

## Keynote Abstracts

### Keynote 1

#### **Re-membering Time. For the Time Being.**

Karen Barad, University of California, Santa Cruz

Chair: Thom van Dooren, University of Sydney

Abstract to follow

**Karen Barad** is Professor of Feminist Studies, Philosophy, and History of Consciousness at the University of California at Santa Cruz. Barad's Ph.D. is in theoretical particle physics and quantum field theory. Barad held a tenured appointment in a physics department before moving into more interdisciplinary spaces. Barad is the author of *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning* (Duke University Press, 2007) and numerous articles in the fields of physics, philosophy, science studies, poststructuralist theory, and feminist theory. Barad's research has been supported by the National Science Foundation, the Ford Foundation, the Hughes Foundation, the Irvine Foundation, the Mellon Foundation, and the National Endowment for the Humanities. Barad is the Co-Director of the Science & Justice Graduate Training Program at UCSC.

### Keynote 2

#### **Out of Time: The Queer Politics of Postcoloniality**

Rahul Rao, SOAS

Chair: Lisa Baraitser, Birkbeck

Support:

Queer theory has enriched our understanding of the relationship between time, psychic life and political transformation. Yet much of the extant queer theoretical literature on temporality has taken the form of a critique of the 'chrononormativity' (Freeman) of the queer liberalism of the North Atlantic. The restricted spatial frame of these engagements has given a great deal of this work a manifesto-like quality that urges us to refuse the linear time of queer liberalism, encouraging us to think and feel our way backwards, forwards, not forwards or sideways in time, if we are to mine our queer potential. In this talk I will suggest that if we were to widen the spatial frame of inquiry to take seriously the disparate trajectories of queer politics in the postcolonial world, it would be difficult to read in any singular fashion what might more appropriately be thought of as the heterotemporality of the global queer political present, much less to advocate singular reorientations of political temporality. I will try to demonstrate how

time (and space) matter differently in the queer postcolony. Working through recent struggles against anti-queer laws in the afterlives of British imperialism as they are lived in Uganda, India and Britain, I will examine the ambivalent potentials of memory and futurity for queer postcolonial struggle. Rather than articulating a temporal manifesto, I will offer something more akin to an anthropology of time that is attentive to how queer postcolonial movements navigate time in its multiple political functions 'as a limit, a resource, a site of exploitation and ultimately antagonism' (Agathangelou and Killian).

**Rahul Rao** is the author of *Out of Time: The Queer Politics of Postcoloniality* (2020) and *Third World Protest: Between Home and the World* (2010), both published by Oxford University Press. He is currently writing a book on the politics of controversial statues. He is a member of the Radical Philosophy collective and blogs occasionally at The Disorder of Things. He has research interests in international relations, postcolonial and queer theory, gender and sexuality, and South Asia.

### **Keynote 3**

#### **The Ecology of Time: Anthropogenic Climate Change and The Role of Ecological Calendars**

Karim-Aly S. Kassam, Cornell University

Chair: Michelle Bastian, University of Edinburgh

What if: (1) Knowledge is not in our heads but in the relationships with our environment; (2) Time is not a fungible commodity but experienced uniquely; and (3) Time is both flexible and relational? This conceptualization of time may help us anticipate the impact of climate change at the local level. Ecological calendars that arise from conceptualizing time as a unique experience that is relational and flexible emphasize the complex connectivity between our biophysical and the sociocultural habitat. Diverse societies in the Pamir Mountains of Central Asia have integrated the human body into the seasonal rhythms of their habitat. They have used these embodied ecological relations to generate "calendars of the human body." These ecological calendars have historically helped communities anticipate time. However, with industrialization, marking the start of the Anthropocene, both the minds and bodies of indigenous and mountain societies were colonized by invading cultures. We will explore the role of ecological calendars: (1) To respond the debilitating anxiety caused by lack of anticipatory capacity faced by rural and indigenous societies that are at the forefront of anthropogenic climate change; and (2) Decolonize the mind and habitat of human societies from the impact of the Anthropocene. Thus, establishing a pathway for the articulation of a methodology of hope based on transdisciplinary research among indigenous and rural societies.

**Karim-Aly S. Kassam** is International Professor of Environmental and Indigenous Studies in the Department of Natural Resources and the American Indian and Indigenous Studies Program at Cornell University. Methodology of Hope: Dr. Kassam's objective is to seamlessly merge teaching with applied research in the service of communities. His research focuses on the complex connectivity of human and environmental relations, addressing indigenous ways of knowing, food sovereignty, sustainable livelihoods, stewardship, and climate change. This research is conducted in partnership with indigenous communities such as the Standing Rock Sioux Nation (USA), the St. Regis Mohawk Tribe (USA) as well as in the Pamir Mountains of Afghanistan and Tajikistan, Kongur Shan Mountains of China, and Alai Mountains of Kyrgyzstan. In 2016, he was awarded 1.2 Million Euros to lead a project to develop anticipatory capacity for climate change. By investigating the relationship between biological and cultural diversity, Dr. Kassam seeks to expand the foundations of the notion of pluralism.

#### **Keynote 4**

##### **The Time of Coal**

On Barak, Tel Aviv University

Chair: Helge Jordheim, University of Oslo

In a process of global carbonization, during the nineteenth century Western Europe infected the entire world with coal, spreading it from the British Isles via the Middle East to India and China - which are today some of the worst greenhouse gas emitters. This fossil fuel and the technologies that combusted it - steam engines and the trains, steamers and telegraph lines they animated - also brought about a new global temporality. We usually regard it as 'empty homogeneous clock time'. However, examined on a global scale and especially from the Global South the time associated with modernity appears differential and heterogeneous on the quotidian and historical levels both. Focusing on this modern mechanical temporality in the British Empire's peripheries, my talk examines the connection between new notions of colonial belatedness such as those associated with "Egyptian time" and patterns of carbonization and de-carbonization in the Anthropocene. I will ask whether and how the various kinds of synchronicity inscribed with and made durable by technopolitical assemblages in the nineteenth and early twentieth centuries have become platforms for the emergence of different trajectories and speeds of de-carbonization today.

**Professor On Barak** is a social and cultural historian of science and technology in non-Western settings. He is an Associate Professor at the Department of Middle Eastern and African History at Tel Aviv University, and the author of three books: *Powering Empire: How Coal Made the Middle East and Sparked Global Carbonization* (University of California

Press, 2020), *On Time: Technology and Temporality in Modern Egypt* (University of California Press, 2013), and *Names Without Faces: From Polemics to Flirtation in an Islamic Chat-Room* (Uppsala University Press, 2006). Prior to joining Tel Aviv University, I was a member of the Princeton Society of Fellows and a lecturer at the history department at Princeton University. In 2009, I received a joint Ph.D. in History and Middle Eastern Studies from New York University. I also hold an M.A. in Islamic Studies from Leiden University, the Netherlands, and Joint LL.B. and B.A. in Law and Arabic Language & Literature from the Hebrew University in Jerusalem. I am a co-founder and co-editor of the Social History Workshop, a weekly blog published on the Haaretz website analyzing current Middle Eastern affairs through the lens of contemporary historical research.

## **Keynote 5**

### **Telling Time's Lies**

Nisi Shawl, writer and editor

Chair: Laura Salisbury, University of Exeter

Support:

*Abstract to be confirmed*

**Nisi Shawl** is an African American writer and editor best known for their fiction dealing with gender, race, and colonialism, including the 2016 Nebula finalist novel *Everfair*. In 2019 they received the Kate Wilhelm Solstice Award for distinguished service to the genre. Shawl's collection *Filter House* is a co-winner of the James Tiptree, Jr./Otherwise Award. Additional publications include the collections *Something More and More*, *A Primer on Nisi Shawl*, and *Talk Like a Man*, part of PM Press's Outspoken Author series. In 2020 they received the Locus Magazine Award, the Starburst Magazine Brave New Words Award, and the Fiyah Magazine Ignyte Award for editing the anthology *New Suns: Original Speculative Fiction by People of Color*. They received a second 2020 Locus Award for co-writing the classic text on inclusivity *Writing the Other: A Practical Approach*, and for teaching related courses. Prior to putting together *New Suns*, they edited and co-edited *WisCon Chronicles 5: Writing and Racial Identity*; *Bloodchildren: Stories by the Octavia Butler Scholars*; *Strange Matings: Science Fiction, Feminism, African American Voices*, and *Octavia E. Butler; Stories for Chip: A Tribute to Samuel R. Delany*. Shawl lives in Seattle, where they take frequent walks with their cat.

## Session Abstracts

### **Session 1 (Block A) (22.00-23.30 GMT)**

#### **A:1a Mary Anning Theatre | Envirotechnical assemblages and indigenous resistance**

Chair:

Support:

#### **Chronotopes of contamination: the bracketing of time and space by legal jurisdiction**

Kirsty Howey, University of Sydney and Deakin University

This paper shows how the classificatory technology of legal jurisdiction brackets environmental politics within particular configurations of space and time, or chronotopes (Bakhtin, 1981). Charting the incremental travels of lead contamination from the very remote McArthur River Mine in the Northern Territory of Australia, the paper shows how the ostensibly rational, technical and mundane workings of legal jurisdiction are a key regime of imperceptibility (Murphy, 2006) which deceptively pigeon-holes Indigenous people and the public within particular jurisdictional spacetimes while facilitating the devastating slow advance of acid mine drainage undetected. Thus, I demonstrate how the laws that ostensibly contain such contamination are themselves permeable pathways that permit the onward trajectory of acid mine drainage across time and space.

**Kirsty Howey** is a former lawyer, who worked for a decade on various land rights and native title matters on behalf of traditional Aboriginal owners in the Northern Territory of Australia. Based in Darwin, she is a Research Fellow at Deakin University, where she is undertaking research on the environmental regulation of hydraulic fracturing ("fracking") in the Northern Territory. She recently submitted her PhD thesis at the University of Sydney, which examines the nexus between Indigenous land use agreements, the state and development in northern Australia.

#### **"Average, Annual"? Temporalizing Habitat Restoration in San Pedro Bay**

Christina Dunbar-Hester, University of Southern California

In only a century, "useless tidal flats" in San Pedro Bay were transformed to become the Ports of Long Beach and Los Angeles (USA), the busiest container ports on the west coast of North America. This locale, in the LA River mouth, would be a "biodiversity hotspot" but for the shipping, oil, and US military presence that have sprung up in the delta and now constitute it. Throughout geologic time, oil existed as a "natural"

substance here, but it has rapidly been transformed through extraction and refinement to build worlds of urbanization and empire. The harbor is thus a site for thinking about the past, present and future of valuation and economization of life, the transformation of life and “raw” materials into capital, and “third nature,” or what manages to live despite capitalism (Tsing 2017). Grounded in Science & Technology Studies and using documentary and field research, this project empirically examines present-day proposals to once again transform the Bay’s ecosystem. A 2019 US Army Corps of Engineers (USACE) report scored potential scenarios for habitat restoration in the Long Beach portion of the bay, using the metric of “average annual habitat units” (AAHU). This paper explores how USACE’s deployment of the AAHU attempts to reconcile incommensurable futures. The “average, annual” metric binds habitat to predictable and incremental change (even promising restoration to a past state)--but the *raison d’être* for the report is that the coastline will be subject to (future) major, cataclysmic anthropogenic changes. Compounding the contradiction, USACE’s analysis began from the premise that maritime, military, and oil industry operations would remain unaffected by ecosystem restoration. The paper interrogates the temporalities at play in USACE’s narrow, technocratic framing of both the “problems” and “solutions” of habitat restoration, and argues that the metric of the AAHU offers tantalizing opportunities to reconceive the massive envirotechnical assemblage that is the harbor.

**Christina Dunbar-Hester** is a faculty member in Communication at the University of Southern California, in Los Angeles, USA, and she holds a PhD in Science & Technology Studies from Cornell University, USA. She is the author of *Hacking Diversity: The Politics of Inclusion in Open Technology Cultures* (Princeton U Press, 2020) and *Low Power to the People: Pirates, Protest, and Politics in FM Radio Activism* (MIT Press, 2014). Her writing and research centers on the politics of technology in culture, especially media and tech activisms, infrastructures, and envirotechnical sites.

### **Time has Come to a Stop: Indigenous Temporalities of Resistance in the West Papuan Oil Palm Nexus**

Sophie Chao, University of Sydney

Over the last decade, Indigenous Marind in West Papua have seen vast swaths of their forests converted to monocrop oil palm plantations. This transformation is often described through the expression ‘since oil palm arrived, time has come to a stop.’ In this paper, I examine how the time-stopping effects of oil palm relate to the plant’s modalities of growth, its association with the future-oriented temporality of capitalist modernity, and the nation-building visions of the Indonesian state. I then analyze how the temporality of oil palm correlates with two state-sponsored events: the erection of a national monument and the burial of a Time Capsule containing the Indonesian nation’s

'dreams.' I suggest that the stopping of time is an effect of state-endorsed agro-industrial projects that destroy the living landscape in which the past is embedded, thus thwarting the possibility of shared futures for Marind and their other-than-human kin. But the halting of time can also be conceived as a form of resistance to the promissory futures and hopes inflicted upon them by the state. By giving up on time, Marind refuse to give in to the temporal configurations upon which externally imposed techno-capitalist and nationalist visions of the future are premised.

**Dr Sophie Chao** is a Postdoctoral Research Associate at the University of Sydney's School of Philosophical and Historical Inquiry and the Charles Perkins Center. She received her PhD from Macquarie University in 2019 and holds a BA in Oriental Studies and a MSc in Social Anthropology from the University of Oxford. Sophie's research explores the intersections of capitalism, ecology, and indigeneity in Indonesia. Her postdoctoral project deploys interdisciplinary methods to explore the nutritional and cultural impacts of agribusiness on Indigenous food-based socialities, identities, and ecologies. For more information on Sophie's research, please visit [www.morethanhumanworlds.com](http://www.morethanhumanworlds.com).

**The temporal choreography of co-design: Carefully attending to competing temporalities when collaboratively deigning agricultural technologies in times of crisis**

Karly Burch, University of Otago  
Marama Muru-Lanning  
Katharine Legun  
Hugh Campbell

Collaborative design (co-design) is a process that requires the careful coordination of multiple collaborators, knowledges and their corresponding time-frames and temporalities to achieve a specific set of goals. While coordinating collaboration across these multiple temporalities can be tricky under stable conditions, crises can further complicate these delicate rhythmic patterns. This paper draws on examples from the MaaraTech Project—a five-year transdisciplinary project co-designing artificially intelligent (AI) robotic technologies for use in vineyards and orchards in Aotearoa New Zealand—to explore how the COVID-19 crisis has affected co-design efforts, particularly when it comes to including Māori-run businesses and agricultural workers as early collaborators in the design process. We use the term temporal choreography to illustrate how we as Pākehā (settler) and Māori (indigenous) social science scholars conceptualise, attend to and balance the various temporalities at play within the wider project. We argue that open discussions on competing temporalities and the temporal choreography of co-design can support the co-design process and contribute to more

inclusive and equitable technological innovation, particularly when co-designing new technologies in times of crisis.

**Karly Burch** is a postdoctoral research fellow at the University of Otago's Centre for Sustainability. She holds a PhD in sociology from the University of Otago and an MSc in agroecology from the Norwegian University of Life Sciences and ISARA-Lyon. Her PhD research explored everyday eating in the Kansai region of Japan in the aftermath of Tokyo Electric Power Company's Fukushima Daiichi Nuclear Power Plant disaster. She currently works on the MaaraTech Project, a multi-year transdisciplinary project collaboratively designing artificially intelligent (AI) robotic technologies intended for use in horticulture and viticulture in Aotearoa New Zealand.

