only allow a more complex reading of the past but also challenge and revitalise the subject of history itself'.[4]

Environmental history has brought past and present together thematically and intellectually. The famous Australian environmental writer Eric Rolls, refers to the 'creative ecology of invasion',[5] while David Lowenthal, heritage and memory historian, emphasises how both 'nature and culture generally benefit from creative intermingling'.[6] The emphasis on creative connection in environmental history extends even to bringing together a wide variety of dedicated professionals and connecting them with the broader public in a way that few other historical fields are able to achieve.

It is the creativity of connection that I would like to stress today and I shall begin by identifying some of those connections through the historical experiences of my own country, South Africa, and the Netherlands whose relationship spans many hundreds of years. For a start, South African historians have very close associations with the Netherlands because much of our professional historical training (particularly among Afrikaans-speakers) derives from scholarship in the Low Countries and resonates with its strong Rankean tradition. The renowned Dutch scholar Pieter Geyl visited South Africa in 1937, while influential South African academics and historians of the early and mid-20th century – men such as Leo Fouché, P.J. van der Merwe, A.N. Pelzer, F.A. van Jaarsveld, J.D. Scholtz, F.J. du Toit Spies – were trained in the universities of the Netherlands, some under the great J.H. Huizinga himself.[7] The Vrije Universiteit of Amsterdam, as well as other Netherlands universities, have South African institutional partnerships even today.

Another strong connection – also not an environmental one – relates to the later part of the 20th century, when the Netherlands was a vociferous opponent of South Africa's apartheid policies and a country in which black and white South Africans in exile were made to feel welcomed and supported. There is no doubt that pressure from Holland in particular played a large part in the eventual triumph of democracy in South Africa in 1994.

VOC AND CAPE TOWN

Going back in time, the formal connection between South Africa and the Netherlands dates to 6 April 1652 when the Dutch East India Company (VOC) established the first European settlement in southern Africa, under commander-surgeon Jan van Riebeeck. There is an environmental reason why the Dutch rather than the Portuguese mariners established a stopping-off point at the Cape as both headed to India and the Far East to obtain spices and other luxury goods for Europe. In their journeys to the East, Portuguese sailors hugged the African coastline and founded their bases in Mozambique on Africa's east coast, there to wait for the monsoon winds and cross the the Indian Ocean. But being superior and more adventurous navigators, the Netherlanders made efficient use of the Atlantic currents to head away from the African coast and make directly for South America early on in the voyage and then come back on the wind to make landfall at the southern extremity of Africa – the Cape – from the west.

In that period of early European expansion, knowledge of the world was still scanty. There were accounts of dragons that emerged from boiling seas, lands that were peopled by humanoids, depicted as having two heads, one eye, a single large foot, and other fantastic life-forms. This ignorance and speculation was expressed visually in the works of Amsterdam cartographers Hondius, Blaeu and Jansson, who filled their maps of Africa with imaginary environments of mountains, rivers and lakes, inhabited by fictional creatures. But it did not take long in an age of geographical and scientific expansion for Europeans to become aware of their ignorance, and later in the 17th century Leiden map-maker Pierre van der Aa left the interior of the African continent blank, noting: 'I would rather show this part of Africa as unknown and uninhabited than rely on my own imagination.'[8]

REMONSTRANTIE

In most parts of the world today when a new development is planned, an elaborate environmental assessment process takes place. Consultants are called in to deliberate the environmental advantages and disadvantages of the scheme in question, to decide on mitigating factors, to determine vulnerable environments and species and to relate these to investment and other returns, as well as to a sense of place and heritage values. Experts, stakeholders and interested parties all take part in the deliberations. It is not generally well known that what was possibly the world's first environmental report concerned the Cape and it was commissioned by the VOC.

The document was called the *Remonstrantie* and it was submitted by Leendert Janszen and Mattijs Proot who were stranded in Table Bay with sixty other sailors when their vessel, the 'Nieuwe Haerlem', went aground in March 1647. For a whole year the group sheltered under Table Mountain, protecting the cargo of spices that had been salvaged and waiting to be rescued by a returning Dutch fleet.[9] Once safely back in the Netherlands Janszen and Proot were asked by the VOC to give a report on the potential of the Cape as a refreshment station for the company's fleets. By then the more unpleasant memories of being shipwrecked had faded and the two men sent in their feasibility study on 26 July 1649 in which they outlined why the development of Cape of Good Hope would be advantageous for the VOC.

The Heeren XVII studied the report carefully and discussed it vigorously, because with policies of mercantilism, monopoly and direct investment, the Company was cautious about investing Dutch capital in far-flung parts of the world in ventures that were not guaranteed to make a profit. But after carefully calculating the pros and cons of South Africa, the Chamber in Amsterdam was instructed to make the Cape its rendezvous point for vessels going to India and the East Indies where the Company had its other bases. Jan van Riebeeck, a junior VOC official, was despatched to start the settlement and a famous old painting shows him planting the flag, Table Mountain in the background and a small group of Khoekhoe, the local indigenous people, standing in subservient postures at a respectful distance.

Janszen and Proot's *Remonstrantie* makes for interesting environmental and social deconstruction. The document was enthusiastic in declaring Table Bay to be suitable for all kinds of vessels and that building a wharf for the revictualling of ships would be easy to construct. They had observed that fresh water was plentiful in streams and ponds, that the soil was fertile and they thus concluded that growing fruit and vegetables would not be difficult. There were supplies of timber in the ravines and on the slopes of Table Mountain, the fishing and whaling were promising and there seemed to be no tropical or other diseases. Making the area even more attractive for colonisation, the local inhabitants – the Khoekhoe herders – were alleged to be friendly people, interested in trade, keen to supply livestock to visiting ships, willing to work, to learn the Dutch language and to convert to Christianity. In short, before long, according to the *Remonstrantie*, the Cape peninsula would be transformed into a little Netherlands, populated by local proto-capitalists, families working at intensive agriculture on small productive plots, improving infrastructure and benefiting the VOC. As history shows, however, the future was quite different.

