

## Session 1

*Katie Young*

### **“Oh, Master, what do you want here? Master, this place is not for you”: Mobilities Inside and Outside Ghana’s Postcolonial Cinema Halls**

In postcolonial Ghana, film shows were wildly popular social events, and as such, cinema halls were dotted throughout most major urban centres. Depending on what cinema one attended, the social experience could be quite different: while some cinema halls adopted “the reverential silence that Europeans expected for serious movies” (Ambler 2001), other halls were loud and boisterous; audiences might whistle, call out, sing, dance, clap, drum, and throw coins at the screen. In these cinemas, audiences acted in accordance with the rules of Ghana’s Concert Party Theatre, a local theatrical tradition dependent on audience-performer interaction and engagement.

With the rise of automobiles, audience members from differing neighbourhoods began to drive elsewhere to see a desired film sooner. Viewers who subscribed to the “reverential silence” of “upper class” cinema halls were thus confronted with alternative forms of spectatorship. As one former cinemagoer described when arriving at a cinema outside of his usual neighbourhood: “The man at the gate said “Oh, Master, what do you want here? Master, this place is not for you. The film will come to the Rex soon, so you watch it there”” (Meyer 2015). Similarly, in a newspaper opinion piece, another audience member policed the changing social makeup of his local cinema hall, revealing his anxieties around the increase in “rouges intruding talk and the shrill whistling of untutored admirers.” This presentation explores cultures of film viewing, and details postcolonial negotiations between local and foreign traditions of embodied spectatorship within Ghana’s urban cinema halls.

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Joanna Tindall,

## **Lacustrine carbonate oxygen isotopes as tracers of past climate change in NW Europe.**

My research focuses on abrupt Holocene climatic events; their often subtle expression in the palaeo-record makes them difficult to study in the absence of a highly sensitive proxy. Reconstructing palaeo-temperature from oxygen isotopes is well-established when investigating major cold-stage abrupt events especially in the ice cores, but their use for reconstructing Holocene variability and palaeo-precipitation in the mid-latitudes is limited in lake sediment archives. When studied at a high-resolution, with a good chronology, shifts associated with subtler climatic events may be identified. The predictable relationship between lake water isotope ratio and air temperature allows unusually large shifts to be associated with other forcing factors, including precipitation. The  $^{18}\text{O}$  composition of precipitation is strongly controlled by atmospheric processes, allowing for their reconstruction. This project builds on Holmes *et al.* (2010) work by investigating lake records across different Holocene time-slices. Oxygen isotopes are measured from ostracod carapaces at a variety of lake sites across Britain. Nearby modern lake water isotope systematics will be used, alongside developing chronologies and comparing this data to outputs from an isotope-enabled GCM in collaboration with BAS to inform the palaeoclimatic record.

The research will assist the palaeoclimatic, climate modelling and archaeological communities in furthering understanding of the nature, mechanisms and impacts of abrupt Holocene climatic events. It will add a body of isotopic data, produce new chronologies and provide new palaeo-precipitation, palaeo-temperature and palaeo-atmospheric reconstructions to the British Quaternary record.

Holmes, J., Arrowsmith, C., Austin, W., Boyle, J., Fisher, E., Holme, R., Marshall, J. and Oldfield, F. (2010) 'Climate and atmospheric circulation changes over the past 1000 years reconstructed from oxygen isotopes in lake-sediment carbonate from

Ireland', *The Holocene*, 20(7), pp.1105–1111.

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*Jessica Fisher*

### **How perceptions of urban nature in the tropics affect subjective wellbeing**

Parks, riversides, and other green-spaces in cities give chances to interact with nature. These interactions are thought to improve people's psychological well-being, restoring the brain from feelings of stress and fatigue. Yet, there remains a limited understanding of what qualities of nature dictate this relationship. Whilst the connection between nature and well-being is typically shown in the West, my PhD project is based in Georgetown, Guyana, and is one of the first from the tropics. In this chapter, we examine how the sights and sounds of wildlife in these spaces might affect people's well-being, whilst trying to account for the difference between what people perceive to be there versus what actually exists. We use bird species richness data and real-time sound recordings taken while conducting questionnaires in four different area types: coastal, green, dense urban, and canalsides. Interestingly, certain measures of momentary wellbeing are enhanced by positive perceptions of sounds and how natural the area is perceived to be. Given the accuracy of these perceptions in relation to the measured environment, results suggest that wildlife in the city improves people's momentary wellbeing. This is evident especially in areas already perceived to be restorative, such as parks as opposed to city centres. This PhD offers both quantitative and descriptive evidence that wildlife in the city can benefit people. There are important implications for urban planners and local government seeking to conserve wildlife, whilst improving the quality of life for people in developing countries like Guyana.

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*Rory Hopcraft*

## **Pirates, Polar Bears, Programs & Portholes**

What do Pirate and Polar Bears have in common? Sounds like the opening to a bad joke, but, they could hold the answer to helping the maritime industry develop cybersecurity regulation.