### **A:1b Banneker Room | Care in the time of Covid**

Chair:

Support:

#### **Sleep in the time of COVID: temporal experiences in the face of uncertainty**

Meg Grealy, University of Sydney

This paper reports preliminary findings from a small-scale qualitative study about sleep, temporality and materiality. This study focuses on a shared household in Sydney, Australia, of people aged 20-30 and their experience of lived time in the face of uncertainty. Uncertainty in this paper pertains to the recent experience of COVID-19, national trends of labour precarity, and climate change. Lived time is understood to be constructed through human and non-human entanglements. The study collected insights from participants about the various routines and rhythms unfolding inside and outside the household. Using sleep diaries and interviews, it focused on the materiality of the bedroom and house, including such elements as mattresses, curtains, walls, creaking floorboards, and leaking roofs, to understand how participants' time was being created, experienced, interrupted and affected. This paper considers these materials in the context of uncertainty, using specific references to sensory experiences, such as the smell of bushfires and the threat of climate change, the feeling of an old mattress, and the expense of a new one. It explores a household's routines and rhythms, seeking to understand how uncertainty affects young people and how it is temporally orientating them.

**Meg Grealy** is currently undertaking her Masters of Cultural Studies at the University of Sydney. She completed her undergraduate in 2019 at the University of Queensland with a Bachelor of Social Sciences (Honours Class I).

**For this Care Crisis and the Next? Discourses of Crisis and Care in Feminism and U.S. Culture**

Tanya (Ann) Kennedy, University of Maine-Farmington

From the organizing of care work across borders in the International Domestic Workers Federation to rejection of the Davos postfeminism of "lean in," the current moment is rich with activism and scholarship devoted to the role of care in feminist imaginings of the future. At the same time, the United States is said to be experiencing a care crisis. This paper examines how the turn to a feminist ethics of care might (or might not) challenge the dominant temporal ordering of global capital in its organizing of the future through large-scale "slow violence" and in the social norms of everyday life. What are the possibilities and pitfalls of using care ethics as a frame to organize a more feminist future?

**Ann Kennedy** is Professor of Women's and Gender Studies at University of Maine-Farmington. Her research areas include media and new media studies, feminist theory and activism, race and ethnicity, gender and globalization, and U.S. literature and culture. Her most recent book is *Historicizing Post-Discourses: Postfeminism and Postracialism in United States Culture* (SUNY, 2017). Her current project is a book-length manuscript on U.S. feminist conceptions of time tentatively called *Reclaiming Time: the Transformative Politics of Feminist Temporalities*.

**Temporalities of care: practices in the Chilean households in the COVID-19 pandemic**

María-Alejandra Energici, Universidad Alberto Hurtado

Sebastian Rojas Navarro

Nicolas Schongut-Grollmus

Samanta Alarcon Arcos

*Prerecorded presentation*

Care has been usually conceptualized as taking place in a lineal temporality. For example, it is studied inquiring in how many hours are dedicated to households' tasks. Considering Barad's (2013) proposal that ongoing agencies "do not take place in space and time but in the making of spacetime itself" (p. 817), we are interested in how temporalities emerge in the difficult and multidetermined character of caring. In light of what has happened during the last months, we consider that it was not only the disease spreading that became a disruptive force in everyday life, where caring practices took place—both at a social and individual level. The pandemic has had a direct impact on how life is experienced in households. Due to the temporary closure of schools and day nurseries, the imposition of quarantine, the possibility—or directive—to work from

home, and advice around physical distancing, certain caring needs that had been met outside of the home now relied on households, modifying how they work. We present results from the research CUIDAR; a study aimed to explore the changes in care practices that have taken place within the Chilean households since the COVID-19 pandemic arrived on national soil.

**Maria-Alejandra Energici** is an academic working at the Faculty of Psychology, Universidad Alberto Hurtado, where she also acts as chair of the Social and Community Psychology Area. She is currently the main researcher of the FONDECYT project ‘The body in the social’, and co-researcher of CUIDAR study, of the ‘National Survey of Informal Care Within the Household’, funded by the Chilean government, and of the project “Confined bodies” funded by Universidad Alberto Hurtado. Her research brings together studies about the body, gender, subjectivity, and new materialisms. Email: [menergic@uahurtado.cl](mailto:menergic@uahurtado.cl). Twitter: @AleEnergici

**Sebastian Rojas Navarro** is an adjunct academic in the Faculty of Education and Social Sciences, Universidad Andres Bello, Chile, and principal coordinator of [www.micropoliticasdeldelcuidado.cl](http://www.micropoliticasdeldelcuidado.cl), a collaborative website about matters of care. He is the main researcher of CUIDAR, the research project “Micropolitics of care: logics, practices, and engagements linked to mental health diagnoses and special educational needs in Chilean schools”, and alternate director of the “National Survey of Informal Care Within the Household”, funded by the Chilean government. His work explores the relations between STS, childhood, mental health, and everyday practices, from a perspective of care. Email: [sebarojasn@gmail.com](mailto:sebarojasn@gmail.com). Twitter @sebarojasn

**Nicolas Schongut-Grollmus** is an academic working at the Faculty of Psychology, Universidad Alberto Hurtado, where he is also the chair of the Social Psychology MA program. He is the director of the research project ‘National Survey of Informal Care Within the Household’, funded by the Chilean government, and of the project “Confined bodies” funded by Universidad Alberto Hurtado. His research topics are oriented to the social study of medicine and health. Email: [nschongut@uahurtado.cl](mailto:nschongut@uahurtado.cl). Twitter: @nicoschongut

**Samanta Alarcon Arcos** is a sociologist and student of the Master of Public Policy at the School of Government of the Pontifical Catholic University of Chile. She is an assistant at CUIDAR and in the research project “Micropolitics of care: logics, practices, and engagements related to mental health diagnoses and special educational needs in Chilean classrooms”. She also works as a professional in the Inclusion for Development Line of Study, at the Center for Advanced Studies on Educational Justice. Her work

links gender studies, childhood, education, and society, from different methodological approaches. Email: salarcon.a@gmail.com. Twitter: @samylarcon

### **Sleeping Through COVID-19: The Cultural Politics of a Mazda Ad**

Paul Huebener, Athabasca University

Cultural representations of sleep not only reflect diverse approaches to the literal practice of sleeping; they can also reflect and shape wide-ranging forms of value and power. I argue that representations of sleep during the COVID-19 lockdowns have contributed to larger conversations about whether the pandemic could or should enable long-term radical cultural changes. In this talk I examine an advertisement from Mazda Canada, which aired on TV and online during the lockdown of spring 2020. Titled “Sleeping Roads,” the ad emphasizes the seductive power of the desire to return to the pre-pandemic world, an impulse that is expressed through an image of sleep that frames the lockdown as a pause from normal daily life. While certain images of sleep and waking can embrace a sense of temporal breakage leading to radical change, the Mazda ad uses sleep as a soothing figure for a cyclical return to what is familiar. At stake in this deployment of sleep and automobile culture is the question of whether the pandemic should be seen as a mere interruption to the status quo of consumer capitalism, or as the onset of a cultural transformation in which the habits and ideologies of the past can no longer be assumed.

**Paul Huebener’s** new book, *Nature’s Broken Clocks: Reimagining Time in the Face of the Environmental Crisis*, investigates the collapse of ecological time. He is an Associate Professor of English at Athabasca University, Canada, and he was delighted to attend the First Temporal Belongings International Conference as a keynote speaker. He has recently started studying sleep, and he tries to conduct research for eight hours every night.

**A:1c Momo Room | Materialising patterns of complex time I**

Chair:

Support:

**The Neo Eocene: More Anthropocenic Temporalities and Metafictional Chronotopes in Ruth Ozeki's *A Tale for the Time Being***

David Carruthers, Queen's University, Canada

This paper evaluates the metafictional performativity of Ruth Ozeki's 2013 novel, *A Tale for the Time Being*, identifying the cultural artifact of the material novel, itself, as a self-reflexive 'staging of environmental risk' (Beck 1992; van Wyck 2004). Premised by the teenage Nao's diary travelling the vast expanse of the Pacific Ocean, from Japan to British Columbia, where it is discovered by character-Ruth at her Gulf-Island sanctuary, the novel, in its forensic speculations on the origin of the found text, traces an imagined course through a Pacific gyre littered with 'plastic confetti,' sometime circa the March 11, 2011 earthquake and resultant meltdown of the Fukushima Daiichi Nuclear Plant. The novel's free indirect discourse, mediating Nao's first-person narrative through surrogate reader Ruth (who is also an author), produces a metafictional impulse binding Nao's intratext, through synecdoche, to the material novel, thereby bringing the reader face to face with the toxic environmental conditions suspected to deliver the diary to Ruth. Complementing the Anthropocenic chronotope of the material text, this paper examines more closely the character of environmental artist-activist Oliver Kellhammer, both Ruth Ozeki's fictional and real-world husband. Meditating intently on another aesthetic object, the Neo Eocene — a forest designed by Oliver on his Cortes Island property to outlast anthropogenic climate change, selected from plants resembling those that would have populated the coastal region during the figurative highwater mark of "the Eocene Thermal Maximum, some 55 million years ago" ([www.oliverk.org](http://www.oliverk.org)), this paper evaluates the Neo Eocene for its distillation of the temporal scope of geological time and the slow violence of global warming into terms comprehensible to the individual human spectator. This futurist arboriculture, complementing Ozeki's own chronotopical project, provides an educational matrix presenting a palpable time-space that renders real, immediate, and accessible the otherwise invisibly-slow and impossibly-complex effects of manmade climate change and, thereby, the necessity for drastic social reform to regulatory policy already revealed as insufficient by the posthuman temporalities suggested by the introduction of the Anthropocene.

**David Carruthers** is a PhD Candidate at Queen's University, researching representations of plant-thinking in the post-Cold War environmental fiction of North America. He is the co-editor of the edited collection *Perma/Culture: Imagining*

Alternatives in an Age of Crisis (Routledge 2017) and has published articles in *Mosaic*, *Perma/Culture*, and *becoming-Botanical*, and literary reviews in *Canadian Literature*, *The Goose*, and *The Bull Calf*.

### **Tidal time and the mud archive**

Kate Judith, University of New South Wales and University of Southern Queensland

Visiting the mangroves of Sydney's southern rivers, I become aware of tides. As I approach, the first question that automatically checks itself through my thought is: 'where is the tide? The question is about ontologies. The mangal is different worlds at different times. Each turn of the tide shifts processes, relations, and behaviours, re-mattering the estuary in a lunar metamorphosis. The mangrove world lives by tidal change and regularity, incorporating these in a literal, embodied sense. Within the mud of these urban estuaries, another timekeeping is in process. Much of the detritus of the city ends up within them. The mangrove mud is an archive of the city, but undone and reorganised through a more-than-human sorting by flood tide, gravity and life's movements. They change as they move through the bodies of filter-feeders or are skuttled into crab burrows, becoming undone from their human connections and meanings. If before these things achieved meaningfulness through their usefulness to human thriving, now new stories emerge from tidal sortings as silica is sucked into clam, plankton comes up against oyster, fungal spore nudges mangrove root.

**Kate Judith** is completing her PhD in Environmental Humanities at the University of New South Wales. Her research explores interstitiality as diffracted through mangrove communities.

### **Greenland sharks, nuclear waste, and a deep time journey**

Sadie E. Hale, Vrije Universiteit Amsterdam (VU)

One of the most difficult things to grasp about the era increasingly referred to as "the Anthropocene" is the question of time. As Dipesh Chakrabarty (2009), María Puig de la Bellacasa (2017), and other scholars have noted, responses to ecological damage and climate change require consideration of multiple timescales at once. This paper proposes a way of thinking with these contradictions through the remarkable animal that is the Greenland shark. Dwelling deep in the Arctic seas, this mysterious shark can live to be more than 500 years old, and its extreme longevity was only recently verified through a technique involving the tracing of radioactive carbon-14 in its eyes. This paper suggests that we might read the Greenland shark's body as an "Anthropocene archive", simultaneously housing a 450 million-year shark species history, a potential 500-year lifetime, and evidence of nuclear experiments and storage of radioactive waste

into the deep future. How might we think beyond anthropocentrism and linearity by considering the Greenland shark? Responding to the conference themes, this paper attends to the entanglement of human activity and shark lives, arguing for the potential of conceptualising time along multispecies, even multidimensional lines.

**Sadie E. Hale** is a Research Master student in Literature and Environmental Humanities at Vrije Universiteit Amsterdam (VU), where she is focused on multispecies entanglements. She also works as student assistant to the VU Environmental Humanities Center. In 2020, her writing has been published in *Edge Effects Magazine* and on the blog of the Rachel Carson Center. In 2018, she co-authored a paper in the *European Journal of Women's Studies*. She holds an MSc in Gender from the London School of Economics, where she was co-awarded the departmental prize for best academic performance, and a BA in English Literature from King's College London and the University of California, Santa Barbara.

**It's time!: Transforming education through a patterns-based approach to the teaching and learning of complex time.**

Shae Brown, Southern Cross University

Time and temporality are fundamental within the nexus of teaching, learning and becoming. Yet time is rarely considered in theorising and research within education (Aldaheff-Jones, 2017). Western education is shaped on the linear logic of mechanical discourse and materiality. Rigid pedagogy within fixed and enforced learning deadlines spills into dangerously reductive temporalities of becoming for young people (Brown, 2019). The effect can be cognitively, emotionally and existentially distressing and damaging (Aldaheff-Jones, 2017; Brown, 2019). Introducing secondary students to a complex conceptualisation of time through pattern thinking offers an alternative to the temporal tyranny of education and the annihilative ideologies of hegemonic paradigms. The multiple temporalities of complex time are explored through patterns that express entangled, enfolded and emergent coming-into-being and co-generative relationality with and within phenomena (Barad, 2007; 2017). The current disruptions to education worldwide are an opportunity to redesign learning. This paper explores how, through the direct and explicit teaching and learning of complex time through pattern thinking we can uncouple student becoming and sense of worth from the alienation of mechanical and modernist timelines, and create space for the possibility of a process of re-humaning; a becoming in complex relationality with the multitemporality of the more-than-human world.

**Shae Brown** is currently undertaking a Doctoral research project at Southern Cross University. Shae's project contributes a multitemporal identity emergence approach to

learning generally and to the teaching and learning of complexity competence specifically. Shae's project uses pattern thinking as an accessible language for all students, a knowledge based on the diffractive relationality of Indigenist knowledge, agential realism and complexity. Shae is also the Senior Student Advocate at Southern Cross University and actively represents postgraduate students as President of the Southern Cross Postgraduate Association and as a Member of the National Council of Australian Postgraduate Associations.

## **Session 2 (Block A) (00.00-01.30 GMT)**

### **A:2a Mary Anning Theatre | Weaving Patterns of Time**

Chair:

Support:

#### **Patterns of Temporality: Iridescent Materialisms and the Decorative Poetics of Change**

Emily Simon, Brown University

In an essay detailing the composition of her book *The Weather*, Canadian poet-theorist Lisa Robertson cites inspiration by a salient “shift” within 19th-century weather writings “from description as ontological figuration, to description as notation of situational modification and change,” which could “annotate patterns of temporality, rather than properties of objects.” Frustrated by the kinetic and diffuse materiality of clouds, attempts to taxonomize meteorological phenomena had spawned inventive new paradigms for matter: conceived not as discrete, static-state “objects” with classifiable “properties,” but as temporal textures imbricated with the movements of transformation. My paper takes up this materialism of “temporal patterns” to pose such emergences and appearances at the thresholds of matter – vibrant modulations of density, color, brightness, shine – as an update to existing materialisms (new and old). By constellating perceptual, qualitative, and temporal vectors, this framework incorporates rhythms of attention and change into the constitution of materiality. Moreover, contrary to longstanding metaphysical hierarchies of substance and accident, and of primary and secondary qualities, I begin from phenomenal effects to account for dynamic and contingent physical-perceptual configurations as sites of material change. Reading this attention to surface through the ornamental framing of Robertson's poetry, I therefore propose that we conceive materiality as “the decoration of time”: that is, as the iridescence and variegation of fluctuating qualitative shifts, as matter's own sparkling patterns of change.