Janzsen and Proot had misread both the environment and its inhabitants. Table Bay is treacherous and many ships were unable to make landfall there – the Cape of Good Hope was indeed more appropriately named the Cape of Storms. While it might appear at first glance to be productive, the Cape soil is actually shallow, stony, sandy or clayey and quite unsuitable for small-scale farming. Rust and other diseases blighted the imported European crops that were unsuitable anyway for a winter-rainfall area. The strong south-east wind was destructive, and drought was a regular presence. The VOC employees had no skills from their water-rich past to draw on nor were their cultural practices appropriate.

In that first hard winter of Van Riebeeck's occupation of the Cape in 1652, before the sheltering fort had been completed, the days and nights were cold, the rain pelted down and the wind blew mercilessly. Conditions were so awful that a small number of VOC employees absconded, intending to walk along the coast to Mozambique and find a ship to take them back to Europe. Armed with four swords, two pistols and accompanied by a dog (who was soon injured by engaging a porcupine in combat), they were charged by two large rhinoceroses and were unable to find anything to eat. Within a week the sorry little party was forced to retreat back to the settlement, and the leader, Jan Blank recorded: 'I could not make a dance of it alone, therefore resolved to return to the Fort, in hopes of mercy and grace in God's name.' The VOC, however, was not merciful, and in order to deter others who might have similar ideas of escape Blank was keelhauled, given 150 lashes and enslaved for two years.[10]

It also did not take long for the Dutch to learn that the local Khoekhoe clans were not willing workers at all – they were transhumant pastoralists for whom livestock was wealth and political power, who grew no crops of their own nor had any interest in getting involved in agriculture. Branding the Khoekhoe as lazy, intractable and stupid – as well as savage, heathen and dirty – the VOC had to import slaves to supply manual labour. The consequence of this was the emergence of a distinct social order and class distinctions based on race, an outcome that was to have far-reaching consequences for the political and environmental future. In addition, the Khoekhoe, whose status was soon downgraded into near-slavery, resisted white settlement by refusing to barter their precious livestock. Violent conflict resulted and, with whites gaining the upper hand because of their superior weaponry, Khoekhoe leadership crumbled and they lost their access to land. And then, because cultivation was so difficult and the economic policies of the VOC so restrictive, white settlers left the Company's employ, drifting far beyond the settlement's official boundaries to become pastoralists themselves, mimicking the simpler and sustainable lifestyle of the local people that was better suited to environmental conditions.[11]

Janszen and Proot's vision of a contained post at the Cape, predicated on a benign climate and productive soils, did not eventuate and the refreshment station soon expanded into an extended colony over which the VOC had little or no control. The absence of authority itself had repercussions in spawning a white settler society that was intolerant of government and rejected its norms, that had no hesitation in embarking on frontier wars not only with the Khoekhoe, whose society soon disintegrated, but with the far more powerful Iron Age or mixed farming Bantu-speaking communities like the Xhosa of the Eastern Cape and the Zulu of KwaZulu-Natal and others beyond.

Further toll came from the environmental transformation that the European connection brought. The stately trees around Table Mountain were soon felled, European oaks and other exotic tree species were planted, interesting indigenous botanical specimens were shipped off to Holland's gardens and museums, the seal colonies on the outlying islands were soon converted into train-oil and hundred of thousands of skins exported to Europe. Before long the penguin and whale populations had been decimated and rhinoceros, hippopotamus, lions, leopards, jackal and other wild animals existed no more.

Thus, within a few decades, the VOC's vision of European settlement, confined to the Cape peninsula, based on intensive agricultural practice honed over centuries on another continent and peacefully interacting with the Khoekhoe, had been displaced by the reality of an extended colony stretching well into Xhosa territory in the Eastern Cape, based on extensive pastoralism and nurturing a white population whose links with the Netherlands and with Europe were increasingly tenuous. That reality had come about because the environmental ideas, expectations and history of metropolitan Europe had connected with the local in quite unanticipated ways. What an interesting narrative is woven into the outcomes of Janzsen and Proot's *Remonstrantie*.

But as William Faulkner reminds us, 'The past is not dead. It's not even past'.[12] South African environmental history confirms this. In present-day South Africa, despite hesitant developments such as beginning to replace imported cattle breeds like

Frieslands with indigenous Nguni animals and ranching with wildlife rather than livestock, the country is still unable to manage its environment within sustainable limits. Monoculture remains the dominant form of agriculture, sugar-cane and other cash crops erode sensitive tropical river valleys, marine resources are plundered in excess of their ability to reproduce, inappropriately sited dams impound transient rivers and soon become silted, soil erosion is not addressed and fragile highveld savannah grassland is converted into plantations of exotic pines and eucalypts that end up as paper for the export market. Coal-fired power stations pollute the environment, while urban architecture resembles either New York's skyscrapers, if they are office premises or Tuscany's villas if they are domestic homes. In one instance, there is something again to connect with the Netherlands. The Hartbeestpoort Dam, about 50km from Johannesburg is as polluted as the Rhine delta.

ENVIRONMENTAL HISTORY

I would like to turn now to the discipline of environmental history itself and to comment on some of the specific connections that have revitalised modern historical studies. While I do certainly not want to overstate the case, I suggest that the essential attraction and importance of environmental history lies in the connections that it is able to make at many levels of human experience. Sörlin and Warde call it an 'umbrella' discipline,[13] but my preferred metaphor would be that of an integrated circuit, that modern medium for making complex connections. Another metaphor would be to liken it to ecology, a discipline with which environmental history has strong and obvious connections. Ecology grew out of the realization that the dominant paradigm of taxonomic science of the late nineteenth century was inadequate to answer the questions that society was beginning to ask. One South African museum director at that time wanted more national parks because they would be living collections to compare with the dead that were housed in museums.