Over the last decade, technology has proliferated into the maritime industry at a staggering rate. In the last 5 years alone there have been countless reports of vulnerabilities being found, and exploited, in both ships and ports. These vulnerabilities put the whole maritime space at risk.

The maritime space itself offers unique geopolitical challenges to borders, sovereignty and jurisdiction. By then adding cyberspace to this it complicates the landscape further, making maritime security a regulatory nightmare. This means that the UN body charged with regulating the maritime space, the International Maritime Organisation (IMO), has been slow to act, meaning there is currently a lack of regulation that considers cybersecurity.

This presentation, while taking a novel approach, will argue that for the maritime industry to successfully regulate its cyberspace it needs to create a Cyber Code. A Code which would house regulation that addresses cyber-threats specific to the maritime space, and various mitigation processes to be implemented. To build and develop this set of robust and resilient regulations within the Code, it needs to be built from the lessons learnt from both Piracy and shipping in the Polar Regions. Both these examples offer solutions to the geopolitical challenges that regulators face when layering cyberspace onto the maritime space.

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### Session 2

*Chris Francis*

## **Investigating the spatial heterogeneity of abrupt cooling events during the Lateglacial Interstadial in Britain and Ireland using chironomids and oxygen isotopes.**

Much attention has focused on the impact greenhouse gas emissions will have on increasing global mean temperatures. Paradoxically the IPCC also predicts that as a result of this warming, Northwest Europe will become more susceptible to abrupt cooling events (ACEs). The Lateglacial Interstadial (c. 14.7-12.9kyr ago), a relatively warm period at the end of the last glaciation, provides an excellent opportunity to study past ACEs as it was punctuated by several centennial-scale cooling events. These ACEs are commonly known as GI-1b and GI-1d are thought to have been in the order of several degrees, which may be analogous to future events. Although this time period has been intensively studied, there are still relatively few high-resolution quantitative oxygen-isotopes and chironomid based temperature reconstructions covering the Lateglacial Interstadial. However, current published data does indicate that temperature declines during ACEs are spatially complex (Brooks and Langdon, 2014; Brooks *et al.*, 2016), with Britain and Ireland showing particular spatial heterogeneity. This talk will present preliminary chironomid and oxygen isotope reconstruction from two new sites, extending the current geographic coverage over Britain.

Brooks, S.J., Davies, K.L., Mather, K.A., Matthews, I.P. and Lowe, J.J. (2016). Chironomid-inferred summer temperatures for the Last Glacial–Interglacial Transition from a lake sediment sequence in Muir Park Reservoir, west-central Scotland. *Journal of Quaternary Science* **31**: 214–24.

Brooks, S. J. and Langdon, P.G. (2014). Summer temperature gradients in northwest Europe during the Lateglacial and early Holocene (15–8 ka BP) inferred from chironomid assemblages. *Quaternary International*, **341**: 80–90.

## **Invisible Fish**

It is likely that transparent, blind cave loaches have been dwelling in the Danube Aach cave system for 25,000 years. In 2017 they were seen for the first time by a group of divers exploring, excavating and mapping the underwater system.

In the extreme darkness and harsh environment, the fish have adapted and survived. The divers, using their skills and technical accuracy to survey the system, may have accidentally, shone the first light on to the cave loaches.

This paper focuses on the dynamics of the moment in the small section of the Danube Aach cave system in which the fish were first seen; and considers how immersion in deep darkness might offer opportunities to rethink modes of navigation and encounters with space and edge.

In presenting this fieldwork I hope to contribute to conversations within both the Geography and Visual Arts disciplines, addressing definitions of materiality and alternative modes of interpreting and responding to space.

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*David Arnold*

## **Insights on Mediterranean aridity during the Late Pleistocene using mammalian tooth crown height**

The Late Pleistocene is characterised by abrupt climatic shifts in Europe, driven by a number of forcing factors. We see a spread of semi-arid environments highlighted by westward migrations of arid-adapted mammals, but our understanding of relationships between these migrations and the climate is hampered by a poor understanding of past precipitation and aridity.

It has been suggested that large herbivore hypsodonty (tooth crown height) can be used as a method of predicting both present and past precipitation. We are undertaking a large-scale modern study to improve this methodology in a bid to improve its reliability to quantify environmental variables. We aim to apply this new understanding to fossil measurements undertaken from Late Pleistocene sites from across the Mediterranean, and we present our preliminary findings from the fossils here.

Measurements were taken from a number of well-dated sites: Abric Romaní (Spain; 40-70 kyr BP), Teixoneres (Spain; 14-100 kyr BP), Le Portel-Ouest (France; MIS 5-3), Grotta del Romito (Italy; c. 24-14 kyr), Qafzeh (Israel; 93 kyr and 31-25 kyr) and Tabun (Israel; c. 300-50 kyr). Here, we show how the mean hypsodonty index of the mammal communities throughout sequences at these sites varies through time, reflecting local or regional aridity patterns. Comparisons are made with pre-existing palaeoenvironmental information from a select number of the sites to validate what is seen in the hypsodonty index changes, as well as seeing if abrupt changes are reflected in our measurements.