**Emily Simon** is a doctoral student in English at Brown University, specializing in 20th- and 21st-century poetry and poetics. Her research is oriented by materialism and formalism, engaging questions of time, texture, and detail at the intersection of poetry, science, and the visual arts. She is currently at work on a dissertation on different modalities of qualitative change and surface effects in contemporary American and Canadian feminist poetry.

**Unequal Hours: entangling temporalities in kinetic artwork**

Anna Raupach, Australian National University

This paper will present a kinetic artwork, 'Unequal Hours', that embodies a physical form of entanglement to explore the complex intersection of temporalities involved in climate change. I will discuss the work using a live-stream video of the installation in progress while it is displayed at Canberra Museum and Gallery from January - May 2021. The installation consists of custom-built clocks that are physically connected with coloured ribbon across a gallery space. The clocks will be programmed to move at a different rates specific to various natural, human and technological timescales, for example tides and eclipse cycles, rhythms of the human body, and local transport schedules. The installation intentionally involves the potential for the ribbons to tangle to the point that the clocks stop moving to reflect the environmental impacts of natural time cycles falling out of sync due to climate change. In this paper, I will present an initial analysis of the work as it unfolds. I will explore how the installation draws out temporal trajectories using physical materials, and harnesses tactile qualities of flexibility and failure to convey temporal relationships that are fragile, interlinked, and consequential.

**Anna Madeleine Raupach** is a multidisciplinary artist working with moving image, installation and AR to re-interpret scientific concepts. She has a PhD in Media Arts from UNSW Art & Design (2014) and is a Lecturer at the Australian National University School of Art & Design. She has had solo exhibitions in New York, Melbourne, Sydney, Canberra, Montreal and Bandung and has participated in residencies and research fellowships at the Cité Internationale des Arts, Paris (2018); Bundanon Trust, NSW (2018); Common Room Network Foundation, Indonesia through Asialink Arts (2017); the University of Southern California; and the Museum of Applied Arts and Sciences, Sydney.

**Materialising weaving: embedding traces of time in woven cloth**

Jessica Priemus, Curtin University of Technology, Western Australia

The act of weaving is commonly defined as forming a textile by interlacing horizontal and vertical threads. Yet, the creation of a woven fabric requires more than just the act of 'weaving' fibres together. Constructing a textile involves multiple people, tools and processes. Considering the above, this paper queries: what new methods and tools of design could be utilised to connect the user or wearer to textile making processes, in particular, the time involved in hand weaving? I share insights that I have gained from my own creative practice and postgraduate research and draw on literature from a diversity of fields - from the written and creative work of Bauhaus textile artist Anni Albers, to practice-led research in the field of design. I reflect on how by attempting to capture my own processes in cloth aesthetically, the weaving act is revealed as a sometimes-flawed marker of time. The potential outcome of this research is the development of a framework for textile designers and weavers that privileges cloth as a conduit for temporal connections between maker and user. I posit that amplifying traces of time through the design of textiles may connect the eventual user/wearer to the 'pulse' of (a) weaving.

**Jessica Priemus** is a PhD candidate, interdisciplinary designer and lecturer in interior architecture, design, fashion and textiles. Her research explores how materials and objects may be designed to amplify traces of the making process.

**Weaving as temporal resistance: slowness, rhythm and the possibility of 'going back'**  
Jordana Infeld, Deakin University

The character Penelope of Homer's 'The Odyssey' is known for her weaving, unweaving and reweaving, which she carried out in order to delay marrying one of her many suitors. The artist Isabella Ducrot writes that 'Penelope wedded weaving to time, inflicting thereby an illusory temporality upon her royal palace, aligning it to the rhythms of her weaving.' Looking at my own weaving practice together with characters in literature who weave, this paper explores the material practice of weaving as a temporally subversive act, a kind of temporal resistance. Additionally, the temporality engendered by weaving is conditioned by its slowness, rhythm and operation at various scales, as well as being inseparable from the material it is involved with. Penelope showed us that weaving entails a possibility not available to all material practices: the possibility of 'going back'. This kind of erasure, however, is imperfect (similar to the type of erasure that makes a palimpsest). The memory of materials, in this case threads, means that a 'true' going back is not possible, or rather, going back is possible but one will always be in a different place to where one was.

**Jordi Infeld** is a PhD candidate at Deakin University, Melbourne. Her current research brings together literary studies and textile practice.

**A:2b Banneker Room | Theorising time's material movements, scales and speeds**

Chair:

Support:

**All at Once – The (Schellingian) Conception of Inner Time**

Philipp Bohlen, Bonn University

One of the most neglected accounts in the philosophy of time is that of Friedrich Wilhelm Joseph Schelling, one of the central figures of post-Kantian German Idealism. In my talk, I want to present some of the aspects of his concept of inner time [Eigenzeit]. For Schelling, every individual derives its meaning and actuality from its own temporal becoming. Time is thus the grounding principle of individuation. It is nothing abstract or external, but rather innate to every being, determining its presence. As I will explain, every object, insofar it is determined in any way, is nothing but a nexus of its own inner past and future, where the past contains the material and transcendental conditions for the object, and the future entails a horizon of possibility. In this picture, the three tenses have to be all at the same time, and to make this possible, they are conceived as strictly heterogenous. For Schelling, individual objects “emerge through and as part of their entangled intra-relating” (Karen Barad). To flesh this out, I will illustrate some of the motivations that led to Schelling’s unique temporal ontology as well as some of the various arguments Schelling offers in support of it.

**Philipp Bohlen** has studied philosophy, sociology and environmental sciences in Mainz, Koblenz and Bonn and is a research assistant at the University of Bonn, working for Prof. Markus Gabriel. He is currently preparing his dissertation on the concept of time and subjectivity in Schelling’s philosophy. He has given talks about this and related topics at the University of Bonn, the University of Siegen and the KU Leuven and has a forthcoming paper on Schelling’s notion of time and human freedom. His academic interests reach from the philosophy of German idealism to current debates in the philosophy of time, ontology and philosophy of mind.

**The Environmental Sublime: Geological Time**

Nanda Jarosz, University of Sydney

For contemporary environmental theorists of the sublime (Mann, 2006; Shapshay, 2013; Brady, 2014; Williston, 2016) time is part of objective reality. Time exists in the world irrespective of human observation or presence. Developments in human understandings of geological time scales and the slow and unperceivable (to the human being) changes to the planet’s landscape and geography have led to the development of new ways of placing the human in the history of the world. The time that it takes for

mountains or canyons to be formed is of a different scale than human time; the earth is approximately 4.6 billion years old, and life is thought to have started on earth some 542 million years ago. The physical materials that determine the world's geography are ancient beyond human experience. Contemporary environmental theorists of the sublime discuss and represent how aesthetic experiences of overwhelming objects can lead the mind to question unimaginably large time scales. In essence, these time scales require recognition of human absence and relatively short presence on earth. Time, in contemporary accounts of the sublime, is, therefore, representative of nature's otherness.

**Nanda Jarosz** is an environmental historian who researches how human relationships to the natural world have transformed over time. Her PhD thesis, *The Environmental Sublime: Nature as Other* investigates the evolution of a non-anthropocentric theory of the sublime. The sublime is an ancient concept that draws out feelings of insignificance and mortality in the face of overwhelming natural environments. Her research analyses how developments in the natural sciences over the last 250 years have led to the emergence of multi-perspectival approaches to the sublime in natural environments. Nanda's work serves to advocate for the importance of the aesthetic experience in building towards an ethical relationship with nature.

### **Viscosity in matter, life and sociality**

Cristián Simonetti, Pontificia Universidad Católica de Chile

A tension between solid and fluid states persists in the western imagination, which tends to divide the sciences and the humanities, along the lines that define what is hard and soft in knowledge. This divide relates to a number of similar dichotomies, including those between exteriority and interiority, materiality and spirituality, homogeneity and heterogeneity, space and time, as well as that between matter and form, all of which have been partially mapped onto a traditional separation between earth and sky. Yet, particular forms of knowledge sit uneasily within these tensions. An example is an understanding of solids as 'highly viscous fluids'. This article explores the concept of viscosity to suggest life remains possible only in so far as matter that is viscid allows solid and fluid states to mingle.

**Cristián Simonetti** is Assistant Professor in Anthropology at the Pontificia Universidad Católica de Chile. His work has concentrated on how bodily gestures and environmental forces relate to notions of time in science. More recently he has engaged in collaborations across the sciences, arts and humanities to explore the environmental properties of materials relevant to the Anthropocene. He is the author of *Sentient*

Conceptualizations. *Feeling for Time in the Sciences of the Past* (2018) and co-editor of *Surfaces. Transformations of Body, Materials and Earth* (2020).

**The ecological impact of acceleration: The threshold of modernity from spatial abstraction to temporal contraction**

Francesco Carpanini, Independent Scholar

Since the First Industrial Revolution the imperative of acceleration has been a key feature of modernity that also marks the more recent process of global digitalization. Yet more historical knowledge should be developed to figure out the ecological impact of acceleration that is becoming more and more evident around the world. Hence this paper delves into how the temporal contraction at the bottom of acceleration came from the spatial abstraction that seizes on the mathematization of space. On the one hand, my paper shows that such a spatial abstraction emerged from the Renaissance birth of linear perspective in painting where an ideal space is geometrically designed before realistically portraying a scene. On the other hand, I argue that this early abstraction of space at the threshold of modernity subsequently triggered the contraction of time that started from the First Industrial Revolution leading to the increasing acceleration and the ecological crisis globally. Drawing upon a range of different authors at the intersection of the history of thought and that of capitalism, such as Cassirer, Koyré, Mumford, Thompson, Koselleck, Harvey, and Virilio, my paper sheds light on the forgotten past of acceleration between space and time in an original way.

I am an independent scholar who recently received an MSc (advanced) in cultural anthropology and development studies from KU Leuven. My thesis explores a community urban garden nearby a deindustrialized area of Brussels under renovation. Its outcomes critically uncover contrasting urban/rural and present/past temporalities around this garden. Previously I received an MSc in communication from the University of Gothenburg. My early academic background is in philosophy with the equivalent of a minor in history (MA and BA, University of Bologna). My most recent scholarly publication is a chapter in the edited volume "Envisioning Change: Environmental Humanities" published by Vernon Press.

**A:2c Momo Room | Building communities across time**

Chair:

Support:

**The (Half) Life of Radioactive Waste and the Posthuman Problem of its Disposal:  
Sebeok's Pandora's Box**

Robert Geroux, IUPUI

The proper disposal of radioactive waste strains temporal understanding: such compounds remain deadly for ten thousand years or more, which means that contemporary strategies for isolation and containment must involve plans that strive for a human experience of “permanence.” Undermining that permanence is a specific set of problems: on the one hand demographic shifts and the appetite for exploration; on the other hand, the tendency of communications systems towards disintegration and entropic loss. The question therefore becomes: How can we isolate potentially catastrophic waste from human populations, over a temporal span in which language itself tends to break down into incoherence? How can we develop a symbolic grammar of warning that survives tens of thousands of years? This is the specific problem presented to the Human Interference Task Force (HITF), a body established in the US Department of Energy, as it was planning the National Nuclear Waste Repository in the early 1980s. Among the members of the HITF was Indiana University semiotician Thomas Sebeok, whose work is the focus of my paper. Especially interesting for my work in the Sebeok archives is the idea of an “atomic priesthood,” a kind of secularized religious order whose essential purpose would be to preserve a barrier around the proposed waste site, preserving a warning message even as other systems of signs declined and disintegrated over incredibly long spans of time. Sebeok’s speculative vision has much to say that is important: about the political function of religion, about intergenerational obligation, about the limits of signs and the fragility of chains of transmission, and about the futility of the so-called civilizational project.

**Robert Geroux** is a political theorist. He was trained at the University of Minnesota, and has taught at the University of Nevada -- Reno, Gonzaga University, and DePauw University. He currently teaches at Indiana University-Purdue University Indianapolis (IUPUI).

**Figuring Feminist Futures: thinking through racialised time and queer temporalities**

Laura Roberts, Flinders University, Gender Studies and Philosophy

Rethinking the “whole problematic of space and time” (1993) is an often overlooked, yet central, aspect of Luce Irigaray’s philosophy and, arguably, an important precursor to

posthuman and new materialist feminisms (Neimanis 2017). Irigaray argues that the “transition to a new age requires a change in our perception and conception of space-time, the inhabiting of spaces, and of containers, or envelopes of identity” (1993, 7-8). Taking Irigaray’s claims here seriously, this paper places Alia Al-Saji’s work on racialised time which engages with aspects from Fanon’s *Black Skin White Masks* alongside Luce Irigaray’s work which critiques notions of linear unfolding and highlights the lack of autonomous subjectivity, and thus temporality, for women and girls. I then gesture toward Jack Halberstam’s thinking on queer temporality to think through ways in which queer time might help us imagine alternative queer feminist futures. In placing Al-Saji’s concept of racialised time alongside Irigaray’s and Halberstam’s work I aim to draw out the ways in which these thinkers might be productively read alongside one another. Although Irigaray’s focus is on refiguring a positive sexual difference and Fanon’s critique demonstrates the burden of racialised subjectivity I think that if we understand the ways in which the intellectual contexts of both these thinkers overlap it may open up a productive space for future critical discussions around the questions of gender, time and race in our contemporary global contexts.

**Laura Roberts** received her PhD in Philosophy from The University of Queensland, Australia, where she taught Gender Studies and Philosophy from 2016-2019. In January 2020 Laura took up a position as Lecturer in Women’s and Gender Studies at Flinders University. Although she now resides in Australia, on Kooron country, Laura was born and raised in South Africa and began her undergraduate studies in Drama and Philosophy at The University of Kwa-Zulu Natal, South Africa during the early years of the post-apartheid transition to democracy. Her research interests include feminist philosophy and politics, post/decolonial theory, contemporary social movements and, more recently, feminist philosophies of technology. Laura has published in these areas and her monograph *Irigaray and Politics: A Critical Introduction* (Edinburgh University Press) was published in June 2019.

### **Mnemonic Artifacts: materiality and remembering processes over time**

Veridiana Domingos Cordeiro, University of São Paulo

*Prerecorded*

The paper aims to explore the relations between memory, time, and materiality. Although memory regards the past and drives the future, it can only be experimented, understood, and pictured in the present because any reality that transcends the present moment turns out to be in the present. As remembering is driven by the present moment, our past representations are always reinterpreted over time. In this sense, any remembrance pictured at present can not be found in a materialized medium

elsewhere outside the interpretation a specific community provides for it. However, materialized artifacts have very different roles in our remembering processes. Although the materiality that a remembrance can attain does not conserve past across time, it works as memory props (Glaeser, 201) or mnemonic artifacts (Heersmink, 2013), which support the remembering process. In this sense, we will discuss the kinds of mnemonic artifacts based on Heersmink's definition and how they are crucial for our remembering process. Besides that, we explore how mnemonic artifacts/ memory props work as crucial "instruments" in the dynamics of validation (in Glaeser parlance) involved in institutionalizing certain versions of the past over others.

**Veridiana Domingos Cordeiro** has a B.A. in Social Sciences (University of Sao Paulo), M.S. in Sociology (University of Sao Paulo), Ph.D. in Sociology (University of Sao Paulo), Visiting Research at the Department of Sociology (University of Chicago). Main research interests: Sociology of Memory, Philosophy of Mind, Digital Sociology, Sociology of Understanding

### **Naturalization as a temporal experience**

Robin Harper, York College (CUNY)

Maggie Rugg Herold's (1995) children's book, *A Very Important Day*, recounts how US immigrants experience naturalization. Each family declares like the Baez family: "And now we will all remember (the oath-taking ceremony) as the most important day since we came from the Dominican Republic." Some immigrant time is more important than others. How does time shape naturalization? As this facile book reveals, and the immigrant incorporation literature concurs, immigration is a temporal experience. Naturalization is rarely studied in this light. Naturalizations are a temporally-infused, task-achievement process. Just as passports are identity, surveillance, and control artifacts (Torpey 2000), marking who citizens are, naturalizations are materially-constituted embodiments of ideas about who 'we' are and who can become one of 'us.' How does time shape the naturalization process and the experience of 'citizens in waiting,' (Motomura 2006)? How does the state's temporally-based naturalization policy conflict with immigrants' own 'construct of possible selves' (Hardgrove et al. 2015)? How do planned backlogs, precluding thousands from voting in the 2020 election, affect immigrants' future citizenship? I will explore the temporal aspects of the naturalization process and how it affects the citizenship of new and potential citizens in the United States.