But the era of collecting was ending with the rise of a more holistic approach and I would suggest that something similar has happened in historical studies with environmental history. Ecology made connections between a habitat and its plants and animals, it made connections between all biota, and connected past with present. It focussed on communities in a living environment at different levels and times and was referred to as a 'philosophy' rather than a distinct discipline.[14] It was described as the study of living beings in their surroundings, but also recognising and taking account of their relationship to those surroundings and to each other. Environmental history shares many of these characteristics.

Environmental history has given historians an arena in which to broaden the horizons and boundaries of the discipline and make it one of the most important and relevant topics in historical studies today. It has been one well served with self-reflection. Since 1972, when Roderick Nash gave environmental history its name, justification and first teaching syllabus,[15] there have been many descriptions of its field of study and arguments for its academic significance. In almost every – eagerly awaited – issue of *Environment and History* and *Environmental History* one is likely to find an article that ponders over the nature and boundaries of environmental history. Political, diplomatic, urban or economic historians do not seem to suffer from the same dilemmas. But despite the disciplinary dissection, the field continues to be regarded as 'a subdiscipline that is one of the least understood in modern academia

[that claims] more inherent theoretical ambiguities and methodological dilemmas than any other area of history'.[16] John McNeill has alluded to the 'chaos' of environmental history in 2003,[17] while Sörlin and Warde continue to maintain in 2007 that environmental history has 'relatively little coherence' and they plead for even more reflection.[18] Like MacNeill before them, they focus on the absence of sociological theory to underpin what we do. Despite these reservations, environmental history continues to be extremely popular as practitioners turn out an exponentially increasing number of books and articles on a wide variety of themes, many of them to be read by an enthusiast public as well as professional audience. While many professionals are correctly critical of Jared Diamond as an environmental historian, it is remarkable that his books *Guns, Germs and Steel* and *Collapse* have taken the world by storm.

DIFFERENT NATIONAL, INTERNATIONAL AND TRANSNATIONAL HISTORIES

Perhaps because of its tendency to reflect on purpose, trajectory and theory (or possibly because of the absence thereof) environmental history is also powerful in connecting different national histories and, at times, turning them into a single narrative as Alfred Crosby has achieved so powerfully.[19] Natural resources exist in disregard of national boundaries and, depending on how they are utilised, they have the power both to fracture or to unify communities. Environmental history raises issues that all communities and cultures have in common: issues such as food production, property and power, so the connection between historiographies is intense and productive. In this connection, the example of the Netherlands and South Africa that I have already spoken of is appropriate. Environmental history is a world or global history and also a transnational one in which the flows of ideas, goods and technologies come together, as they cross diverse boundaries at different times. It also enriches national histories themselves by including the environmental and international dimension and thus providing new insights on older themes. Klingle argues that there is an 'artificial split between the local and the global' which environmental history attempts to bridge.[20]

To say this is not to suggest that environmental history homogenises; it does not, but it does make connections. National histories remain distinct but they are highly suggestive to others – the medieval history of the Netherlands for example, with its emphasis on water, resonates with the Indian case of medieval Rajasthan and water management there.[21] In the case of Australia the dominating concern is how European settlers came to terms scientifically, aesthetically, economically and politically with an unusual and strangely fragile landscape and biota, peopled by Aboriginal Australians with strong links to the 'country' that shapes their identity and nurtures their existence. New Zealand has an important contribution to make because of the speed of ecological transformation. South Asian environmental history is characterised by investigating the nature and significance of the colonial experience', related particularly to agrarian history and a strong tradition of subaltern studies. While European environmental history is rooted in landscape and urban history and the management of agricultural land, African history is characterized by the colonial encounter and jettisoning notions of an 'untouched' wilderness.

But animal ethics, forest reserves, polluation, urbanisation are all environmental histories that link national narratives. Each continent, area or region has specific environmental histories, but because there are connections, they enrich each other and can speak to each other. Worster refers to this as a 'world without borders' and White has pointed out that the internationalisation of environmental history has been a major contribution since the 1980s.[22]

It is surely remarkable that we can meet today as environmental historians and discuss connections between the Netherlands, Africa, Australia on related, broad-based themes and even understand the medieval world better through environmental adaptive techniques that are common to our own time. If one surveys the new literature it suggests that environmental history has not ignored the dominant historiographies of each geo-region but it has added a fresh dimension to them. One has to agree with McNeill that the nation state is not the only appropriate scale on which to study environmental history.[23] Of all the historiographies, environmental history cannot be divorced from transnational concerns and generates links between public history, heritage, frontier history, the history of science as well as connecting themes and space.

Presently, national boundaries seem increasingly porous, a consequence no doubt of globalisation, but in the particular circumstances of Africa due also to the collapse of the state in many parts of the continent. Permeable national borders also result in interstate migration (refugees included), human and other animal disease transmissions and other consequences that have environmental dimensions.

'TWO CULTURES' AND MULTI-/TRANS-/INTERDISCIPLINARITY

Perhaps the most important connection that environmental history might make is to elide what C.P. Snow famously called the 'two cultures'. Both Lowenthal and Worster have said that environmental history has the potential to close the gap between the humanities and the sciences, the environmental sciences in particular. Worster has referred to the process as looking for common ground, of finding 'open doorways through the walls of specialisation that divide us'. Furthermore, he has said: 'So we are opening a door in the wall that separates nature from culture, science from history, matter from mind. Where we are arriving is not at some point where all academic boundaries and distinctions disappear ... but one where those boundaries are more permeable than before'.[24] Sörlin and Warde also allude to the connection as not being the promotion of full inter- or multi-disciplinarity, but to a 'translatory role between disciplines'.[25] The excitement is the search for that common ground, the thrill of finding those connections, the challenge of the synthesis. The jury is still out on environmental history's interdisciplinary potential although all would be sympathetic to McNeill's comment that the 'fuzzy borders' are part of the appeal of environmental history.[26]

Environmental history also connects disciplines in a way that other fields in history are not able to do. Even though environmental history has remained 'history' it has generated partnerships with a number of other disciplines – the environmental sciences and historical geography are obvious ones, but there are also links with hydrology and engineering, chemistry (pollution), medicine (history of disease), as

well as many others. This collaborative and inclusive approach leads to increased understanding of our world and our history.