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*Matthew Simmons*

### **'Games for Change': The Politics Behind Digital Gaming Development**

With sponsorship from the World Bank, UN, and IMF, many 'Games for Change' have been packaged as development interventions. Usually, the goal of these games is to educate the population about health, business and sexual consent, whilst some strive to break down conflict binaries, break perceptions of the 'Other', and promote freedoms and liberties. Currently, these games have slipped past analysis and have been deployed as unproblematic interventions capable of 'empowering' and educating communities in the Global South. Building on the work

of Lisa Smirl and Andrew Barry, I argue that the 'Games for Change' social movement has not only been co-opted by elite IGOs, but that such games have been shown to actively marginalise certain 'beneficiaries'. Through drawing on a multi-disciplinary framework - which adds to calls for both development and popular geopolitics to better consider the importance of materiality – I hope to shed light on the current failings of such interventions, before arguing how they may be designed better for the future.

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### Session 3

*William Jamieson*

#### **Granular Geography: Extraction, Commodification, Reclamation**

Singapore has been continuously expanding for five decades through land reclamation, with 25% of its current land-mass consisting of reclaimed land, and 100km<sup>2</sup> more to be completed by 2030. Initially used for social housing and infrastructure, more recently reclaimed land has been devoted to the Marina Bay Sands Integrated Resort and Casino, and the Gardens by the Bay, becoming critical in the construction of Singapore's national identity as a Global City. To resource its construction of land, Singapore has been importing hundreds of millions of tonnes of sand extracted from other Southeast Asian countries through a network of contractors. This has produced tensions with its neighbours, as Malaysia, Indonesia and Cambodia have banned sand export to Singapore. However, the sand still flows, legally or illegally.

This paper will map the commodity chain of sand, threading together the geographies of resource extraction and land reclamation, and outline how they produce an infrastructure of the Singaporean State's political subjectivity. This paper also proposes that the Singaporean State inverts colonisation's dynamics of

geographical expansion (i.e. invasion or occupation) through this commodity chain: by converting another country's territory into a commodity, sand, and extracting it through superior purchasing power, the Singaporean State reconverts it back into its own sovereign territory through land reclamation.

Political geographers, such as Karen Bakker, Gavin Bridge, and Andrew Barry have outlined how an expanded definition of materiality can help to refine our understanding of political and economic geography. This paper wishes to argue that sand in the Southeast Asian context offers us an opportunity to explore how multiple conceptions of materiality in political economy, cultural geography, and new materialism can be integrated to understand the geopolitics of globalisation, and will demonstrate this by reading the political, economic, and spatial relations of Singapore and Southeast Asia through the commodity chain of sand.

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*Joshua Pike*

### **Reconstructing the last deglaciation of central Patagonia using annually-laminated sediments**

Varved sediments, at their most basic, are composed of a dark coarse-grained layer deposited during the summer melt season and a light fine-grained layer deposited during winter as the lake freezes over. These two components when combined are the varve, and when continuously counted in conjunction with examination of their internal sedimentary structure, enable precise estimates of the rates and duration of palaeoenvironmental events, like abrupt warming and cooling. Patagonia is one such place where glaciolacustrine (glacial lake) varves are located and can be used to reconstruct the dynamics of the last deglaciation at millennial, centennial and decadal timescales.

In this talk, we present data from Chile Chico, in the Lago General Carrera basin, in which an ice-contact glacial lake formed as an ice lobe from the Patagonian Ice

Sheet retreated from its Last Glacial Maximum (~17 ka) position. As the lobe retreated laminated sediments were deposited in the palaeolake, which have subsequently been exposed as the lake drained. Specifically, this talk will discuss why these laminations are believed to show an annual signal and discuss the current varve series in terms of deglacial history of Lago General Carrera.

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*Ed Brookes*

### **Excavating gentrification: The contemporary geographies of Robin Hood Gardens**

The Robin Hood Gardens Estate in Tower Hamlets, East London (RHG) has become an iconic site in contemporary debates around London's housing crisis. The only brutalist housing estate ever to have been constructed by British architects Alison and Peter Smithson, it has been at the heart of national and local political discussion, preservationist campaigns and the contemporary economic and social processes of housing. As of 2015 English Heritage rejected its application to be listed and demolition of the site began in 2017, with luxury flats set to take its place. This project therefore represents an interjection into these complex, interlinking and important debates, given that much of the site will be demolished over the next few years. Viewing the site as continually 'layered' by different people, cultures, histories, practices and places, the project will use both geographic and archaeological methods to excavate these layers and their incumbent meanings and histories (which will be lost post-demolition). In utilising such an approach the project attempts to provide a more nuanced account of how sites of urban regeneration can be understood more deeply, exploring processes of gentrification and housing policy within the city as a building goes through the last stages of its life.

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*Andreas Haggman*

## **PhDs are not all fun and games**

Abstract: This presentation will focus on a recently-completed PhD thesis in cyber wargaming. The researcher developed a tabletop board game based on the UK National Cyber Security Strategy which was deployed to a variety of organisations to determine its pedagogic efficacy. The speaker will outline the findings of the research, but above all share their experiences of the joys and challenges of fieldwork using a board game.

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