**Robin A. Harper** is Professor of Political Science at York College. My research focuses on migrant public policy in comparative context in Germany, Israel and the United States. Research questions explore the meaning(s) of citizenship, naturalization,

belonging, inclusion/exclusion, borders and temporary labor migration. I engage temporality and other interpretive approaches to understand how citizenship and migration policies are generated and lived. A recent co-authored article exploring time and migration was published in *Time & Society*, Harper, R. A., & Zubida, H. (2020). Thinking about the meaning of time among temporary labor migrants in Israel. *Time & Society*, 29(2), 536-562.

### **Session 3 (Block B) (9.00-10.30 GMT)**

#### **B:3a Mary Anning Theatre | Troubling sites of temporal privilege**

Chair:

Support

#### **Time and place: thinking about the temporality of stigma**

Alice Butler-Warke, Robert Gordon University

Stigmatisation of place has, since the advent of Loïc Wacquant's formulation of advanced marginality, been considered emblematic of the post-industrial society. It has remained temporally fixed as a distinctive feature of societies experiencing a decline in welfare provision and what Wacquant describes as the attendant 'new regime of marginality'. In this paper, however, I highlight a distinct temporal element that must be considered when discussing place-based marginality. Limiting our understanding of the stigmatisation of place to a single temporal moment, fails to capture the full story and nuances of the process of stigmatisation. I discuss the utility of framing and classifying place-based stigma according to 'core' and 'event' stigma in order to capture the temporal textures of the stigmatisation process. Drawing on empirical research from Toxteth in Liverpool, I build an argument for approaching the study of place-based stigma through a temporal lens.

**Dr Alice Butler-Warke** is a critical human geographer and lecturer in sociology at Robert Gordon University (Scotland). Her research focuses on place identity and stigma, urban experience, discourse and power, and postcolonial framings of the city.

#### **Photographs, Bodies, Verbs: The Politics of Tense in Post-Apartheid South Africa**

Anna Stielau, New York University

In her reflection on post-apartheid student politics, the activist Leigh-Ann Naidoo argues that South Africans inhabit a present that cannot be fully present to itself because we're forever struggling over "who gets to tell the time" (2016). Suspending the idea that a common temporal frame of reference is desirable, my paper explores the

'telling' of such divergent times as an index of the differentially distributed proximity of South Africa's past, and a method through which to militate for change. Specifically, I am interested in the role photographs play in establishing a political tense, not just a visual grammar, for discussions of the legacies of colonization, moving these beyond the recourse to repetition that has so far dominated critical explorations of time in Africa. A property of speech and of images, tense is also a somatic fact, pointing to the accretion of time in raced bodies that face different futures even in moments of physical co-presence. With that in mind, I draw on the aesthetic and embodied tactics of South Africa's resurgent student movement, #FeesMustFall, in conjunction with the work of several local artists, to theorize radical tense and tensing in the context of the ongoing project of global decolonizing.

**Anna Stielau** is a doctoral candidate in the Department of Media, Culture, and Communication at New York University. Her research interests include race, visual culture, and the politics of time on the African continent and in its art worlds.

**The stuff we send and receive: Troubling temporalities and im/mobilities**

Michele Lobo, Deakin University, Melbourne, Australia

Kaya Barry

Michelle Duffy

While 2020 has closed down metropolitan, state and international borders, the materials we send and receive appear to be more mobile than ever before. We wait eagerly and impatiently for parcels, takeaway and online orders to arrive on our doorstep. Yet, this 'contact free' drop-off, express and 'next day' delivery in the midst of our im/mobilities intensifies our insatiable desire for consumption and technocratic forms of time. Time is materialised through ongoing extraction, exploitation, carbon-intensive industrial practices, extinction and ecological crises. This paper seeks to trouble the temporalities and im/mobilities that many in a privileged world take for granted yet which intensify socio-ecological injustices. In this performative paper, we experiment with the intensities of temporality that entangle, knot, braid, flow or are stilled as 'stuff' materialises at our homes. To explore this in a quotidian way, we use the materiality of letters and postcards exchanged over four months in three Australian cities (Newcastle, Melbourne and Brisbane) as a means to seed plural imaginations about the entanglement of temporality, materiality and im/mobility.

**Michele Lobo** is a cultural geographer who explores race, affect, belonging and ecological intimacies in more-than-human worlds. She is a lecturer in Human Geography, Deakin University, Melbourne, Australia.

**Kaya Barry** is a cultural geographer working in the areas of mobilities, migration, tourism, material cultures, and creative arts research. She is a Postdoctoral Research Fellow at Griffith University, Australia.

**Michelle Duffy** is an Associate Professor in Human Geography, University of Newcastle, Newcastle, Australia. Her research explores sound, music, affect, emotion and movement as ways to consider how our relations with human and non-human worlds bring about notions of community, resilience and wellbeing.

### **Museums and Radical Time**

Jen Walklate, University of Aberdeen

Museums are temporal – this much is for certain. And yet, their characteristics in temporality are frequently simplified – history, heterotopia – or entirely blackboxed, as these institutions come to terms with their complex contemporary contexts. In this paper, we will complicate the notion of museum temporality in a way which seeks to offer a device for thinking about and within the modern institution – this device is radical time. Initially exploring the ways in which museums have been understood as temporal historically, from heterotopic to memory keepers, the paper will move on to discuss the idea of radical time, its nature, and its potential as a device of political, social and practical consequence for museums. By interrogating the agents which produce museum temporality and the ways in which their actions are made manifest, the paper will argue that a radical temporality in museums – multiple, disruptive, questioning – can enable the museum as institution to develop and grow politically, atmospherically, and conceptually. Furthermore, it will start to unpick why this matters, how radical temporality decenters over-dominant narratives, and opens the museum up to polyvocality, radical trust, and empathy.

**Jen Walklate** is a lecturer and curatorial fellow in Museum Studies at the University of Aberdeen. She received her PhD in Museum Studies from the University of Leicester for a thesis entitled 'Timescapes: The Production of Temporality in Literature and Museums'. She has published on the histories and theory of museum documentation practice, museum temporality, and museums and anxiety. Her paper, 'Carnival Temporality and the Ethnographic Museum' will be published in Modest and Pels Museum Temporalities in 2021, and she is currently working on her monograph, Time and the Museum: An Essay on Space, Language and Meaning.

### **B:3b Banneker Room | Engineering colonial time**

Chair:

Support:

### **Antipodean Time Balls: Time materialised in two colonial cities**

Nancy Cushing, University of Newcastle

From 1829, time balls were set up in elevated positions in ports and on coastlines around the world, making time not only material but highly visible from ships and shore. By asserting the existence of an objective and correct time emanating from the Royal Observatory at Greenwich, time balls promised greater certainty in the calculation of longitude, improving the safety and efficiency of sea voyages. Beyond this primary purpose, time balls also served functions on shore. As nodes in a global system of visual time keeping, they allowed the transcendence of geographical location, affirming that those who observed the daily descent of the ball were on time and up to date, no matter how awkwardly distant they were from the places to which they were tied by culture and commerce. This paper will take up the urban role of time balls, focusing on the Australian cities of Sydney and Newcastle in the nineteenth century. It will argue that time balls made a distinctive imprint on public and private urban lives, creating a sense of having set aside previously variable local times and entered a common stream of time running through and beyond the British empire.

**Associate Professor Nancy Cushing** is an environmental historian and member of the Centre for 21st Century Humanities based on Awabakal land at the University of Newcastle, Australia. Her primary areas of interest are animal human histories and energy histories, especially those related to air pollution. Her most recent book is *Animals Count* (Routledge 2018), co edited with Jodi Frawley. Nancy is a member of the executives of the Australian Historical Association and the Australia and New Zealand Environmental History Network, and vice president of the NSW History Council.

### **The Time of Coins: Temporalities of Money and Power in the French Colonies**

Myriam Amri, Harvard University

This paper explores the entanglements of time and money in the colonial period. Using French colonial archives on French Algeria and the Tunisian protectorate, I argue for the centrality of money as a colonial medium to materialize punctuated time. I examine how French colonial authorities use the materiality of money, through a shared currency, to naturalize a colonial understanding of time. I examine how colonial currency inscribes coloniality in the everyday as the times of transaction and exchange become linked to the symbolic time of the colony. I show how the changes in the form of money are linked to moments of crisis for French officials, where money becomes a way to inscribe the permanence of coloniality for example, by issuing new coins

representing symbols of power or by limiting how the currency gets transacted. I analyze how this project is ultimately fraught because money is a commensurable device that condenses different temporal scales that always exceed the colonial ones. Ultimately, this paper argues that money, as it gets materialized, can become an essential time technology, one which participates in the construction of hegemonic power but that always holds the potential of being subverted against it.

Myriam Amri is a PhD candidate in the joint degree in Anthropology and Middle Eastern Studies. Her research is a historical anthropology of money in Algeria and Tunisia, focusing on notions of materiality, value and power. She is also interested in questions of temporality, knowledge production and space.

### **Rewriting River Time on the Nile and the Thames**

Samuel Grinsell, Universiteit Antwerpen

Colonial modernity rewrote the rhythm of rivers. This paper looks at two rivers with entangled histories: the Thames, heart of the British Empire, and the Nile, the target of some of the most ambitious colonial engineering projects of the early twentieth century. Comparison and connection will shed light on changing histories of time. This paper focuses on two temporal aspects of the modern histories of these rivers:

- Regulating riverscapes: the Thames and the Nile are both heavily engineered rivers. Their banks and flows have been strictly regulated in order to allow economic time to dominate the river and its environment. This change is spatial, but also deeply temporal in its concern with making rivers legible.
- From pulse to flow: the grand structures of the Aswan Dams and the Thames Barrier have altered their rivers dramatically. Rhythmic ebb and flow have been replaced with more predictable waterscapes, to protect human space on the Thames and to regulate water supply on the Nile. These changes attempt to erase the rivers' time. This paper brings together concerns with time and space in the history of colonial modernity, tracing transnational networks of engineering and power that played an important role in making our time.

**Samuel Grinsell** is a historian of the built environment, passionate about humanities outreach and teaching. His research explores how humans make the places in which we live. He is a Visiting Researcher at the Centre for Urban History, University of Antwerp, working on the nineteenth century history of the ports of Antwerp, London and Rotterdam, with funding from the Leverhulme Trust. He has PhD in Architectural History at the University of Edinburgh, and has published articles in the scholarly journal *Environmental History* and the online magazine *Aeon*, as well as book reviews for *Rethinking History* and *ABE Journal: Architecture Beyond Europe*. He is a Fellow of

the Royal Geographical Society and a member of the Advisory Council for the Global Urban History Project.

**Nationalism, indigeneity and the temporality of settler-colonialism: 'indigenous grapes' as time-capsules**

Ariel Handel, Minerva Humanities Center, Tel Aviv University

Israel/Palestine is a site of bitter struggle, not only over space but also over time. Authenticity, precedence and temporal consecutiveness are inherent to narratives and practices of both populations. The paper studies the complex temporalities of settler-colonialism through the lens of 'indigenous wines.' It will show how winemakers and scientists use genetics, enology and ancient texts to rewrite the *longue durée* of the Israeli/Palestinian landscape in their attempt to reproduce wines drunk by Jesus or King David. In 2008 the first Palestinian "indigenous wine" was released, introducing a discourse of primordial place-based authenticity into the wine field. Israeli winemakers have followed soon after. However, the story goes far beyond the wine-world, as the Palestinian/Israeli indigenous wine creates an innovative material culture embedded in global capitalism. The interconnection between science, economy, and politics endows indigenous wine with the power to make an assertion of acquired indigeneity and be part of a colonizing ideology. As an object that is both natural-biological and human-cultural, the indigenous wine combines different kinds of knowledge: DNA analysis and genetic mapping to scientifically ground biological continuity; local-indigenous knowledge, in the form of elderly Palestinian farmers' oral testimonies; analysis of ancient Arabic and Hebrew texts, with the aim of identifying characteristics of taste, color, alcohol concentration, and ancient winemaking techniques. Each of these knowledges, however, also represents various temporalities. The paper will show how natural-biological time, agricultural time, indigenous time and colonial time are intertwined, making the grape a 'time-capsule' of the settler-colonial regime in Israel/Palestine.

**Ariel Handel** is director of the Lexicon for Political Theory project, and academic co-director of Minerva Humanities Center at Tel Aviv University. His research focuses on human mobilities in the West Bank and the Gaza Strip, the politics of housing and urban frontiers, gastropolitics, and the political philosophy of geography. Handel is the editor-in-chief of *The Political Lexicon of the Social Protest* (Hakibutz Hameuchad, 2012), and co-editor of *Normalizing Occupation: The Politics of Everyday Life in the West Bank Settlements* (Indiana UP, 2017).

**B:3c Momo Room | Queering lifetimes**

Chair:

Support:

### **The Horizon of Queer Utopias**

Heloise Thomas, University of Bordeaux Montaigne

In my paper, I connect analyses of queered temporalities to contemporary discourses on historiography and apocalypse in Northern American culture, so as to delineate the material possibility of counter-apocalyptic queer utopias. In the wake of environmental, political, and social disruptions, the new millennium has generated new ways of staging the end of the world that twist its temporality. The dominant perspective, rooted in apocalypticism (the very foundation of American political thought and philosophy), is shifting to one identifying historical trauma that befell minoritized communities as forms of apocalypse. This implies we are post-apocalyptic subjects, unfettered by conceptions of a foreclosed future, which has material consequences on the very construction of historiography. I posit that contemporary, Anthropocenic anxieties may find a solution in queerness, not as death-bound and death-driven, but as a life-affirming, emancipatory dynamic that, in the face of extinction, requires us to rethink our very modes of defining, relating to, and constructing history and the world. Intersecting ecofeminist, decolonial, and queer ontologies, the texts I look at gesture at different relationships to time, space, and life itself, where queerness helps us “stay with the trouble,” and acts as a catalyst to reimagine utopian visions, against the exhaustion of history.

**Heloise Thomas** (they/she) is a PhD student at Bordeaux Montaigne University, and teaches in Lyon, France. Their dissertation studies the representations of history and historiography in 21st-century U.S. literature, from a feminist, queer, and decolonial perspective, notably exploring the interplay of archives, gender, queerness, race, and the apocalypse in contemporary literature. A former student of the ENS de Lyon, they have taught in French and US colleges and are invested in literary activism in parallel with their academic work.

### **Matters of time in the lives (and deaths) of gay men in Hainan**

James Cummings, University of East Anglia

Based on ethnographic, phenomenological research into the spatial and temporal orientations of gay lives in Hainan, People’s Republic of China, this paper focuses on two related temporalities and draws out their material figurations. I first explore the time of ‘the scene’ (quanzi) – an imagined space within which gay men experience commonality with one another and social belonging. Stories of ‘coming into the scene’ (jinquan) were often paralleled by the problematisation of futures oriented towards

marriage and reproduction without the emergence of alternative imaginable life courses. As such, 'the scene' was a space defined by temporal unsustainability. I then turn to stories of 'leaving the scene' (tuiquan). These involved reorientations towards marriage and reproduction underpinned by a sense of filial duty, fears of aging without the support of children and the pervasive sense that a continued 'life in the scene' was an orientation only towards death. These temporalities turn on material dynamics – relations between reproduction and the imagination of infinite time, the temporal orientation of gendered bodies and intergenerational relations of care. This paper, therefore, addresses culturally-and-materially specific modes of heteronormativity that operate at the level of ontology to limit imaginable and practicable orientations of life in time.