While environmental historians of Africa have certainly made use of sources from other disciplines, environmental history, at least in Africa, has remained distinctly 'history' and has not become what Stephen Dovers argued that it should be: a vibrant interdisciplinary arena.[27] But each discipline has strengths and perhaps we should not look forward to environmental history actually diluting the power of history but rather to agree with Tom Griffiths that the benefit of environmental history is that it prioritises the 'historians' traditional concerns of identity, agency, economy and politics' using the narrative form rather than being the handmaiden of a potpourri of multi-disciplines.[28]

But if environmental history has remained history it has been able to interact with other disciplines in a way that has not happened previously – even if one considers that the antecedents of environmental history might lie in the total history of the Annales, or the rich tradition of historical geography, or landscape history, as McNeill suggests.[29] Steven Pyne reminds us that environmental history is shared territory and that many scholars who look at the environment in historical terms are not necessarily historians in the academy, although it is the historians that illuminate rather than solve problems.[30] In other words, we should not downplay the distinctions between disciplines but recognise that there are transdisciplinary connecting pathways between them. And of course, let us not forget that other disciplines have their own perspective on history. South Africa's most famous historical geographers once commented that 'geography is called up to give depth and fullness to historical events'.[31]

ENVIRONMENTAL HISTORY AND SOCIETY: CONNECTIONS WITH PUBLIC AND PUBLIC POLICY

The further characteristic connection that I would like to raise is that between environmental history and society at large. As Mahesh Rangarajan has observed in his excellent and most useful book, *Environmental Issues in India: A Reader*, we are constantly assailed by environmental concerns in all media and, indeed, in our personal experience.[32] There is no escape as we breathe polluted air, comment on the oddities of recent seasons, or recognise vegetation change around us. The public and policy makers are affected at a practical level by environmental ideas – ideas around waste, appropriate usage, macro climate change, managing scarce resources – and many of these issues play out in the political arena and require historical context. Environmental history is thus particularly attractive to the public because it has moral purpose and thus connects intellect with emotion.[33] Environmental history is not the only historical field with passion, energy and an ethical sense that has engaged with public discourse. Social history, too, had an agenda in order to broaden historical studies away from the society's powerful and to consider history from 'below', to incorporate those who were exploited. But as environmental sensitivity grew in the United States and elsewhere in the 1960s, history met the challenge by engaging in the moral discussion about the profligate use of resources and by showing that there was another basement level – that of the exploited resource.

Many of the environmental concerns were not new, but they were given fresh impetus when attention was drawn to the environmental damage done to promote short-term human interest and inappropriate notions of 'progress' and when remote places and wild animal populations seemed under threat. History responded to these current challenges by providing intellectual rigour and context. Environmental history is political – it speaks to modern concerns and, perhaps of all the historiographies, is the most activist.[34]

The public has become involved in environmental issues that beg historical context through powerful international governmental and non-governmental forums that often make front-page newspaper headlines and engage politicians through the power of environmental books such as the *Limits to Growth* or reports such as Brundtland's.[35] Environmental history thus speaks to an urgent social issue, one which can perhaps be described as *the* issue of our time. Even though recent environmental history lacks the 'green' political agenda that characterised earlier literature, historians are engaged with society in re-evaluating dominant ideologies and outmoded tropes such as 'degradation' and 'decline', and questioning what is meant by precolonial environmental equilibrium.[36] For this reason, more recent environmental history on urban, international and climatic subjects – among others – has been able to give us 'more complex readings of the history of science and knowledge'.[37]

As environmental sensitivity grew in the United States and elsewhere in the latter part of the twentieth century, history met challenge by engaging with the moral discussion about the profligate use of resources. That moral dimension continues to connect environmental historians with their societies. Historians have been able to engage with changes in the urgency of environmental concerns and the bookshelves bulge with publications on climate change, genetically modified foods, energy issues, animal ethics and many more. As Nash puts it, 'Environmental history can offer a powerful critique of modern capitalism and colonialism but also challenge the romanticism of pre-modernity and pre-colonial societies and so counter the primitivising claims of some environmental philosophies.'[38]

BIOTA AND BIOMES

Environmental history has done much to intellectualise the connections between different biota around the world, foodcrops and their diffusion – James McCann's *Maize and Grace* is a wonderful recent example of this literature[39]– but there are also intellectual issues around the introduction of animals and plants that have had an effect on different parts of the world. Rabbits, for example, domesticated and eaten in Europe, incredibly destructive in Australia. The links between animals, plants and human cultures are made explicit in environmental history. In this regard, acclimatization is an issue, one thinks also of museums, tulips, and many of these new histories interrogate the cultural importance of 'indigenous' versus introduced or 'exotic' animals and plants.[40] Ecological imperialism and feral animals are rejuvenating aspects of history and connecting different biomes is encouraging historical understanding in areas as different as the ice of the Antarctica and the deserts of central Australia. The obvious importance of animals in human history is that they illuminate so much about society. Harriet Ritvo has observed of the Victorian era that 'Killing large exotic animals emerged as both the quintessential

activity and symbol of imperialism',[41] and the work of John Mackenzie has also been seminal in this regard.

NEW SOURCES

Environmental history has also achieved fresh connections between scholars and their sources. Whereas historians once studied documents almost exclusively, environmental historians regard the environment itself as an historical document, it is itself an historical actor and humans interact with it. One can give the example of the sea in the case of the Netherlands in which culture and history is based around the management of water or wildlife in Africa. Prioritising environmental issues internationally alerted historians to fresh subjects of investigation, issues relating to the exploitation or conservation of natural resources, the effects of climate and specific geographies and the relationship between nature and culture. These topics demand that historians engage with a wider variety of sources than ever before – oral, visual, spatial. In particular, it has been the environment itself that has suggested new narratives about human society and ideas on how better to understand human action.

