Decolonising Science Narratives – a one-day workshop at the Science Museum

09.30-10.00: Registration and coffee

10.00-10.15: Welcome from Emma MacNicol (Assistant Curator) and Shelley Angelie Saggar (Research Fellow)

10.15-11.30: Panel 1: De-centring Eurocentrism (chair: Martha Clelow, Science Museum)

Khalil Thirlaway: Polyfantastica and Pacific space-time

Animesh Chatterjee: Uncovering the cultural and political meanings of electricity in colonial Calcutta, *c.* 1875-1925

Nanna K. L. Kaalund: Who is a (Scientific) Explorer? Reconsidering the Arctic Research of Tookoolito and Ebierbing

11.30-11.45: Coffee break

11.45-13.00: Workshop: Decolonising Science Narratives: How, Why, Who?

This session will take the form of a workshop whereby participants will spend 10 minutes at a time brainstorming answers to questions around practice, methodology and the use of the term "decolonising".

13.00-14.00: Lunch

14.00-15.15: Panel 2: Nonhuman Narratives (chair: Dr Sarah Arens, University of St. Andrews)

Alex Fitzpatrick: Beyond Domestication and Subsistence: A Call for a Decolonised Zooarchaeology

Aadita Chaudhury: Seeing coloniality and race through narratives in the fire sciences

Jack Ashby: The political platypus: how the language and representation of Australian animals oiled the colonial machine

15.15-16.30: Panel 3: Decolonising Health and Medicine (chair: Harriet Jackson, Science Museum)

Mehreen Afzal: Using autoethnography as a research method

Rebecca Raven: Herbs and Human Sacrifice: The Desolation of Aztec Medicine and Epistemology

David Lawrence: Decolonising Transnational Research Partnerships

16.30-16.45: Closing remarks

17.00-17.45: Black History Tour of the Natural History Museum with Miranda Lowe, Principal Curator and founding member of Museum Detox. (Optional).

17.00-18.30: Drinks in the Dana Foyer

Abstracts

Aadita Chaudhury, 'Seeing coloniality and race through narratives in the fire sciences':

California, like many other places throughout the world, has seen in the last couple of years, its landscape swept by large fires. While the public imagination and conversation regarding wildfire science has often been surrounding climate change, property damage and human and biodiversity loss, the implications of California's colonial history in today's fire regimes have been often under-discussed. This paper seeks to expose how European scientific models of forestry, often derived from Enlightenment thought and borne out of the ethos of the Industrial Revolution, created reductionist models of ecologies that had and continue to have deleterious effects on California's environments. By exploring how the applications of European forestry models marginalized Indigenous people, I argue that the phenomenon of fire itself has never been neutral or devoid of meaning, especially in colonial contexts.

This paper is meant to be a provocation to encourage thinking about how decolonial understandings of ecology can help shape practices and paradigms that can challenge the still persistent models of colonial science and bureaucracy that implicitly and explicitly continue to propagate harm within human-environmental relationships. I centre fire in all its biophysical implications and symbolic meaning as the starting point in which to understand ecosystem sciences and the so-called Anthropocene, and I trace the unique, often sordid ways fires (and responses to fires) act as microcosms and archives that show us to show us contemporary colonial thinking and practices, from witch-burnings, the practice of the sati, to contemporary arctic wildfires and building fires like the Notre Dame and Grenfell Tower. Finally, I seek to situate fire as both a witness and a partner in decolonizing the sciences, and show how the politics of fire can help us better configure better relations with the objects of scientific study that produce more ethical and effective results.

Alex Fitzpatrick, 'Beyond Domestication and Subsistence: A Call for a Decolonised Zooarchaeology':

The recent movement for the decolonisation of academia has, unsurprisingly, become the centre of much discourse within archaeology as a discipline. And it is completely warranted – archaeology, for all intents and purposes, has its origins rooted in the colonial expansion of Western/European nations, and is still struggling to address much of the problems that this destructive process has created: the repatriation of ancestors and artefacts, a booming trade of illegal antiquities, etc. However, sub-disciplines such as zooarchaeology, the study of animals within the archaeological record, have yet to be held under scrutiny.