**James Cummings** is a Senior Research Associate at the University of East Anglia, UK. His research focuses on understanding sexuality from an interdisciplinary, phenomenological perspective as a social practice that is historically and politically constructed and oriented in everyday contexts of space and time. He has worked with gay and bisexual men in both the UK and China and is author of the forthcoming book *The Everyday Lives of Gay Men in Hainan: Community, Space and Time* (2021, Palgrave Macmillan).

### **Embracing the failed resume: A woman's academic career in nonlinear time**

Brigitte Bechtold, Central Michigan University

The career of an academic professional has a standard pattern that is modeled on a model that is patriarchal and capitalist. Doctoral studies and career develop along a steady upward trajectory, and the successful endeavor is documented in a curriculum vitae or resume that shows a steady list of publications, conference presentations, and ongoing research. The dates attached to these achievements are chronological, without gaps. For a woman professional, things are often not so easy. Many still follow their partners and settle for less than ideal jobs, and have to juggle domestic chores and child rearing. Their resume often looks spotty, research projects become outdated, and much of their best work makes it to a filing cabinet (or computer files), to which they fully intend to return once they have time. Time is not measured linearly. There are periods in which the only free time is when the baby is taking a nap. Submitting a resume for the purpose of getting tenured or promoted becomes a nightmare. What to do with the inevitable gaps? In this paper, I propose to develop a resume that embraces what Judith Halberstam has termed the queer art of failure, and to illustrate the non-linear time of what I will call the anti-resume.

**Brigitte Bechtold** is an emeritus professor at Central Michigan University, where she has taught Sociology and Economics. She holds a Ph.D. from the University of Pennsylvania. She has published books and many articles and book chapters, and serves on the editorial boards of for several professional journals. Recently, she published a chapter titled "Brickwork, Capitalism Collective Memory, and the Commons," in the book "Blurring Timescapes, Subverting Erasures: Remembering Ghosts on the Margins of History" (Berghahn Books).

### **The Transvestite and the Transsexual: Tracing the Temporalities of Transitioning**

Ketil Slagstad, Institute of Health and Society, University of Oslo

Fundamental to the 20th century medical discourse on trans identities is the divide between the diagnostic categories of the transsexual and the transvestite. Underpinning the diagnostic categories were specific theories of time, chronology and transformation. The post-war medical concept of "gender identity" rested on a notion of its unchangeability, which became emblematic for gender-affirming therapy, to make the body congruent with inner self. Since the transvestite was thought to inhabit a fluctuating desire to change gender expression, medical interventions were contraindicated. Important was the notion that such interventions had irreversible effects and therefore posed a risk of future regret. Hence, doctors sought to minimise risk of future regret and protect the integrity of the body by rooting the individual's experience of gender in something immutable –the past. Treatment goals had to be visualised in relation to potential future embodiment and identity. Hence, the ir/reversibility binary infused both diagnostic and therapeutic reasoning. In this paper, I propose to employ the concept of "trans\*historicitities" to map out how the transsexual and the transvestite came into being, as trans opens up understanding of time, history illuminates trans and historicity points to the entanglement of past-present-future (Devun & Tortorici, 2018). The main argument is that trans\*historicitities is a handy tool to unearth the epistemic power ingrained in practices of pathologisation and normalisation.

I am currently a PhD student in the medical historical research project Biomedicalisation From the Inside Out (PI Anne Kveim Lie, University of Oslo), in which analyse the history of gender-affirming therapy in the 20th century Norway/Scandinavia. Originally trained as a doctor, I changed career paths and have been part of this project since May 2019. I have published two articles on the history of AIDS in well-renowned history of medicine/science journals (Medical History, Social History of Medicine), one specifically on the temporalities of epidemics.

### **B:3d Saar Room | Materialising Lifetimes: Matters and Infrastructures I: Bio-chronologies in Bodies, Models, and Pathogens**

Chair:

Support

*Inspired by 18th century natural history, this stream links scales of time to scales of life. The aim is to explore how lifetimes form through the entanglement and synchronization of various time scales and life scales, and how they take on material shape in the world. The concept of “lifetimes” replaces the distinction between natural and historical times with the continuity of scales. Scales of time span from the 15-minute life cycles of microbes to the 4-year cycles of elections and political power through to the millions and billions of years in the geological timescale; scales of life span from the non-life of minerals to the non-human life of microbes and bacteria to human life in societies. The project will explore how biological, geological and climatological chronologies combine with social and political concepts to form temporal arrangements governing human and non-human life, and how these arrangements materialize in technological and scientific infrastructures.*

*In this panel we will discuss examples of how different bio-chronologies combine with social and political times to form temporal arrangements, or “timescapes” (Barbara Adam), both in laboratory and future worlds, as well as taking material shape in cells, pathogens, and models.*

#### **The Lifetimes of Resistant Pathogens**

Anne Kveim Lie, Medical Faculty, University of Oslo

During the last decades, pathogens that are resistant to modern anti-infectious treatment have become an increasing concern to national and international authorities, threatening our ability to treat common infections, increasing the risk of disease spread, severe illness and death. Increasingly, researchers are discussing bacterial life as a specific instantiation of the biology of the Anthropocene (Landecker 2015), as the very constituency of the microbial world have changed during the last 50 years or so because of human intervention. In this paper, I want to focus on one particular aspect of this change, namely the shifting temporality of microbes and their tempi, speed and acceleration have changed as a result of human interventions in Western post-war societies – and how these changes again have affected human bodies and societies.

**Anne Kveim Lie** is associate professor in medical history at the Department of community medicine and global health at the University of Oslo. She has been interested in the history of disease broadly defined, including how ideas and practices as well as their biological manifestations have changed through time. Her research

interests focus on the history of technology, the history of reproduction, and the history of therapeutics and their regulation.

### **Nanotechnologies for Stopping Time: Stone Decay and Chemical Intervention**

Rachel Douglas-Jones, IT University of Copenhagen

Stone decay is a material marker of the passage of time, a memory of industrialised atmospheres, marker of acidifying rain and a contested aesthetic. This paper follows the work of the European research project HEROMAT (2011-2015) as they sought to design nanotechnological consolidants that, if applied to stone, would provide protection against the decay and erosion of the elements. Drawing on ethnographic work with engineers within the project, I explore the transformation of weathering into time. In contrast with videos that described the consolidant intervention as a new 'skin' for old stones, I analyse the technologies and visualisations within the project that take researchers beyond surface applications and into the pores of stones themselves.

**Rachel Douglas-Jones** is a social anthropologist and STS scholar. She works at the IT University of Copenhagen where she is the head of the Technologies in Practice research group, and co-directs the experimental methods lab, ETHOSLab. Her recent research has analysed manifestos, erasure poetry, digital monsters, data ethics, fakes, and the metaphors involved in cloud computing.

### **ZT: Timescapes of chronobiology**

Kristin D. Hussey, Medical Museion, University of Copenhagen

Circadian scientists make time to study time. Behind the doors of the laboratories of the University of Copenhagen's Novo Nordisk Foundation for Basic Metabolic Research (CBMR), chronobiologists tinker with new ways to track, isolate, and study time as an embodied process. Interrogating the minute metabolic processes of animal models, scientists use a variety of methodologies to model biological time. Amongst the most prominent is generating local time through modified light-dark cycles, indicated as 'ZT' or zeitgeber time – the time since exposure to an environmental cue like bright light or feeding. In any moment, a multitude of overlapping 'timescapes' are at play across scales within the laboratories of CBMR. However, the material realities of the scientists themselves as time-bound beings constantly threatens to undermine both their findings and their own circadian health. Inspired by Barbara Adam's (1998) conception of 'timescapes', this paper is interested in the competing and intersecting time(s) of circadian biology and biologists at CBMR. Adams has argued that a look to the embodied rhythmicities of biological time(s) is an essential counterpoint to industrial time. In the laboratory, these timescape(s) clash continually causing time distortion on

different scales. Informed by the approach of laboratory studies, this paper focuses on the methodologies used by circadian science to study time as an embodied, metabolic process – namely, the ZT system of ‘laboratory time’ (Nowotny 1994). By attending to the role of the chronobiologist as an investigator of and a subject of time, it reflects on the seeming impossibility of doing ‘real’ circadian science by finding an ‘objective’ perspective on biological rhythms. In so doing, it creates a space for wider reflections on the society which values the production of scientific time and its associated research as a way to ‘correct’ or ‘optimize’ the body in a 24/7 society.

**Kristin Hussey** is a postdoctoral researcher at the Novo Nordisk Center for Basic Metabolic Research (CBMR) and University of Copenhagen’s Medicinsk Museion. Her background is as a curator, geographer, and historian of medicine. Her current project ‘Body Time’ considers circadian rhythms in their historical, cultural and philosophical contexts. She is currently curating the ‘Time’ theme for the upcoming 2021 exhibition ‘The World Is In You’ at Kunsthal Charlottenborg in Copenhagen.

### **Time Is Our Most Precious Resource: The Historical Temporalities of Modeled Environmental Futures**

Emil Flatø, IKOS, University of Oslo

The turn of the 1970s has been interpreted as an “epistemic rupture”. Basic categories of thought, like “temporality”, were subject to profound critique, and modeling spread as a research method. But the significance is a matter of profound debate. I argue that modeled futures expanded the domain of calculation, enabling representations of time which complicate the distinction between actualized event and virtual possibility. However, contrary to claims that the result was a “colonization of the future” or a determinism of the “closed world”, early appropriations of models for the purposes of environmental management informed divergent futures relating to different ideas of scale, the situatedness of the modeler, and how to use modeled information. Before Limits to Growth, Meadows and Randers were advocating a sophisticated awareness of time in environmental management, building upon simulations of the multiple temporalities of the fallout from DDT emissions. Simulations of global warming, meanwhile, rendered a long-term, global, virtually glanced futurity amenable to public concern. Finally, Carroll Wilson engineered the first climate assessment, but eschewed that long-term in favor of the kairos of industry and politics. His motto? “Time is our most precious resource.”

**Emil Flatø** is a member of the Lifetimes project and ph.d. candidate in temporalities and the history of science at the University of Oslo. His research probes the relationship between scientific claims about and collective action on futures, charting the

appropriation of futures thinking by the nascent interdisciplinary community of climate scientists around the turn of the 1970s. Prior to entering the academy, he was a reporter, critic and commentator for the weekly *Morgenbladet*.

**B3d Piercy Room | WORKSHOP Anna Feigenbaum | Tinkering with Timelines - An interactive workshop**

Anna Feigenbaum, Bournemouth University

Timelines are one of the oldest forms of information visualisation, used in ancient societies as a key tool for keeping track of culture, histories and heritage. Employing chronological time as a structuring device, information could be neatly ordered and presented; its content populated by dramatic elements (i.e. a major battle, policy decision, relationship milestone, etc.). These features make timelines such a common educational resource for visualizing information over the course of time. Yet, timelines are also, by virtue of these same attributes, full of absences, reductions and flattenings. Their form persuades creators to make difficult decision about what points of information should be emphasised and why. As chronological representations, they generally can only depict forward movement. It is difficult to use them to compare and contrast information or divergent accounts of events, to show multiple perspectives, or to tell stories about entanglements and networks. In this interactive workshop, participants will briefly explore the history of timelines as a method of information visualization. We will then look at examples that visually challenge the linear flow of timelines, along with strategies that engage graphic metaphors to intervene in flattened and static notions of time. We will then create our own experimental timelines.

**Anna Feigenbaum** is an author of *The Data Storytelling Workbook* (Routledge 2020), a nonlinear history of *Protest Camps* (Zed 2013) and a sort of chronological history of *Tear Gas* (Verso 2017). She is currently PI on a UKRI/AHRC COVID-19 Rapid Response project exploring the role that web-comics can play in communicating public health data. Anna has led workshops with people and organisations around the world on data storytelling, infographics and digital communication. Her consultancies include Amnesty International, The New York Times and Public Health Dorset. She regularly publishes in academic and popular media outlets.

**Session 4 (Block C) (14.00-15.30 GMT)**

**C:4a Mary Anning Theatre | Materialising Lifetimes: Matters and Infrastructures II: 18th-century Presents**

Chair:

Support

*Inspired by 18th century natural history, this stream links scales of time to scales of life. The aim is to explore how lifetimes form through the entanglement and synchronization of various time scales and life scales, and how they take on material shape in the world. The concept of “lifetimes” replaces the distinction between natural and historical times with the continuity of scales. Scales of time span from the 15-minute life cycles of microbes to the 4-year cycles of elections and political power through to the millions and billions of years in the geological timescale; scales of life span from the non-life of minerals to the non-human life of microbes and bacteria to human life in societies. The project will explore how biological, geological and climatological chronologies combine with social and political concepts to form temporal arrangements governing human and non-human life, and how these arrangements materialize in technological and scientific infrastructures.*

*Many of the natural chronologies and lifetimes we live by in the present are handed down from the 18th century, in texts, tables, and collections of specimens. This panel will explore how we engage with these lifetimes and how they impact us.*

### **Gilbert White and the Naturalist’s Journal Making Phenological Times in 18th-century England**

Erik Ljungberg. IKOS, University of Oslo

18th-century England saw the emergence of attempts to create precise measurements of cyclical and seasonal phenomena in plants and animals. Among these was the parson Gilbert White, who kept daily records of natural events in a custom-made journal from 1768 to 1792. In order to answer the question of how the times of the calendar and clock are enmeshed with the seasonal and cyclical times of plants and animals in Gilbert White’s knowledge-practice, this paper proposes seeing times as emerging through continuous information exchanges occurring within and between three levels: the physiosphere, the biosphere, and the sociosphere. As White slots different natural phenomena into his tabular grid, or times the motions of birds with his portable watch, he filters the organic unfolding of the environment through the lense of calendar- and clock-time. This is informed by exchanges within the sociosphere, as White negotiates his findings in relation to the wider network of British naturalists at the time. There is also an exchange between the physiosphere and the sociosphere, or between White and his tools, in whose affordances specific times inhere. Thus, I aim to show the role of both knowledge-tools, and their traces which circulate in the sociosphere, in the emergence of an understanding of seasonal and cyclical times of plants and animals based on precise, abstract time in the work of Gilbert White.

**Erik Ljungberg** is a master’s student in the history of knowledge at the University of Oslo. He has bachelor degrees in cultural history and social anthropology. In his

dissertation, he looks at how tools, practices, and discourses come together to form time-making engines in the work of the 18th-century naturalists Gilbert White. He is particularly interested in the theory of multiple temporalities and the relationship between natural and social times.

### **Nature as heritage: The (life)times of type specimens**

Brita Brenna, IKOS, University of Oslo

In storage in natural history museums, we find the specimens that since the late 18th century has formed the basis for the classification of natural organisms: the so-called “holotypes”. How can we describe and analyse this particular kind of heritage, which is the foundation for our description of life, but which is in itself absolutely singular and immutable?

**Brita Brenna** is a professor of museology and cultural history at Institute for Culture Studies and Oriental Languages, University of Oslo. She works with the histories of exhibitions, collections, museums, copies, natural history, and fieldwork. She is a member of The Heritage Experience Initiative and *Lifetimes: A Natural History of the Present*. Based on a RCN funded project on copies she published, together with Hans Dam Christensen and Olav Hamran, the anthology *Museums as Cultures of Copies. The Crafting of Artefacts and Authenticity* with Routledge in 2019.