IDEAS AND CREATIVITY

Environmental history connects ideas and gives birth to new and creative thinking. Weiner reminds us that environmental history grew out of intellectual concerns – wilderness and the American mindset, pollution, forest history, conservation, irrigation, social and intellectual understandings of nature, relationship between social systems and environmental change.[42] Connecting humans and nature and tracking their relationships through space as well as time have allowed us to think anew about culture, gender, technology, politics and spirituality among many other ideas. New questions about the nature of colonialism, of empire, of cultural attitudes towards the environment are invigorating history and drawing students and the public. There is also much to tell in uncovering historical attitudes to and effects of natural cycles and catastrophes – many of which are still with us today, including climate change, earthquakes, the use of scarce resources. It also connects environmental ideas between societies and can shed new light on the interaction between cultures with different perspectives on the use of resources. There is a good deal of new literature about the connections between indigenous knowledge systems and western ways of thinking about the environment. Environmental history therefore has a great potential for synthesis and inclusion in areas such as culture, gender, technology, politics, spirituality and many more. As Hays has asserted, the main historical challenge is to track the process by which this interaction between humans and their environment has evolved.[43]

CONCLUSION

Of the connections that I have explained, Lowenthal comments that 'divergent viewpoints are inevitable – and enlightening'.[44] The European Society for Environmental History has been bold in unshackling the rest of the world from Europe and showing a more complex interaction in this conference. And given the connections between the power of the agressively modernising Netherlands, its environmental diffusion and the luxury trade to the East, it seems fitting to conclude by remembering Ravi Rajan's acronym for environmental history: 'spice' –

Similarities, Patterns, Interconnections, Continuities and differences and the Evolution of the discipline.[45] Harriet Ritvo, whom I admire greatly, describes our discipline less romantically as an 'an unevenly spreading blob', in which research on the human and the non-human are mingled and thus connected.[46]

The European Society for Environmental History is not yet a decade old, but already it has made its mark on European historical studies. It has also played an important role in forging formal connections with the longer established American Society for Environmental History which has invited Professor Verena Winiwarter to join its central committee. Perhaps this formal link heralds the end of a controversy. While scholars in the United States claimed ownership of the birth of environmental history in the 1960s and 1970s, Richard Grove, the founding editor of *Environment and History* who remains critically injured after a dreadful motor accident, argued that this was not so, and that the roots of environmentalism lay in past imperial and colonial eras, thus in Europe. Grove compared environmental history in the United States with that elsewhere, and he declared the latter to be developing 'intellectual leadership and agenda-setting' as well as 'the most vigorous schools and discourses of environmental history'.[47]

The establishment of the European Society for Environmental History and the conferences it has held have vindicated Grove's point of view. Innovative scholarship from Europe is well on the way to producing a tradition that is not derived from United States models, but that illuminates aspects of the European experience that are path-breaking and creative and that can inform the work of American scholars.[48] But together, as environmental historians who research issues such as water, climate, plants, wild animals and other matters that are directly relevant to daily life on earth we have a platform to engage with society as academics and activists for our craft and to reinforce the significance of historical studies more broadly.

I would like to end by briefly emphasizing the personal connections inherent in a gathering of this nature. Despite the marvelous benefits of email and other instant technological communications, nothing has yet replaced the academic value of mutual discussion and the opportunity to question and debate the connections, ideas and evidence that I have analysed among similarly-minded colleagues. These interactions are what make any discipline grow and deepen.

REFERENCES

Asdal, K., 'The problematic nature of nature: The post-constructivist challenge to environmental history', *History and Theory*, 42, 2003, pp.60-74.
Beinart, W. and McGregor, J., eds, *Social History and African Environments*. Oxford, James Currey, 2003.
Beinart, W., 'African history and environmental history', *African Affairs*, 99, 2000, pp.269-302.
Beinart, W. and Coates, P., *Environment and History: The Taming of Nature in the USA and South Africa*. New York, Routledge, 1995.
Bess, M., M. Cioc and Sievert, J., 'Environmental history writing in southern Europe', *Environmental History*, 5(4), 2000, pp.545-556.
Blaser, K., 'The history of nature and the nature of history: Stephen Jay Gould on science, philosophy and history', *The History Teacher*, 32(3), 1999, pp.411-430.
Bowler, P., *The Fontana History of the Environmental Sciences*. London, Fontana, 1992.
Brooking T. and Pawson, E., 'Editorial: New Zealand environmental histories', Special issue: New Zealand, *Environment and History*, 9(4), 2003.
Bramwell, A., *The Fading of the Greens: The Decline of Environmental Politics in the West*. New Haven and London, Yale University Press, 1994.
Carruthers, J., 'Africa: Histories, ecologies and societies', *Environment and History* 10 (2004), pp.379-406.
Chakrabarti, R., ed., *Does Environmental History Matter*? Kolata, Readers Service, 2006.
Cioc, M., Linner B-O., and Osborn, M., 'Environmental history writing in northern Europe', *Environmental History*, 5(3), 2000, pp.396-406.
Coates, P., 'Clio's new greenhouse', *History Today*, August 1996, pp.15-22.
Coates, P., *Nature: Western Attitudes since Ancient Times*. Berkeley, University of California Press, 1998.
Cronon, W., 'A place for stories: Nature, history and narrative', *Journal of American History*, 78(4), 1992, pp.1347-1376.
Crosby, A.W., *Ecological Imperialism: The Biological Expansion of Europe, 900-1900*. Cambridge, Cambridge University Press, 1986.
Crosby, A.W., 'The past and present of environmental history', *American Historical Review*, 100, 1995, pp.1177-1189
Dargavel, J., 'Editorial', Special issue: Australia, *Environment and History*, 4(2), 1998.
Diamond, J., *Collapse: How Societies Choose to Fail or Survive*. London, Allen Lane, 2005.
Diamond, J., *Guns, Germs and Steel: A Short History of Everybody for the Last 13 000 Years*. London, Vintage, 1998.
Dovers, S., Edgecombe, R. and Guest, B., eds, *South Africa's Environmental History: Cases and Comparisons* Athens, Ohio University Press, 2003.
Dunlap, T.R., *Nature and the English Diaspora: Environment and History in the United States, Canada, Australia, and New Zealand*. Cambridge, Cambridge University Press, 1999.
Elvin, M., *The Retreat of the Elephants: An Environmental History of China*. Princeton, Yale University Press, 2004.
Fay, B., 'Environmental history: Nature at work', *History and Theory*, 42, (2003), pp.1-4.