This paper argues that zooarchaeology, despite its presumed focus on non-human species, is indeed just as much of an anthropocentric discipline as any other field within archaeology, and requires a similar consideration of decolonisation. Research trends within zooarchaeology, such as the overt emphasis of functional and economical approaches to animal remains in the archaeological record, can be traced to a very Western/European capitalist reading of the past that perhaps obscures truths that may not adhere to the Western/European paradigm that much of archaeological interpretation utilises.

In order to combat how entrenched colonialist ideals are within zooarchaeology, this paper suggests that the key to a decolonised approach lies within the paradigm in which we develop our interpretations, where Western/European animal-human relations are held as an unconscious standard by which all archaeological remains are held to and interpreted against. By adopting a wider worldview that is much more open to "unconventional" alternatives, perhaps zooarchaeologists can finally unlock the true potential of many of our bone assemblages.

Animesh Chatterjee, 'Uncovering the cultural and political meanings of electricity in colonial Calcutta, c. 1875-1925':

This paper examines the multiple and multifaceted political and cultural meanings of electric supply and domestic electrical technologies such as lighting and fans in Calcutta between 1875 and 1925. Adopting an approach that brings into conversation strands from histories of technologies, science and technology studies, colonial and postcolonial studies, and histories of Bengali middle-class gentlemanly or *bhadralok* (gentlefolk) society and its complex relations with the colonial landscape, this paper upends current historiography on electricity in colonial India focused on the colonial state and the colonial archive. By paying attention to diverse and hitherto unexplored vernacular archives, my paper investigates more everyday encounters with, and responses to electricity in public and domestic spheres. It addresses how diverse meanings of electricity emerged, and how such viewpoints were never confined to technological or scientific matters, but were deployed, often polemically, in discussions of social, cultural and political beliefs between promoters, the colonial state, and sections of *bhadralok* society. Throughout this paper we will see how much was made in the late-nineteenth and early twentieth centuries of the connection between electricity, colonialism, and Western conceptions of technological modernity; connections that brought uncomfortably to the fore the internal conflicts within *bhadralok* intelligentsia on varied perceptions and ideas of identity, domesticity and nationalism. I will then demonstrate how representations of electricity as a "modern" technology in advertisements of electrical lighting and fans, and in writings of promoters involved presenting electricity as a rhetorical and technological solution to social, moral and political issues of native servants within urban and domestic spheres. Finally my study asks what responses were provoked in contemporary *bhadralok* householders and the extent to which electricity, and electric lighting and fans were perceived by them to have material and social value within the domestic sphere.

David Lawrence, 'Decolonising Trans-national Research Partnerships: Reflections of a Clinical Researcher':

Trans-national research partnerships are cooperative projects conducted by a combination of research institutions from both low and-middle-income countries and high-income countries. There may be mutual benefit in these partnerships but there is also significant potential to (re)create and perpetuate power imbalances with such practice subject to the label of 'scientific colonialism'.

Where I work, HIV research, large trials are often conceived, funded and managed by international research networks based in high-income countries. This results in local researchers implementing the trial but not necessarily gaining the skills required to later design their own trials, nor receiving sufficient academic

recognition when research is published. These inequalities arise in part from the way global health research is funded and how it's success (or not) is determined. Chief Investigators from high-income countries are influential in steering the research agenda and their performance is based on research findings and publications, distracting from more subjective outputs such as capacity building.

The limited research exploring the experiences of local researchers has found them feeling like 'poor prostitutes' due to these structures. The perspective of research participants has not been extensively studied but frequently elicits rumours, such as blood stealing, to be widespread. These rumours are often dismissed by researchers as expressions of ignorance but are interpreted by anthropologists as forms of popular resistance and a testament to the fact that 'researcher and participant are living in different worlds'. The perspectives of local researchers and research participants is the focus of my research and by drawing on my experience and observations as a clinical researcher based in Southern Africa, I will unpick some of the complexities of transnational research partnerships. I will reflect on my own position as a facilitator of this work and present examples of efforts being made to decolonise global health research.