### **The life-times and mind-times of natural history: The life-times and mind-times of natural history**

Sine Halkjelsvik Bjordal, IKOS University of Oslo

Time, as we know it, materializes: The second hand moves, people age, today’s events are not tomorrow’s. At bottom, time in physics is also always material, even if the arrow of time work at molecular levels. Every entity in the universe has a proper lifetime and rhythm of change; every form of life (non-organic included) is always also a life-time. Human conceptualizations of time have material effects too; our many mind-times materialize in all sorts of practices, institutions, and actions. These mind-times and life-times interact with each-other in manifold ways, entangling and forming (un)stable constellations. One such «entangling» is the field of natural history as it developed in northern Europe in the second half of the 18th century. 18th-century naturalists are often characterized by their practices of classification, ordering and description – and their seemingly lack of temporal perspectives (with exceptions!). However, precisely because the naturalists’ object of study was what they understood as nature – and the many life-times nature was composed of – new entanglements of mind-times and life-times could develop. Based on a corpus of texts written by Scandinavian naturalists I

will in this paper explore and discuss natural history as a multitemporal field of knowledge, where new constellations of life and time could emerge and materialize.

**Sine Halkjelsvik Bjordal** is a PhD candidate in cultural history at the Department of Culture Studies and Oriental Languages (IKOS), University of Oslo. She just submitted her dissertation and is currently teaching at IKOS. At the moment she is particularly interested in the connections between different forms of knowledge and different forms of time, natural history in the 18th century, and histories of knowledge(s) in general. She is a member of the LIFETIMES research group.

**C:4b Banneker Room | Roundtable: A Day at a Time: The temporalities of the pandemic**

Chair: Dawn Lyon, University of Kent

Support:

This roundtable will present multiple perspectives on a shared data set on the everyday experience of time during the coronavirus pandemic. In a collaboration with the Mass Observation Archive, the research team (also including Michelle Bastian) is collecting reflective diaries from a national panel of writers as well as accounts from students in our own institutions. We offer multiple ways into making sense of the time of the pandemic from different disciplinary starting points. Simon will describe how individuals have experienced the altered relationships that have unfolded between social and formal organisation, focusing on the participation of time, measurement and technologies in mediating between work and home, or care for self and others. Dean will consider how university students have experienced time, drawing attention to the effects of technologies, e.g. online learning, algorithmic decision-making, digital surveillance, etc. Beckie will examine how media are one way in which time and temporality are materialised in the pandemic, by looking at how digital and analogue media feature in people's everyday lives including in changing their everyday experiences of planning, scheduling, and communicating with others. Emily will focus on 'legal consciousness' and people's experiences of new laws and rules affecting how they live and 'make time' in the pandemic, for example in relation to social distancing, work, travel, everyday rhythms, hopes and plans. Dawn will read the diaries to explore the ways in which the rhythms of everyday life are disrupted, shattered and/or reinscribed in the pandemic and what this means for the possibility and practice of future-imagining.

**Simon Bailey**, Research Fellow, Centre for Health Services Studies, University of Kent, is co-author of *Making it as a contract researcher: a pragmatic look at precarious work*

(Routledge 2020) and co-editor of *The Projectification of the Public Sector* (Routledge 2019).

**Rebecca Coleman**, Reader and Co-Director of Methods Lab, Sociology Department, Goldsmiths, has recently published *Glitterworlds: The Future Politics of a Ubiquitous Thing* (Goldsmiths Press 2020) and a special issue of *Sociological Review* on 'Futures in Question: Theories, Methods, Practices' (edited with Richard Tutton, 2017).

**Emily Grabham**, Professor in Law, University of Kent, is author of *Brewing Legal Times: Things, Form and the Enactment of Law* (University of Toronto Press, 2016), and co-editor (with Sian Beynon-Jones) of *Law and Time* (Routledge 2019).

**Dawn Lyon**, Reader in Sociology, University of Kent, is author of *What is Rhythmanalysis?* (Bloomsbury 2018) and Editorial Board member of *Time & Society*. Dean Pierides is Lecturer in Business and Management at the University of Stirling and Board member for ISA's RC17.

#### **C:4c Momo Room | Nonlinear fictive times: strategies, ethics, possibilities**

Chair:

Support

#### **From Human Time to Geological Aeons – the Aggregate Identity of Audrey Parker on Haven**

Sonia Front, University of Silesia

Audrey Parker (Emily Rose) in the fantasy/supernatural drama *Haven* plays the role of a mediator between the parallel worlds who travels to the town of Haven every twenty-seven years to help protect the inhabitants plagued by "the Troubles," i.e., supernatural abilities, which finally threaten them with imminent destruction. Audrey's uniqueness also resides in her identity which consists of many segments in which different consciousnesses inhabit the same body over five hundred years. The paper will focus on the character's unique temporality, proposing that her figure links human lifetimes to geological aeons, symbolised by aether, the primary substance of the Void, located between the worlds. That link makes *Haven* a series of the Anthropocene and challenges us to think beyond the usual temporality of a human lifespan. The imminent destruction as a result of individual egotism leading to the misuse of aether is a trope for the destruction of our planet. *Haven* uses Audrey to represent a network of connections and repercussions dispersed over centuries to illustrate how our cumulative actions impact our planet. The show's anti-linear strategies thus address the

environmental concerns of an increasingly unstable environment to suggest new ways through which to figure imminent threats concerning ecological disaster.

**Sonia Front** is Assistant Professor in the Institute of Literary Studies, University of Silesia in Katowice, Poland. Her research interests include time and temporality as well as representations of consciousness in twenty-first-century literature, film and television. Her last book is a monograph *Shapes of Time in British Twenty-First Century Quantum Fiction* (2015).

**'Dark', Cybernetic Temporal Loops and the War Against Time, Fatalism and God**  
Michael Goddard, University of Westminster

The contemporary German television series 'Dark' proposes a uniquely complex approach to time and time travel, going well beyond most time travel fiction, especially that which appears in film and television. While expanding on such tropes as the impossibility and necessity to change the past to affect the future, the series constructs an expansive series of temporal loops that raise philosophical questions about the nature of time itself, considered in a quantum framework. It does so via the artifice of temporal disturbances that take place every 33 years, making it possible to leap between one generation and another, initially manifesting itself in the disappearance and reappearance of a series of children between the (almost) present and the 1980s that prove to be the playing out of a much larger pattern of temporal slippages. More than this it connects the idea of temporality with religion, not only in the fiction of a secret society with clear allusions to occult groups but also to the metaphysical proposition that not only is God time, but that both must be stopped. This paper will explore the temporal fictions presented by the series as an ethical call to resist the metaphysical traps of cyclic temporality

**Dr Michael N. Goddard** is Reader in Film, Television and Moving Image at the University of Westminster. He has published widely on international cinema and audiovisual culture as well as cultural and media theory. In media archaeology, his most significant contribution is the monograph, *Guerrilla Networks* (2018), the culmination of his media archaeological research to date, which was published by Amsterdam University Press. His previous book, *Impossible Cartographies* (2013) was on the cinema of Raúl Ruiz. He is currently working on a new research project on genealogies of immersive media and virtuality.

**Thickening the Gutters: Temporal Materialisation in Queer Comics Production**  
Garry McLaughlin, University of Dundee

In *Cruising Utopia: The Then and There of Queer Futurity* (2009), José Esteban Muñoz challenged queer creators to resist anti-relational thinking and look towards a future that is a 'horizon of becoming.' In this paper, I will examine his take on utopia and his assertion that queer futurity is found in cultural production, as well as those scholars who have interrogated his ideas, such as Nishant Shahani. I will explore the ways in which queer comic creators have used the medium's inherent temporal plasticity to craft trans-temporal narratives, using as case studies *Stuck Rubber Baby* (Cruse 2011), *On A Sunbeam* (Walden 2018) and *O Human Star* (Delliquanti 2015). Through critical engagements with these texts, I will show how chronotopia, the 'braiding' between elemental objects across the metaframe of a comic book (Groensteen 2007), creates temporal interstices in narrative that allow dialogue between past, present and future. Such braiding is a literalisation of Bakhtin's chronotope in which time 'thickens, takes on flesh, becomes artistically visible' (1937). *Thickening the Gutters* argues that the medium of comics is particularly well suited to the artistic materialisation of time and the exploration of queer futurity.

**Garry McLaughlin** is a SGSAH-funded PhD Researcher at University of Dundee. His work focuses on queer temporality in comics and graphic novels and he is specifically interested in the ways in which queer creators make innovative use of the medium. He has been writing and illustrating comics for over 10 years.

### **Non-Synchronism: The Literary Politics of Time**

Filippo Menozzi, Liverpool John Moores University

This paper will explore the concept of "non-synchronism" or *Ungleichzeitigkeit*, a notion formulated by German philosopher Ernst Bloch in a pivotal essay included in his 1935 book *Heritage of Our Times*. Non-synchronism captures the survival of times other than the present and their mobilisation as political force. Bloch developed the term to make sense of the rise of Nazism in Germany in the 1930s out of untimely remnants exceeding teleological narratives of progress and modernisation. The term, however, is deeply ambivalent and, in other contexts outside Europe, has become a way of expressing possibilities for emancipatory politics and resistance to colonialism and exploitation. While extremely useful to make sense of political realities of our age, non-synchronism can also be a powerful heuristic tool for understanding the literary manipulations of time. Indeed, non-synchronism provides a wider frame of reference helpful to situate literary devices for reshaping the reader's perception of time, including disjointed chronologies, flashback, flash forward, peripeteia and ekphrasis. As expressions of a deeper non-synchronic temporal consciousness, these literary manipulations of time register the uneven dimension of a global modernity and the

heterogeneous temporalities that are constantly reproduced through the expansion of capitalism and its logics of accumulation.

I was awarded a PhD from the University of Kent in 2013 and am now a lecturer in world literature at Liverpool John Moores University. I am the author of *Postcolonial Custodianship* (Routledge, 2014) and *World Literature, Non-Synchronism and the Politics of Time* (Palgrave 2020). My work has appeared in journals and venues such as *Historical Materialism*, *New Formations*, *Rethinking Marxism*, *College Literature*, *Wasafiri*, *Interventions*, *ARIEL*, the *Journal of Postcolonial Writing*, *Humanities*, *The Conversation* and *openDemocracy*. I am section editor of the online journal *Postcolonial Text and Exchange* Associate at Tate Liverpool.

### **C:4d Saar Room | Unsettling time in colonised places**

Chair:

Support:

#### **Colonised time: temporality and (non-)synchronicity in the Ainu context**

Robert Hume, University of Manchester

This paper focuses on the settler-colonial context of Japan's northernmost island, Hokkaidō, and the assimilation of indigenous Ainu communities since the Meiji Restoration in 1868. Through an exploration of temporally disjunctive imagery in the introduction to the Ainu *shin'yōshū*, a Japanese-Ainu bilingual collection of *yukar* (folktales) and one of the most famous early twentieth century attempts to preserve Ainu folklore, this paper argues for the need to recognise the possibility of not only colonised space, but colonised time, too. The introduction to the Ainu *shin'yōshū* sees indigenous temporalities disrupted through depictions of pre-colonial Ainu space that employ leitmotifs more commonly found in non-Ainu Japanese art, as well as the rhythmic implementation of colonial forms of time reckoning, such as the division of the year into four seasons. Identifying these moments of temporal disjunction, I will argue, allows temporal dissonance to be reconceptualised as not only a product of colonisation, but as one of its causes, too. Moreover, it opens up a space to question the perpetuation of colonial realities through such (non-)synchronicities today, while also allowing for a re-evaluation of Fabian's (2014) 'denial of coevalness' paradigm in settler-colonial contexts.

**Robert Hume** is a first year doctoral student in Japanese studies at the University of Manchester. Having received his BA(Hons) in Russian and Japanese and his MA in Modern Languages and Cultures, his current postgraduate research focuses on the contested times and spaces of the islands that form the Russian-Japanese maritime

border, and the ways in which temporal and spatial dissonances are materialised, navigated, and engaged with in contexts of revival and decay.

**Active past: Sensitizing studies of the present to the doings of the past**

Tone Huse, Department of Archaeology, History, Religious Studies and Theology, UiT The Arctic University of Norway

The paper addresses the material life of time by examining the urban landscapes of Nuuk, the capital city of Greenland. A rapidly growing city, Nuuk is also being positioned by its authorities to become a ‘capital of the Arctic’, the development of the city being strategically aimed to position Greenland within the rapidly transforming Arctic region. Looking at how Nuuk landscapes are being altered by acts of demolition as well as new constructions, the paper identifies, firstly, the layered temporalities of Nuuk’s built landscape and, secondly, how these relate to the city’s colonial past and to the cultural politics of decolonization. The paper further suggests the notion of an ‘active past’ as a way of conceptualizing the unsettled nature of the Nuuk’s colonial past, suggesting that the history of the city cannot be dismissed simply as a background or context, but must be studied in terms of how it continues to be activated in and acts upon current practices of making and negotiating the city’s landscapes.

**Tone Huse** is an associate professor at the Department of Archaeology, History, Religious Science and Theology, UiT The Arctic University of Tromsø. She is author of the book "Everyday Life in the Gentrifying City" and is currently the leader of the radically interdisciplinary research project “Urban Transformation in a Warming Arctic”. A key aim of this project is to identify the characteristics of Nordic colonialism, as it has unfolded within the field of urbanization, as well as to describe how Nuuk’s colonial past is activated in and affects ongoing transformation processes.

**Temporal Privilege: lapse, truth, and possibilities for decolonial thinking.**

Jill Stauffer, Haverford College

A lapse is negative: it is a piece of time—or a different temporality—missing from an account smoothed over to look seamless. But a lapse also has positive resonance: it points to something missing, if we learn to look for it. We’ll find lapse in any account of settler colonial history that frames territorial expansion as always already inevitable, or requires that indigenous truths must reside in a timeless past, or dictates what the terms of citizenship or the terms of tribal membership can be, or attaches self-determination to western legal ideas about what sovereignty and land ownership mean and requires indigenous peoples to fight those battles in courts based on those ideas, and so on. Lapse is a feature of settler colonial truth. This paper will argue that it is possible for

settler subjects to learn to see the lapses in which they are implicated and, in so doing, learn to inhabit time differently. Doing that may even help us think differently about what it means to dwell alongside others on land when land's provenance cannot be exhausted by property law. In other words, this paper aims to look beyond settlers' temporal privilege and into the possibilities of decolonial thought and action.

**Jill Stauffer** is associate professor and director of the concentration in Peace, Justice and Human Rights at Haverford College (just outside Philadelphia, PA, in the U.S.). Her book *Ethical Loneliness: The Injustice of Not Being Heard*, on the role social abandonment plays in discourses of transition, reconciliation and recovery, was published by Columbia University Press in 2015. Recent published work includes articles on drones, settler colonialism, indigenous land claims, and how international law judges child soldiers. She is currently working on a book on the relationship of time to law and justice.

### **Queer temporality, settler sexuality, and the occult**

Sydney Sheedy, Concordia University

Queer theory has often worked through temporality as a way to measure the radical potential of queer kinship to disrupt the violent meters of heteronormativity, empire, and whiteness. Indeed, the notion that queer histories are counterhegemonic is so pervasive that, in the contemporary resurgence of occultism amongst young queer people, adepts regularly explain that it is their 'natural right' to practice magic: their inheritance from a legacy of hidden ancestors whose queerness is self-evident by virtue of opposition to power. In this paper, I look at the extent to which 'queer time' — departures from the rhythms of heteronormativity — effaces the racialized conditions of its own legibility. I historicize contemporary occult practices amongst queer Montrealers within the wake of 19th century Spiritualist reform that dramatized the status of the body, its relative animacy, and the (t)race it accumulated during a period of uncertainty about the reach of empire. If the body inherits a "variably alterable genealogy" (Schuller 2018), I am interested in how queer people in Montreal use the occult in order to legitimize alternative roots/routes to queer settler subjectivity that refuse grounding within the colonial legacy they otherwise inherit, and what gets displaced, ingested, or banished in the process.

**Sydney Sheedy** is a queer white PhD student in Interdisciplinary Humanities at Concordia University in Tiohtià:ke (so-called Montreal) . Their dissertation explores the revival of the occult in queer community building in Montreal and its implications for antiracism and decoloniality. She works across queer theory, ethnography, critical race and whiteness studies, religious studies, and history.