Ford, C., 'Nature's fortunes: New directions in the writing of European environmental history', *The Journal of Modern History*, 79, 2007, pp.112-133.
Gould, S.J., *The Hedgehog, the Fox, and the Magister's Pox: Mending and Minding the Misconceived Gap between Science and the Humanities*. London, Jonathan Cape, 2003.
Griffiths, T. and Robin, L., eds, *Ecology and Empire: Environmental History of. Settler Societies*. Edinburgh, Keele University Press, 1997.
Griffiths, T., 'How many trees make a forest? Cultural debates about vegetation change in Australia', *Australian Journal of Botany*, 50(4), 2002, pp.375-389.
Grove, R. and J. McGregor, eds, Special Issue: Zimbabwe, *Environment and History*, 1(3), 1995.
Grove, R., Editorial, *Environment and History*, 1(1), 1995.
Grove, R., Editorial, *Environment and History*, 6 (2), 2000.
Grove, R., *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism*. Cambridge, Cambridge University Press, 1995.
Hays, S.P., 'Toward integration in environmental history', *Pacific Historical Review*, 70(1), 2001, pp.59-68.
History and Theory, Theme Issue 'Environmental history: Nature at work', 42, December 2003.
Journal of American History, 76(4), 1990 'A round table: Environmental history',.
Klingle, M. 'Spaces of consumption in environmental history', *History and Theory*, 42, 2003, pp.94-110.
Leach, M. and Mearns, R., eds, *The Lie of the Land: Challenging Received Wisdom on the African Environment*. Portsmouth, N.H., Heinemann, 1996.
Lowenthal, D., 'Environmental history: From genesis to apocalypse', *History Today*, 51(4), 2001, 36-44.
MacKenzie, J.M., ed., *Imperialism and the Natural World*. Manchester, Manchester University Press, 1990.
MacKenzie, J.M., *Empires of Nature and the Nature of Empires: Imperialism, Scotland and the Environment*. East Linton, Tuckwell Press, 1995.
MacKenzie, J.M., *The Empire of Nature: Hunting, Conservation and British Imperialism.* Manchester, Manchester University Press, 1988.
Maclennan, B., *The Wind Makes Dust: Four Centuries of Travel in Southern Africa*. Cape Town, Tafelberg, 2003.
Maddox, G., Giblin, H. and Kimambo, I., eds, *Custodians of the Land: Ecology and Culture in the History of Tanzania*. Athens, Ohio University Press, 1996.
Main, A.R., 'Ghosts of the past: Where does environmental history begin?', *Environment and History*, 2(1), 1996, pp.97114.
Mauch, C., Stoltzfus, N. and Weiner, D.R., *Shades of Green: Environmental Activism around the Globe*. Lanham, Maryland, Rowman & Littlefield, 2006.
McCann, J., *Green Land, Brown Land, Black Land: An Environmental History of Africa*. Portsmouth, Heinemann, 1999.
McCann, J.M., 'Climate and causation in African history', *International Journal of African Historical Studies*, 32(2-3), 1999, 261-280.
McCann, J.M., *Maize and Grace: Africa's Encounter with a New World Crop, 1500-2000*. Cambridge, Harvard University Press, 2005.
McNeill, J.R., 'Observations on the nature and culture of environmental history', *History and Theory*, 42, 2003, pp.5-43.
Meadows, D.L. et al, *The Limits to Growth* (Club of Rome). New York, Universe Books, 1972 and later editions.

Nash, C., 'Environmental history, philosophy and difference', *Journal of Historical Geography*, 26(1), 2000, pp.23-27.
Nash, R., *Wilderness and the American Mind* 3 ed. New Haven, Yale University Press, 1982.
Nash, R., 'American environmental history: A new teaching frontier', *Pacific Historical Review*, 41(3), 1972, pp.362-372.
Osborn, M., 'Sowing the Field of British Environmental History', www.h-net.org/~environ/historiography/british.htm.
Pacific Historical Review, 'Forum: Environmental History, Retrospect and Prospect', 70(1), 2001, pp.55-111.
Pawson, E. and Dovers, S., 'Environmental history and the challenges of interdisciplinarity: An Antipodean perspective', *Environment and History*, 9(1), 2003, pp.53-76.
Pollock, N.C. and Agnew, S., *An Historical Geography of South Africa.* London, Longmans, 1963.
Pyne, S., *Burning Bush: A Fire History of Australia*. New York, Henry Holt, 1991.
Pyne, S., 'Environmental history without historians', *Environmental History*, 10(1) 2005, pp.72-74.
Pyne, S., *Fire in America: A Cultural History of Wildland and Rural Fire*. Washington, Washington University Press, 1997.
Pyne, S., *World Fire: The Culture of Fire on Earth.* New York, Henry Holt, 1995.
Rajan, S.R., 'The ends of environmental history: Some questions', *Environment and History*, 3(2), 1997, pp.245-247.
Rangarajan, M., 'Environmental histories of South Asia: A review essay', Special issue: South Asia, *Environment and History*, 2(2), 1996, pp.129-143.
Rangarajan, M., ed., *Environmental Issues in India: A Reader*. Delhi, Dorling Kindersley, 2007.
Richards, J.F., *The Unending Frontier: An Environmental History of the Early Modern World*. Berkeley, University of California Press, 2003.
Ritvo, H., 'Animal planet', *Environmental History*, 9(2), 2004, pp.204-220.
Ritvo, H., 'Destroyers and preservers: big game in the Victorian Empire', *History Today*, January 2002, pp.33-39.
Ritvo, H., 'Discipline and indiscipline', *Environmental History*, 10(1) 2005, pp.75-76.
Robin, L., *Defending the Little Desert: The Rise of Ecological Consciousness in Australia*. Melbourne, Melbourne University Press, 1998
Robin, L., *How a Continent Created a Nation.* Sydney, University of New South Wales Press, 2007.
Sachs, A., 'The ultimate "other": Post-colonialism and Alexander von Humboldt's ecological relationship with nature', *History and Theory*, 42, 2003, pp.111-135.
Schiebinger, L. and Swan, C., eds, *Colonial Botany: Science, Commerce and Politic in the Early Modern World*. Philadelphia, University of Pennsylvania Press, 2005.
Sörlin, S. and Warde, P., 'The problem of the problem of environmental history: A re-reading of the field', *Environmental History*, 12(1), 2007, pp.107-130.
Steinberg, T., 'Down to earth: Nature, agency and power in history', *The American Historical Review*, 107(3), 2002, pp.798-820.
Stewart, M.A., 'Environmental history: Profile of a developing field', *The History Teacher*, 31(3), 1998, pp.351-368.
Stroud, E., 'Does nature always matter? Following dirt through history', *History and Theory*, 42, 2003, pp.75-81.