Jack Ashby, 'The political platypus: How the Language and Representation of Australian Animals Oiled the Colonial Machine':

When James Cook landed in north-eastern Australia in 1770 and took possession for Great Britain, it fundamentally changed the political, social and natural world. The animals the expedition discovered, described and exported would profoundly affect people's experience and understanding of zoology.

I will argue that the ways in which Australian animals – particularly marsupials – have been described and represented are fundamentally pejorative, and reflect an ongoing colonial bias. This attitude begins with the settlers and explorers of the 17th and 18th centuries, but remains detectable in the ways that Australian wildlife is seen today, in museums, TV programmes and in the popular zeitgeist. This may sound extreme, but I'll be asking whether the zoological and socio-historical stories of marsupials, platypuses and echidnas may intertwine to have severe impact on global politics.

Based not only on the early writings about marsupials, and particularly kangaroo-relatives, but also narratives up into and including the present, it has often been said that marsupials are a more primitive, and therefore inferior way of being a mammal. They are continuously represented as second-rate, with obvious hints that Australia is an evolutionary backwater. Are there implications for this unscientific assumption beyond zoology? Is there something sinister behind this blatant and lazy denigration – how does it feed into British post-colonial narratives? I will argue that attitudes to the wildlife fed into concepts of *Terra Nullius*, and continue to impact attitudes to Australia as a whole.

Khalil Thirlaway, 'Polyfantastica and Pacific Space-Time':

The research for the *Science Fiction* exhibition at the Science Museum has revealed many interesting aspects of science fiction that we won't have space to explore in the narrative of the main exhibition. We don't want to waste those

stories, and we're intending to use as many of those as possible in the events offer, transmedia engagement and at academic conferences.

This summer I attended the Science Fiction Research Association's annual conference in Honolulu, subtitled "Facing the Future, Facing the Past: Colonialism, Indigeneity and Science Fiction". The idea of looking to the past to understand the future is an important part of native Hawaiian culture, and the conference included lots of Hawaiian filmmakers, artists, poets and academics as well as the international academic attendees.

An ongoing multi-media project by Hawaiian artist Solomon Enos struck me as particularly relevant to this workshop. In *Polyfantasica* Enos asks the following question: in a world where Pacific cultures were not "interrupted" by European colonialism, what would the next 40,000 years of human biological, cultural and technological evolution look like?

Hawaiian (and some other Pacific cultures) view space and time differently from how we do. Could consciously exploring such perspectives lead us to new approaches in context and narrative? How does this interact with current/traditional practice? What's holding us back from decolonising our narratives? These are all questions which may not have conclusive answers but should spark valuable conversations among the scientific, creative and cultural communities.

Mehreen Afzal, 'Using autoethnography as a research method':

During my degree in Occupational Therapy I was required to undertake a research project. I have recently finished working as a research assistant part time for the university and this experience has increased my interest in bridging the gap between research and practise. I chose to do an autoethnography for my dissertation project because I think this research method is also about challenging existing binaries and boundaries between researcher and participant, and research and practise. For me, decolonisation is about breaking down these binaries. In these relationships we should be questioning power, privilege and the wider social context, which is not a focal point in any health professional training.

I would like to present on my experience of using autoethnography in research as a novice researcher, why I think that more health practitioners should be involved in this type of research and why autoethnography is an important research method in health. My autoethnography was about food and its importance for my own identity. Food-based occupations such as cooking, eating and socialising can take up much of our day. The occupations we choose or have to perform can be the principal way we express and develop our identities (Christiansen, 1999). I will expand on the findings of my research project a little in the presentation.

Currently, more allied health professionals are attempting to get into research. Health research places the most importance on quantitative, medical based research. Whilst this research is valuable, qualitative research methods such as autoethnography can provide a richness and insight into personal narratives which I think is really important. Chang (2016) addresses the topic of autoethnography not being transferable (which is important for health research) however if the story resonates with the reader then isn't this a form of transferability?