**C:4e Piercy Room | Belonging out of place, out of time**

Chair:

Support:

**Mobility in Time: Contagion as Collective Reinvention**

Anne McNevin, The New School

This paper approaches mobility in space together with mobility in time. If sedentarism is typically privileged as a baseline norm in spatial terms, presentism is its equivalent in temporal terms. Presentism does not only imply a perspective from the present that ignores or underplays historical context, but also and more significantly, the possibility of separating past from present and future in ways that do not countenance the interconnections – or mobilities – between them. Presentism gives us clean breaks that separate one moment from the next – the colonial from the postcolonial for example, in ways that discount seepage, contagion, and continuity over time. This paper reflects on examples where mobilities in time are the premise for political projects in space: Indigenous conceptions of sovereignty (premised on the inseparability of part/present/future; and the inseparability of time from space) and anti-colonial confederations (premised on interconnections between colony and metropole in time, and refusing their split-separation in space). The paper examines the potential for contagion and mobility as temporal metaphors to offer resources for collective political re-invention and to do so in ways that counter the more pejorative sense in which contagion and mobility are mobilized as spatial metaphors (as in, disease, infection, swarms, and so on).

**Anne McNevin** is Associate Professor of Politics at The New School. She is author of *Contesting Citizenship: Irregular Migrants and New Frontiers of the Political*, and co-editor of the journal, *Citizenship Studies*. Her recent publications examine time as a technique of border control and the transnational governmental regimes that shape the experience of refugees and migrants in and around Indonesia. She is working on a new book that aims to bring a world beyond bordered states into the realm of serious political consideration.

**Wilder Times: Multispecies Temporalities in Scottish Rewilding Projects**

Edda Starck, University of Goettingen

Based on ethnographic fieldwork conducted in Scotland, this paper explores the diverse multispecies temporalities that become apparent around rewilding projects. Within the context of rewilding, past ecologies are commonly used as sources of inspiration that

serve to construct notions of more-than-human belonging. This paper firstly discusses how traces of past ecologies are used to reimagine environmental histories with a multispecies focus. Becoming susceptible to more-than-human stories in this way allows to remember and mourn species lost to extinction, while simultaneously offering the hope of finding healthier ways of living together in this newly found sensitivity. Building on this, I will secondly discuss what tactics are applied by those involved in rewilding work in order to produce desired futures. While multispecies conviviality is central to future imaginaries, I argue that within rewilding projects practices of care and control are often deeply intertwined. Who is carrying the costs of these futures, and who is left behind? I will elaborate on the biopolitics of futuring, exploring how notions of native and invasive species shape rewilding ethics and inform decision-making on questions of life and death.

**Edda Starck** is a master's student at Georg-August-University Göttingen, where she studies Anthropology and Cultural Musicology. She holds an MA in Anthropology and Music from the University of Aberdeen. She has conducted fieldwork on environmentalism as well as performance arts. Her core research interests include environmental temporalities and multispecies conviviality. Edda Starck is furthermore working as part of the HERA project FOOD2GATHER, researching migrant foodscapes across Europe.

### **Orientation in an horizonless worlds – thinking through the chronopolitics of migration**

Nishat Awan, Goldsmiths, University of London

What possibilities does a materialised politics of time offer for working against the production of illegality in relation to contemporary border regimes? Time is used as a biopolitical means of control through the production of 'deportation time' where long periods of waiting are suddenly interrupted by extreme acceleration of time as deportation decisions are made in a matter of hours. These combine with strategies of disorientation and separation to produce an imperial time of border control. At the same time, the violence of the border regime is also a highly spatialised system of control where the lived experience of migrant lives can only be conceived through questions of territory/citizenship, partitions and points of control. What particular forms of dis-orientation emerge when the points of orientation collapse into an horizonless world being produced through such geospatial and temporal totalities? The paper will interrogate these issues through the everyday navigational practices of people crossing long distances across land and water. How do undocumented migrants cross securitised borders and navigate across a world that is being increasingly conceptualised as a totality? What chronopolitics of migration emerge through a re-

conceptualisation of the spatiality and materiality of such journeys? What relational, embodied and material practices emerge from these experiences and how can we learn from these practices to unlearn the imperialism of deportation time and computational navigation?

**Nishat Awan** is Senior Lecturer in Visual Cultures at Goldsmiths, University of London based at the Centre for Research Architecture. Her work focuses on the intersection of geopolitics and space, including questions related to diasporas, migration and border regimes. She is interested in modes of visual and spatial representation and ethical forms of engagements with places at a distance. Currently, she leads the ERC funded project, Topological Atlas ([www.topologicalatlas.net](http://www.topologicalatlas.net)), focused on the spatial analysis of borderscapes.

### **The Temporal Politics of (The) Left Behind**

Blake Ewing, University of Oxford

There is a close connection between politics and different flows of time. Political processes take time. And political activity attempts to arrest or set the pace for various processes of change. Politics also trades in temporal concepts of process – speaking for instance of ‘movements’, ‘reform’ and ‘development’. This paper will focus on the political use of ‘left behind’ and ‘the left behind’ as terms of displacement that are reactive to different time flows and political horizons. It analyses how ‘left behind’ has changed from a term employed to instigate action, acceleration and catching-up, to one of identity that predominantly calls for reversing, stopping and slowing down. Linking the linguistic politics of ‘left behind’ to the material flows of processes of globalisation in particular, the paper will compare the use of the term in the political language of development economics to the identity politics of (white) rural America and de-industrialised areas of Britain. It will analyse how ‘the left behind’, initially an assigned descriptive term, has emerged as a core component of a resurgent identity politics of recognition and resentment.

**Dr Blake Ewing** is a Smithsonian Research Fellow and Politics Tutor at Oriel College, University of Oxford.

### **C:4f Room 6 | Film and Talk: Like Clockwork: Material Cultures of Time within Black Communities**

Rasheedah Phillips, Esq., Community Legal Services of Philadelphia, Black Quantum Futurism Collective

Chair:

Support:

This film and talk session will explore the material culture of clocks, watches, and other artifacts of mechanical clock time within Black American communities. Phillips will begin by looking at clocks and watches as instruments of surveillance, labor regulation, objectification, and punishment for enslaved Africans. Even post-slavery, such practices persisted throughout time and into the present; for example, through temporal segregation in the Jim Crow South, and in the conflicting temporal mores of the justice system. The institutions that use clock time as its basis for order work together to catalyze and perpetuate systemic oppression that deny Black communities access and agency over the temporal domains of the past, present, and the future. Throughout the discussion, Phillips will reference images of clocks and primary sources such as newspaper articles, where Black people were relegated to the status of clocks through caricatures being locked into clocks, such as mammy clocks, or clocks built into cast iron bodies of caricatures, such as Topsy Blinking Eye clocks. The talk will end by meditating on the future of clock time within Black communities by looking at the work of Black Quantum Futurism, which seeks to subvert, re-envision, reclaim, and dismantle the material realities of clock time and culture in the lives of Black people.

**Rasheedah Phillips** is a queer Philadelphia-based housing attorney, mother, and interdisciplinary artist whose work has appeared in *Keywords for Radicals*, *Temple Political and Civil Right Journal*, and more. She is the co-founder of Black Quantum Futurism and Community Futures Lab. As part of BQF Collective and as a solo artist, Phillips has been A Blade of Grass and Velocity Fund Fellow, and has exhibited, presented, and performed at ICA London, Philadelphia Museum of Art, Chicago Architecture Biennial, Manifesta 13, and more. Phillips is a 2020 Vera List Center Fellow for the research and art project called Time Zone Protocols.

C:4g Room 7 | WORKSHOP Robert Woodford | Exploring the Deep Time Walk

Chair:

Support:

The award-winning Deep Time Walk enables users to experience a history of the Earth like never before. Designed using appropriate technology, the Deep Time Walk calculates your speed and distance as you journey across 4.6bn years of time, enabling you to learn about key evolutionary events as they occur and comprehend the destructive impact of humans on the Earth's complex climate. Join co-founder and executive director Robert Woodford to discuss the aims of the project and share your input and feedback. Attendees are invited to try out the walk ahead of the session by downloading from the App Store or Google Play.

## **Session 5 (Block C) (16.00-17.30 GMT)**

### **C:5a Mary Anning Theatre | Lightning Talk Session (I)**

Chair:

Support

#### **Who owns the rhythm?**

Ryan Bowler, Design informatics, Edinburgh university.

This flash talk asks the question, Who Owns the Rhythm? In a world that promotes fast fashion [Bruce] favours unsustainable consumption [Thogersen] and generates a concept that society is accelerated [Wajcman],[Rosa and Trejo-Mathys]. When personal rhythms are experienced, displaced time labels become apparent in a state of slowing [Droit-Volet], waiting [Ferrie and Wiseman] or dropping out [Yian]. These labels are misplaced upon people who by choice or by personal circumstance experience time in friction with 'normative' social rhythms. This talk will discuss the materials of time used by people with disability. And argues the rhythms owned by people with disability are more complex than fast and slow.

**Ryan Bowler** is a second-year PhD student; his focus is on the Temporal narratives of marginalised people and the integration of technology and design to promote socially accepted diverse experiences of time. He aims to understand the temporal diversity of peoples secluded by dominant social narratives of time. His current research focuses on people with Chronic Fatigue Syndrome and their experience of time having this condition. The overall goal of his PhD is to discuss his topic Inclusive Temporal Technologies and create a framework that supports designers in making technologies that work for multiple experiences of time.

#### **A Rumination on Past, Present, and Future**

Trang Dang, Nottingham Trent University

This lightning talk sets out to examine the idea of time as an emergent property of things, including (in)animate nonhumans and humans, and the way this idea imparts past, present, and future to us. Informed by object-oriented philosophy, this talk demonstrates that all entities have their own temporalities whereby their ontological being is their futures and their ontic appearances are their pasts. In time of climate crisis, this radical understanding of pasts and futures gives us proof of coexistence and hope for change, while allowing us to cherish a present that is a constant sliding of futures over pasts.

**Trang Dang** is currently a doctoral student at Nottingham Trent University and previously graduated from Oxford Brookes University with a BA and an MA in English Literature. Funded by the NTU PhD Studentship scheme, her PhD project focuses on Jeff VanderMeer's weird fiction, exploring narratives of co-existence between humans and nonhumans and the role of new weird novels in portraying the current climate crisis. Her main research interests are contemporary cli-fi and sci-fi, critical theory, and continental philosophy.

### **Life-time: Figuring the person-in-time in Alzheimer's disease research and innovation**

Natassia Brenman, Goldsmiths University

How do new methods of tracking neurodegenerative disease figure the person-in-time? Intensive testing through imaging, wearable devices, and other digital phenotyping techniques respond to and produce changes in the way we detect signs of cognitive decline, as part of a broader shift towards a 'digital psychiatry'. Techno-scientific promises involve tracking 'real life' in 'real time'. In this lightning talk, I draw on my current work in this field in the UK and present ideas for a new project on the way big-data and lived time intersect and co-constitute one another, creating various (perhaps competing) temporalities through the lifecourse.

**Natassia Brenman** is an ESRC postdoctoral research fellow based at Goldsmiths sociology department. Her research uses ethnographic methods to explore the technologies, temporalities, and spaces of mental health and care. Natassia is currently developing work on detecting dementia in her new project on time and technology in neurodegenerative disease. This project speaks to a broader set of interests in the changing face of psychiatric diagnosis, including different or emergent ways of making sense of the 'normal' and the 'pathological' in mental health. Natassia received her PhD from the London School of Hygiene and Tropical Medicine in Medical Anthropology, and she currently holds an honorary position at the University of Cambridge Institute of Public Health.

### **Moss Urgency. How to relate to non-human temporalities?**

Harriet von Froreich, Independent Researcher

A forest moving towards North is so slow, that it is almost imperceptible to us without a translating or mediating effort. Artistic interventions offer a means to relate to the very own specific temporalities of non-human beings, as could be seen in Olafur Eliasson's reknown „Ice Watch“ (2014). This can be a crucial precondition for activist engagement. As the famous word by Baba Dioum goes, „in the end, we will conserve

only what we love“ – indeed, but what if moss or rock „urgency“ is simply escaping us, as we’re bound to human lifespans, rhythms and speed? Artistic interventions invite us to „attune“ (Morton 2016) to non-human timescales and their inhabitants, to „beyond“ our own temporal situatedness. To practice “temporal empathy”, I will offer a short performative exercise to the participants.

**Harriet Rabe von Froreich** holds a MA (theatre and drama) in Live Art and Performance Studies (University of the Arts, Helsinki, 2017), a MA in Literature, Philosophy and Aesthetics (European University Viadrina, Frankfurt Oder 2015) and a BA in Theatre Studies and Comparative Literature (Free University Berlin). She is an artist, researcher and strategist based in Berlin. Besides her artistic works and academic activities, she has been part of several future-oriented socio-entrepreneurial projects, e.g. on the topics of Circular Economy and Universal Basic Income on the Blockchain. Her current research revolves around the potential of artistic strategies to mediate incommensurable temporalities and scales, in order to develop an emotional relationship to non-human beings, hoping to empower activist engagement against the climate crisis.

### **Legacy Files. Datafication and Time in Environmental Health Regulation**

Susanne Bauer, University of Oslo, Centre for Technology, Innovation and Culture

This talk will investigate the materialities and temporalities in metrics for science and policy. Based long-term observations in environmental epidemiology, I will diffract legacy infrastructures and discuss their lingering presence in the ways we conceptualize and act on environmental health. I will reflect on the ongoing accelerations in data mining from past disasters for the prediction of futures and the governance of commons. For instance, large scale data assemblages gathered over decades become boiled down into benchmarking exercises and “real-time” scoring applications. Mapping out the varied distributed agencies involved, I will discuss the synchronization and actualization work in knowledge production for science and regulation.

**Susanne Bauer** is a professor of Science and Technology Studies (STS) at the Centre for Technology, Innovation and Culture (TIK). Trained as environmental scientist and epidemiologist, her work in STS has focused on sociomaterialities of epidemiological research, data labour and knowledge infrastructures. She currently works on projects on Cold War nuclearity and toxicity and their lingering presence in how we conceptualize and act on environmental health. Long-term collaborative projects also include a multispecies environmental history of Frankfurt airport. Her work has been published in journals such as *Social Studies of Science*; *Science, Technology and Human*

Values; Medical Anthropology Quarterly; History of the Human Sciences; Environmental Humanities.

### **Alteration in the Experience of Dark Nights Due to Artificial Light**

Diane Turnshek, Physics Department, Carnegie Mellon University

Artificial light at night (ALAN) alters the amount and quality of time spent experiencing the natural treasure of dark skies. 80% of people in the US can't see the Milky Way. The area affected by light pollution is increasing by 2% per year. ALAN has allowed the extension of wakefulness into the evening, disrupting Circadian rhythms. As the health ramifications of ALAN become apparent, people are using technology to shift the spectrum of light consumed after dark to longer wavelengths that limit the suppression of melatonin production. Time-lapse satellite imagery and drone maps show the extent of changes through time.

**Diane Turnshek** is an astronomer at Carnegie Mellon University. Crewing the Mars Desert Research Station in the Utah desert, made her aware of the spread of light pollution and her outreach efforts earned her a Dark Sky Defender Award from the International Dark-sky Association. In 2019, she co-edited a science fiction, fantasy and horror anthology, *Triangulation: Dark Skies*, to bring awareness to this environmental issue. As the elected Technical Working Group Chair for the International Astronomical Union's commission on observatory site protection, she will be instrumental in running a scientific focus meeting in South Korea in 2022.