Taylor, A., 'Unnatural inequalities: Social and environmental history', *Environmental History*, 1(4), 1996, pp.6-19.
TeBrake, W.H., *Medieval Frontier: Culture and Ecology in Rijnland*. College Sation, TX, Texas A&M University Press, 1985.
Tooley, R.V., *Collectors' Guide to Maps of the African Continent and Southern Africa*. London, Carta Press, 1969.
Van Dam, P.J.E.M., 'Euro-English and the art of environmental history', *Environmental History* 10, 2004, pp.103-105.
Van Dam, P.J.E.M., *Vissen in Veenmeren*. Hilversum, Historische Vereniging Holland, 1998.
Van der Merwe, P.J., *The Migrant Farmer in the History of the Cape Colony, 1657-1842*. Translated by R.B. Beck. Athens, Ohio University Press, 1995.
Van Sittert, L., 'From "mere weeds" and "bosjes" to a Cape floral kingdom: The re-imagining of indigenous flora at the Cape, c1890-1939', *Kronos*, 28, 2002, pp.102-126.
Van Tielhof, M. and Van Dam, P.J.E.M., *Waterstaat in Stedenland: Het Hoogheemraadschap van Rijnland voor 1857*. Utrecht, Matrijs, 2006.
Wackemagel, M. and Rees, W., *Our Ecological Footprint: Reducing Human Impact on the Earth*. Gabriola Islands B.C, New Society Publishers, 1996.
Weiner, D.R., 'A death-defying attempt to articulate a coherent definition of environmental history', *Environmental History* 10 (2005), pp.404-420.
Weiner, D.R., *Models of Nature: Ecology, Conservation and Cultural Revolution in Soviet Russia*. Pittsburgh, University of Pittsburgh Press, 2000.
White, L., 'The historical roots of our ecologic crisis', *Science*, 155, 10 March 1967, pp.1203-1207.
White, R., 'American environmental history: The development of a new historical field', *Pacific Historical Review*, 54, 1985, pp.297-335.
White, R., 'Environmental history, ecology and meaning', in 'A round table: Environmental history', *Journal of American History*, 76(4), 1990, pp.1111-1116.
White, R., 'Afterward: Environmental history, watching a historical field mature', in 'A round table: Environmental history', *Journal of American History*, 76(4), 1990, pp.103-111.
Whited, T.L., Engels, J.I., Hoffman, R.C., Ibsen, H. and Verstegen, W., *Northern Europe: An Environmental History*. Santa Barbara, ABC-CLIO, 2005.
Wilson, E.O., *Consilience: The Unity of Knowledge*. New York, Knopf, 1998.
World Commission on Environment and Development (WCED) (The Brundtland Commission) New York, UNO, 1983.
Worster, D., ed., *The Ends of the Earth*. New York, Cambridge University Press, 1988.
Worster, D., 'Nature and the disorder of history', *Environmental History Review*, 18(2), 1994, .1-15.
Worster, D., 'The two cultures revisited: environmental history and the environmental sciences', *Environment and History*, 2(1), 1996, pp.3-14.
Worster, D., *The Wealth of Nature: Environmental History and the Ecological Imagination*. New York, Oxford University Press, 1993.
Worster, D., 'World without borders: The internationalizing of environmental history', *Environmental Review*, 6, 1982, pp.8-13.