Nanna K. L. Kaalund: 'Who is a (Scientific) Explorer? Reconsidering the Arctic Research of Tookoolito and Ebierbing':

In 1857 the American publisher Charles Francis Hall first travelled to the Arctic. Hall had no formal scientific or naval training, but was convinced that by immersing himself in Inuit cultures he would be able to undertake Arctic exploration in a cheaper, safer, and more efficient way. He spent the winter in Baffin Island, where he met Tookoolito (Hannah) and Ebierbing (Joe), a married Inuit couple who had previously spent two years in England. Hall understood that the success of his venture, as with other European and Euro-American Arctic expeditions, fundamentally relied on the 'labour' of Arctic Indigenous peoples. While labour such as hunting, dog-driving, and building shelter, usually was acknowledged by explorers in their published accounts, it was presented as a type of manual labour that was non-essential to the official duties of the expeditions. Mirroring this, the work of Tookoolito and Ebierbing is typically described in terms of them accompanying and assisting Hall. However, this does not do justice to the contributions of Tookoolito and Ebierbing. Rather, they were Hall's teachers, and they had an active role in the planning and execution of Hall's Arctic travels. As Hall switched between utilizing Tookoolito and Ebierbing as ethnographic specimens by displaying them in his lecture tours, and relying on them not only for ensuring the success of his expeditions but for his survival, the unequal power-dynamic was continuously transformed and renegotiated during their voyages. In this paper, I examine the contributions of Tookoolito and Ebierbing, focusing on the relationship between scientific practice and the lived experiences of Arctic ocean and over-land travel. In particular, I interrogate the ethnographic, linguistic and geographical work of Tookoolito and Ebierbing, the way Hall translated this into his own scientific results, and in the process erased the research of Tookoolito and Ebierbing.

Rebecca Raven, 'Herbs and Human Sacrifice: The Desolation of Aztec Medicine and Epistemology':

For the Decolonising Science Narratives conference, I will be discussing the conquest of the Aztec Empire by Spanish conquistadors and how this effectively desolated their medical knowledge. This fits under the section dedicated to indigenous epistemologies and scientific appropriations.

I will explore this by considering religious attitudes, both societies at the time of the invasion and the often-misunderstood practice of human sacrifice. Briefly looking at where both societies were in scientific development before and after the conquest will mean that I can evaluate any medical appropriations (read: theft) by Europeans, as well as the complete destruction of the Aztec Empire and their contributions.

I will look at various elements crossing the medical spectrum including surgery, herbs and diet. As most of the Aztec Codices' were destroyed by the Spanish Missionaries and Conquistadors in the aftermath of the conquest, my analysis will be limited to those areas discussed in later works written by the Spanish. My main argument is that all these areas were considerably negatively impacted by the Spanish conquest and their Christian beliefs and ideals that were drenched in racism, patriarchy and hierarchy at this time. I will also explore attempts that have been made since the conquest to return to the indigenous way of life.

The Aztec Empire was an enormously developed civilisation, with a fairer judicial system and gender balance than the vast majority of Europe in the same period. However, most of the public history in our contemporary society focuses on their 'barbaric' practices of human sacrifice and occasional cannibalism (see the popular Horrible Histories book *Angry Aztecs*). I will explore how the European perspective has sought to demonise the empire in order to portray their colonisation as morally right and just in the face of such 'barbarity'. By framing the Aztecs as bloodthirsty psychopaths, the Spanish were able to stroll right into their Empire's capital and raise it to the ground.

Organisers

Emma MacNicol is an Assistant Curator on the One Collection project at the Science Museum and MA student in the History of Art at SOAS University, London. She is a particular advocate of African culture and focuses on encouraging recognition of its value within her academic and professional work. She is on Twitter @EmmaMacNicol

Shelley Angelie Saggar is a Medicine Galleries Research Fellow looking into culturally sensitive items in the historical collections of Sir Henry Wellcome, held on long-term loan at the Science Museum. Her research interests include the representation of museum spaces in comparative Indigenous film and literature and the relationship between medicine, museums and colonialism. She is on Twitter @j4lebi

Speakers

Aadita Chaudhury is a PhD candidate at the Department of Science and Technology Studies at York University. Previously, she completed a Masters in Environmental Studies at York University's Faculty of Environmental Studies, and a Bachelor of Applied Science at University of Toronto's Department of Chemical Engineering and Applied Chemistry. Her research interests are broadly surrounding the anthropology and philosophy of biology and the ecological sciences, cartography, postcolonial and feminist STS, and environmental and medical humanities.

Alex Fitzpatrick is a zooarchaeologist and current PhD candidate at the University of Bradford. Her current research concerns faunal remains recovered from the Covesea Caves in north-east Scotland and involves focused analysis of the taphonomic characteristics from these remains to further investigate complex Later Prehistoric cosmologies and funerary rites. She holds a MSc in Archaeological Sciences from the University of Bradford and is a current Fellow of the Society of the Society of Antiquaries of Scotland. In her spare time, Ms. Fitzpatrick is a science communicator and writes about archaeology at her website: www.animalarchaeology.com.

Animesh Chatterjee is a final year PhD candidate at Leeds Trinity University. His thesis, titled "Conflict and Identity in the Social Life of Electricity in Colonial Calcutta, c. 1880-1925", studies the multiple and multifaceted political and cultural meanings of electricity and electrical technologies such as lighting and fans in colonial Calcutta. The thesis invests in an exploration of social actors and archival sources hitherto unacknowledged in histories of technologies in colonial India to situate electricity within the class and nationalist politics of the Bengali middle-class gentlemanly or *bhadralok* (gentlefolk) society and its complex relations with British colonialism.

David Lawrence is a clinician and Associate Professor in the Faculty of Infectious and Tropical Diseases at the London School of Hygiene and Tropical Medicine. David has been seconded to the Botswana Harvard AIDS Institute Partnership in Gaborone, Botswana since 2017 where he works as the lead doctor for a multi-site clinical trial in the field of HIV-associated cryptococcal meningitis. David is working towards a PhD in the field of Medical Anthropology entitled *The Lived Experience of Participants in an African RandomiseD trial (LEOPARD)* which aims to use ethnographic research to improve participant experience in clinical trials for life threatening conditions.

Jack Ashby is the Manager of the University Museum of Zoology, Cambridge. He is author of the book *Animal Kingdom: A Natural History in 100 Objects*, which is explores what we can learn about the incredible mechanisms behind life on earth from specimens in museums; as well as discussing how natural museums present a potentially unnatural view of nature. A key area of interest is the biases that are detected in how animals are popularly represented, particularly in museums. He regularly undertakes fieldwork on the ecology of Australian mammals.

Khalil Thirlaway is a former Assistant Curator at the Science Museum. A science communicator with a background in biomedical research, he is now part of the Natural History Museum's science communication team. While working on the Science Museum's upcoming *Science Fiction* exhibition his research synergised with his personal interest in scientific and cultural narratives to provoke thoughts on how science fiction can illuminate aspects of how we interact with science and with each other.

Mehreen Afzal is currently studying for a master's degree in Occupational Therapy. Occupational Therapy provides support to people who want help with everyday activities. It is an allied health profession. Professionals work in a variety of settings such as hospitals and within the community. As an undergraduate, Mehreen studied history, learning about independence movements and postcolonial history. She is interested in different ways of researching health and is exploring ways to bridge the gap between research and practice, researcher and practitioner and science and art. She is using autoethnography as a method for her dissertation to attempt to examine these existing binaries.

Nanna K. L. Kaalund is a Postdoctoral Research Associate at the Scott Polar Research Institute, University of Cambridge, working as part of the ERC-funded 'Arctic Cultures' project. She received her PhD from the postgraduate programme in Science and Technology Studies at York University, Canada in 2017. Her research centres on the intersection of Arctic exploration, race, print culture, science, religion and medicine in the modern period with a focus on the British and Danish imperial worlds.

Rebecca Raven is an Assistant Curator (One Collection) at The Science Museum. Her previous research has focused on gendered experiences and exclusion roughly ranging the Renaissance period from the taboo of menstruation in religion to the topic of sex work in the sixteenth century Aztec Empire.