[1] See M. Wackemagel and W. Rees, *Our Ecological Footprint: Reducing Human Impact on the Earth* (Gabriola Islands B.C, New Society Publishers, 1996).
[2] See Richard White, 'Environmental history, ecology and meaning', in 'A round table: Environmental history', *Journal of American History*, 76(4), 1990, p.1111.
[3] 'Introduction', *Environment and History*, 10(4), 2000, p.371.
[4] 'Introduction', *Environment and History*, 10(4), 2000, p.377.
[5] Quoted in L. Robin and T. Griffiths, 'Environmental history in Australasia', *Environment and History* 10(4) 2004, p.445.
[6] D. Lowenthal, 'Empires and ecologies: Reflections on environmental history', in T. Griffiths and L. Robin, *Ecology and Empire: Environmental History of Settler Societies* (Edinburgh, Keele University Press, 1996), p.235.
[7] See, for example, F.A. Mouton, *History, Historians and Afrikaner Nationalism* (Vanderbijlpark, Kleio, 2007).
[8] R.V. Tooley, *Collectors' Guide to Maps of the African Continent and Southern Africa* (London, Carta Press, 1969), p.1; p.28.
[9] B. Maclennan, *The Wind Makes Dust: Four Centuries of Travel in Southern Africa* (Cape Town, Tafelberg, 2003), pp.28-29.
[10] Maclennan, *The Wind Makes Dust*, p.29.
[11] See P.J. Van der Merwe, *The Migrant Farmer in the History of the Cape Colony, 1657-1842* (Athens, Ohio University Press, 1995).
[12] Quoted in Brenda Niall, *Life Class*, (Melbourne, Melbourne University Press, 2007), p.162.
[13] S. Sörlin, and P. Warde, 'The problem of the problem of environmental history: A re-reading of the field', *Environmental History*, 12(1), 2007, pp.107-130.
[14] P. Bowler, *The Fontana History of the Environmental Sciences* (London, Fontana, 1992), pp.365-36.
[15] R. Nash, R., 'American environmental history: A new teaching frontier', *Pacific Historical Review*, 41(3), 1972, pp.362-372.
[16] A.L. Dalton, book review, 'On African environmental history: *Green Land, Brown Land, Black Land: An Environmental history of Africa, 1800-1990* (Portsmouth, NH, Heinemann, 1999)', in *Current History*, May 2000, pp.231-232.
[17] J.R. McNeill, 'Observations on the nature and culture of environmental history', *History and Theory*, 42, 2003, p.38.
[18] In 'The problem of the problem of environmental history', *Environmental History*, 12(1), 2007, p.108, Sörlin and Warde maintain that environmental history has 'relatively little coherence' and argue for even more reflection on environmental history's absence of engagement with social and political theory.
[19] A.W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900-1900* (Cambridge, Cambridge University Press, 1986).
[20] M. Klingle, 'Spaces of consumption in environmental history', *History and Theory*, 42, 2003, p.108.
[21] Compare the work of the Netherlands environmental historians and M. Kumar, 'Ecology and traditional systems of water management: Revisiting medieval Rajasthan', in M. Rangarajan, *Environmental Issues in India: A Reader*.
[22] See, for example, D. Worster, 'World without borders: The internationalizing of environmental history', *Environmental Review*, 6, 1982, pp.8-13.
[23] McNeill, 'Observations ', *History and Theory*, 42, 2003, p.38.
[24] D. Worster, 'The two cultures revisited: environmental history and the environmental sciences', *Environment and History*, 2(1), 1996, p.4; p.13.

[25] Sörlin and Warde, 'The problem of the problem of environmental history', *Environmental History*, 12(1), 2007, p.118.
[26] McNeill, 'Observations', *History and Theory*, 42, 2003, p.9.
[27] S. Dovers, 'On the contribution of environmental history to current debate and policy', *Environment and History*, 6(2), 2000, pp.131-150.
[28] T. Griffiths, 'How many trees make a forest? Cultural debates about vegetation change in Australia', *Australian Journal of Botany*, 50(4), 2002, pp.376-378.
[29] See J.R. McNeill, 'Observations on the nature and culture of environmental history', *History and Theory*, 42, 2003, pp.5-43.
[30] S. Pyne, 'Environmental history without historians', *Environmental History*, 10(1) 2005, p.72.
[31] N.C. Pollock, and S. Agnew, *An Historical Geography of South Africa* (London, Longmans, 1963), p.ix.
[32] See M. Rangarajan, 'Introduction', *Environmental Issues in India.*
[33] W. Cronon, 'A place for stories: Nature, history and narrative', *Journal of American History* 78(4), 1992, p.1375.
[34] See, for example, C. Mauch, N. Stoltzfus, and D.R. Weiner, *Shades of Green: Environmental Activism around the Glob* (Lanham, Maryland, Rowman & Littlefield, 2006).
[35] D.L. Meadows et al, *The Limits to Growth* (Club of Rome) (New York, Universe Books, 1972); *World Commission on Environment and Development* (WCED) (The Brundtland Commission) (New York, UNO, 1983).
[36] G. Maddox, '"Degradation narratives" and "population time bombs": Myths and realities about African environments', in S. Dovers, R. Edgecombe and B. Guest, eds, *South Africa's Environmental History: Cases and Comparisons* (Athens: Ohio University Press, 2003).
[37] W. Beinart, 'African history and environmental history', *African Affairs*, 99, 2000, pp.269-302.
[38] C. Nash, 'Environmental history, philosophy and difference', *Journal of Historical Geography*, 26(1), 2000, pp.23-27.
[39] J.M. McCann, *Maize and Grace: Africa's Encounter with a New World Crop, 1500-2000* (Cambridge, Harvard University Press, 2005).
[40] See, for example, L. Robin, *How a Continent Created a Nation* (Sydney, University of New South Wales Press, 2007).
[41] H. Ritvo, 'Destroyers and preservers: big game in the Victorian Empire', *History Today*, January 2002, pp.33-39.
[42] D.R. Weiner, 'A death-defying attempt to articulate a coherent definition of environmental history', *Environmental History* 10 (2005), pp.404-420.
[43] Hays, S.P., 'Toward integration in environmental history', *Pacific Historical Review*, 70(1), 2001, p.60.
[44] Lowenthal, 'Empires and ecologies' in Griffiths and Robin, *Ecology and Empire*, , p.229.
[45] S.R. Rajan, 'The ends of environmental history: Some questions', *Environment and History*, 3(2), 1997, p.248.
[46] H. Ritvo, 'Discipline and indiscipline', *Environmental History*, 10(1) 2005, p.75.
[47] R. Grove, 'Editorial', *Environment and History*, 6(2) 2000, p.128.
[48] For South African and other comparisons, see for instance, W. Beinart and P. Coates, *Environment and History: The Taming of Nature in the USA and South Africa* (New York, Routledge, 1995); T.R. Dunlap, *Nature and the English Diaspora:*

Environment and History in the United States, Canada, Australia, and New Zealand (Cambridge, Cambridge University Press, 1999).