### **C:5b Banneker Room | Time in suspension**

Chair:

Support:

### **Feeling and Writing in Suspension: Waiting in COVID-19 Shopping Queues**

Victoria J E Jones, Durham University

The COVID-19 virus and subsequent UK national lockdown were a catalyst for new practices of waiting, influencing how people interacted within retail shopping queues. Social distancing created new forms of affective, bodily and material presences. This paper focuses on a phenomenon, a particular form of waiting observed in twenty two shopping queues during lock down in the North East of England, UK. Waiting practices formed through the COVID-19 lockdown, opened new forms of feeling, requiring new forms of articulation. As such the paper is an experiment with language and form speculatively describing feelings, sensations, materialities and temporalities, through a metaphor, fluid suspension. Initially the paper outlines what waiting is and does in

order to provide a touchstone when considering the feelings shaped within new forms of waiting. It will then outline and consider what fluid suspension can open as a writing device. Then working with fluid suspension and the work of queer and cultural theorists, the paper elucidates concepts of surface and viscosity in order to describe the morphologies of mood and sensation felt and shared whilst waiting within COVID-19 shopping queues.

I am a conceptual artist and Cultural Geography researcher currently undertaking a non-practice based PhD in the Geography department at Durham University. My study, 'Spaces of Pauses Mobility: A Geography of Waiting', examines how the practice of waiting is embodied, with a particular focus on the experiences of astronauts waiting for space travel. It attempts to move forward conceptualisations of waiting as an interruption, towards considering waiting as a form of affective-sensorial-material feeling. It is intended that the study will have impact within and outside the mobilities literature.

### **The multi-temporalities of waiting: Legal and everyday life of internal migrants in India**

Pankhuri Agarwal, University of Bristol

When workers move from one state to another within India, they lose access to welfare such as food, housing and others as these are attached to the proof of residence in the home state. This together with the precarious nature of their work such as in brick kilns, construction and others, often inducts them to being rescued under the Bonded Labour System (Abolition) Act 1976, which promises them rights akin to welfare. But, the workers must wait for years in the legal system. I juxtapose waiting for rehabilitation as victims of bonded labour (legal time) with the simultaneous waiting for rights as migrant citizens in India (social time), by using narratives from multi-sited ethnographic fieldwork conducted in Delhi in 2019. The workers have been in the legal system from 3-37 years. Thus, by challenging the binary of experiencing time as either domination or liberation, this paper shows how multi-temporalities exist side by side in the quest for development. The spatio-temporal performance of waiting is not only a symbolic representation of the marginalisation of workers but also of their consciousness; judiciously spent in realising rights which they are entitled to as citizens but are denied in practice.

**Pankhuri Agarwal** is a Doctoral Researcher in Sociology at the University of Bristol. Her PhD is a multi-sited ethnography of the lived legal experience of internal migrant workers in India. She focuses on their experience of waiting, personhood, and rights to critique the slavery-freedom binary underpinning anti-trafficking and modern slavery

laws. Previously, she has worked for over 8 years researching the legal and policy issues surrounding migration, gender-based violence and labour rights, with NGOs, government departments as well as law enforcement stakeholders in South Asia. She tweets @Pankhuri\_A

### **Stockpiling. The material politics of anticipation**

Andreas Folkers, Justus-Liebig University Giessen

I will analyze stockpiling as a security device that hoards time, stores power, and buffers disruptions. The stockpile is a temporal matter of security by virtue of its ability to freeze time and to prepare for future emergencies. Stockpiling is informed by anticipations of threats but also materially underpins expectations. The paper will unpack the temporal ontology of stockpiling by mobilizing theoretical approaches from new materialisms, Michel Serres concept of the reservoir and Martin Heideggers understanding of the "standing reserve". The paper will then briefly traces the (deep) history of stockpiling as a security device and a technology of power. Stockpiling enabled the emergence of the earliest states by establishing the means to store surpluses and centralize power. In modernity, stores became more dispersed as money, commodity exchange and new infrastructures made it possible to procure resources through circulation. In the 20th century stockpiling became a reflexive security device reactive to risks associated with the disruption of circulations. Finally, I will show the paradoxical effects of stockpiling techniques by looking at examples from contemporary catastrophe preparedness and the public and private hoarding practices during the Covid-19 pandemic. The paper offers a theoretical, historical and empirical engagement with stockpiling and thereby further elucidates the politics of anticipation and the material life of time.

**Dr. Andreas Folkers** is post-doc at the sociology department of the Justus-Liebig University Giessen (Germany). He received his PhD in sociology in 2017 from the Goethe-University in Frankfurt (Germany). He works on biopolitics, security, environmental politics and energy informed by debates in (critical) social theory as well as in Science and Technology Studies (STS). Recent publications include: 2019: Freezing time, preparing for the future: The stockpile as a temporal matter of security. In: Security Dialogue. 50 (6). 493-511. 2020: Air-appropriation: The imperial origins and legacies of the Anthropocene. In: European Journal of Social Theory. 23(4) 611–630.

### **Logistical boredom: towards a theory of differential temporality**

Nicholas Anderman, Department of Geography, University of California, Berkeley

Logistics, the modern science of moving things, gives form to a prevailing image of the earth as an abstract, unified space-time, at once frictionless, homeostatic, and optimized for high-speed mobility. Drawing on dissertation research carried out on board a series of containerhips, in this article I develop a critique of this accelerationist understanding of logistics, on the basis that it fails to acknowledge the temporal experiences of commercial seafarers and the contested history of maritime labor markets. Instead of speed-up, I suggest that boredom—an affective experience consonant with temporal slow down—is, for many sailors, a common experience at sea. Working with “temporality”, a term defined by the media theorist Sarah Sharma as “an awareness of power relations as they play out in time” (2014: 4), I situate boredom in the context of (1) the repetitive labor of maintenance and repair that constitutes seafarers’ working lives, and (2) the formal monotony of the shipping container and the containerhip. Building on this analysis, I develop a theory of differential temporality, whereby stilled experiences of time at sea are tied causally to the acceleration of time elsewhere. In this speculative schema, the offshoring of boredom speeds up time on terra firma.

**Nicholas Anderman** is a PhD Candidate in the Department of Geography at the University of California, Berkeley. His dissertation research deals with the politics of automation, labor, and temporal experience in the context of maritime logistical networks. At Berkeley, he is affiliated with the Center for Science, Technology, Medicine, & Society and the Post-Imperial Oceanics Working Group.

### **C:5c Momo Room | Playing with temporal embodiments across media and the digital**

Chair:

Support:

### **Intra-Play as Political Materialisations of Memory**

Conor McKeown, King's College London

Within agential-realist game studies (Janik, 2017; Wilde & Evans, 2017; Chang, 2017; Stone, 2018; McKeown, 2019), McKeown's utilisation of Barad's work frames digital gameplay as engaging with ever-fluctuating time and temporality. This paper furthers this formulation through readings of two games: Lucas Pope's (2018) *Return of the Obra Dinn*, and *What Remains of Edith Finch* (Giant Sparrow, 2017). In these, players are presented with objects that disrupt and reconstruct spacetime. However, neither game places players in control of spacetime (distinct from fundamentally entertaining games). Instead, these games ask players to understand specific political tensions within time periods: those of British Colonialism in the case of *Obra Dinn*, and the systemic shortcomings of support for the neurodiversity in *Edith Finch*. These games encourage players to entertain the notion that, as Barad writes "the past was never simply there to

begin with and the future is not simply what will unfold; the 'past' and the 'future' are iteratively reworked and enfolded through the iterative practices of spacetime-mattering" (2007, 314). An agential realist reading of play as "intra-play" reframes gaming as spacetime-mattering: playing the past, these games welcome an active turn to empathy, understanding and an engaged construction of the future.

**Conor McKeown** is a researcher of games and science philosophy at King's College London. They explore games' potential as tools for understanding and enacting novel posthumanism.

### **Prehistory, race, and the survival of the human species**

Ben Pitcher, University of Westminster

The conjoined crises of capitalism and the environment have made the prehistoric a rich resource in contemporary culture. Prehistory appears to provide a critical outside to twenty-first century capitalism when an alternative to capitalism cannot be imagined as anything less than the end of the world. The prehistoric is not just a figurative reference in popular culture; it is a neglected potential we uncover deep within ourselves. This paper considers how TV survival shows model a turn to prehistory as a way out of the social and environmental problems of the twenty-first century. In their symbolic discarding of the inessential accretions of subsequent culture, survival shows meditate on the possibility of starting again. In their references to the prehistoric, survival shows pose the question of human persistence in species terms: what are the terms of our own survival? Exploring the interwoven and mutually defining discourses of race and prehistory, this paper considers the racialization of survival. In its flight from whiteness and civilisation towards nature and tribal life, the trope of survival appropriates the precariousness of indigenous existence for Western audiences. The vulnerability of the human species is animated through a kind of existential blackface.

**Dr Ben Pitcher** is Reader in Sociology at the University of Westminster. He is the author of *The Politics of Multiculturalism* (2009) and *Consuming Race* (2014). He is currently writing a new book on the cultural politics of prehistory.

### **Wasting Time? On the temporal rhythms of TikTok**

Andreas Schellewald, Goldsmiths, University of London

The short-video app TikTok is as much loved as it is despised. Some, especially those younger than 25, appear to find pleasure in the app's bottomless feed of video clips, often less than 15 seconds in length. Others, on the contrary, struggle with attributing meaning to this seemingly random array of videos. Instead, TikTok is frequently

rendered a time-wasting machine, a distraction from more meaningful matters. Based on a year-long ethnography of TikTok users based in the Greater London area, the paper will discuss the different spatio-temporal rhythms that emerge around scrolling through the app. Contrasting popular and patronising critiques of digital media as sources of acceleration and boredom, i.e. providing only momentary and not lasting fulfilment, the paper instead shows how TikTok's endless content feed creates a form of 'worldly sensibility' allowing people to regulate their sense of self and belonging. From the 'waiting body', trying to pass time, to the 'tired body', attempting to clear the mind, to the 'energised body', feeling inspired by the present structure of feeling. Doing so, the paper closes in emphasising the importance of contextual observations of digital media to evaluate their consequences on experiences of time and the present in particular.

**Andreas Schellewald** studied cultural studies and sociology in Friedrichshafen, Vienna, and Edinburgh. He currently is a Doctoral Researcher at Goldsmiths, University of London, investigating TikTok, algorithms, and modern boredom.

### **Digital literacy as critical corporeal agility**

Tim Markham, Birkbeck, University of London

This paper argues that while the experience of digital life can often feel like an inescapable presentness, a kind of suspended temporality, in fact it is the texture of that experience – one full of affect and discourse and mood – that propels the navigational motion that discloses the world. The forward-facing temporality of subjectification is what instantiates its ethical stakes, its origin the always ontologically prior present. Necessary to ethical digital living is a critical corporeal agility, a deftness of navigation whose disclosure of the world grasps at-hand the contingency of a world so revealed. This is distinct from clear-eyed awareness of and talkability about digital materialities; against the myth of weightless digital flows in a world of bits, the paper argues that it is through this critical corporeal agility that the materiality of environments comprised of fossil fuels, container ships, coltan mines, undersea cables, data centres, rubbish dumps and the sweat of exploited labour is understood – not as a curtain pulled back to reveal the reality of all this stuff, but precisely, after Judith Butler's reading of Spinozan ethics, through its opacity. The paper ends by proposing an empirical model for analysing digital literacy understood as body sense.

**Tim Markham** is Professor of Journalism and Media at Birkbeck, University of London. He is author of *Digital Life* (Polity, 2020), *Media and the Experience of Social Change: The Arab World* (Rowman & Littlefield, 2017), *Media and Everyday Life* (Palgrave, 2017), and *The Politics of War Reporting: Authority, Authenticity and Morality*

(Manchester, 2012); co-author of *Media Consumption and Public Engagement: Beyond the Presumption of Attention* (Palgrave, 2007; 2010) and co-editor of *Conditions of Mediation: Phenomenological Perspectives on Media* (Peter Lang, 2017).

**C:5d Saar Room | Disrupting the temporal dynamics of capitalism: pandemics, pedagogies, and economies**

Chair:

Support:

**Crip Pandemic Time: Dismodernist Challenges to Capitalist Presents and Futures**

Arianna Introna, Independent researcher

The Covid-19 pandemic has simultaneously confronted societies with the extent to which fragility is a condition common to all bodies, if unequally distributed, and witnessed systemic attempts to protect 'the ableist fantasy of independency and full functioning' (Altermark 2020) through 'ontologically violent messages' which re-position fragility as the prerogative of risk groups (Liddiard 2020). My paper will explore how the corporeal lives of pandemic time instantiate a two-fold disruption of these attempts at re-establishing the symbolic hegemony of bodyminded normalcy. First, I will consider pandemic time as materializing temporalities disruptive of the 'temporal dynamic' of capitalism, which involves a 'painful negotiation' of the grip commodification exerts on situated social experience through linear and homogeneous time management (Ingold 1995:27). Secondly, I will argue for the uses of approaching pandemic time as crip time on the basis of how processes of capitalist valorization are vulnerable to the interruption and discontinuity that are brought about by the prospect and actual proliferation of not exploitable ill bodies. Ultimately, I will suggest, this proliferation generates a dismodernist (Davis 2002) temporality which demonstrates the historical character of capitalism and disturbs the imagination of its possible futures.

My research interests lie at the intersection between Scottish cultural and literary studies, disability studies and Marxist autonomist theory. In 2018 I completed my PhD in Scottish literature at the University of Stirling. My PhD thesis explored representations of disability in Scottish literature drawing on Marxist autonomist theory and disability studies. Since June 2019 I have been Research Assistant on Dr Corey Gibson's project *Dreaming the Daily Darg* at the University of Glasgow. The next stage of my research retains an autonomist disability perspective to examine narratives and contexts of welfare, unemployment, health and social reproduction.

**Timing students on the road to capitalism: The case of Success Academy employing a sequence-dependent temporal configuration to 'close the achievement gap**

Veronika Cibulkova, London School of Economics

This research relies on the sociological assumption that time is not only a natural objective entity, but also constructed, performed, and disciplined through everyday temporal practices. In the context of a specific New York City based no-excuse school serving socio-economically, racially, and linguistically disadvantaged students - Success Academy, the research shows how different temporal practices are utilized in order to reach an educational goal of closing the achievement gap. Success Academy's pedagogy - more specifically, their pedagogical handbook 'Mission Possible' exposes how different temporal practices are taught in interaction with one another and how they are order-dependent. Analysing the discourse through Success Academy's underlying goal to produce students achieving both academically and socio-economically, this research shows how some temporal practices are prerequisites for learning (and teaching) other, more complex temporal practices. These practices - time taught to be quantifiable and measurable, scarce and finite, can become a base on which students are disciplined, compared and competing. Moreover, such practices are an understanding that actions unrolling in the present result in future temporal outcomes. They exist in a hierarchized order governed by the normative logic of urgency. By understanding how temporal practices are utilized hierarchically to construct a specific temporal configuration oriented towards an academic and socio-economic achievement of Success Academy's "scholars" the current sociological understanding of time that treats temporal practices in isolation with one another is challenged. It is argued that different temporal practices utilized in an institutional context interact with each other. The discourse they underpin and the institutional goal they serve pivots the logic of such temporal interaction that produces unique outcomes educational outcomes – in the case of Success Academy in closing the achievement gap.

**Veronika Cibulkova** is an MSc candidate in Sociology from the London School of Economics. She is currently living in Slovakia where she works as an education researcher re-designing evaluation criteria for Slovak public school system.

### **On the temporalities of socionature and the time of economic production**

Vijay Kolinjivadi, Postdoctoral researcher

The tendency of Western capitalist modernity to insist on linear and universalised representations of time has made it increasingly difficult to effectively differentiate - and respond to - perceptions of catastrophic planetary change from any other experience of change. In this paper, we adopt a political ecology perspective in considering the work of physicist and ecological economist Nicholas Georgescu-Roegen, who described the fundamentally qualitative changes that take place in any

economic production process. Using Georgesçu-Roegen’s flow-fund model, we describe the hegemonic cultural processes required to spatially fix dynamic and continuously emergent socionatures into the oppressive linear temporality of the clock. In doing so, temporalities associated with qualitative change that characterise socionature relations become irreversibly altered into new unruly socionatures. The continuous unfolding of socionatures through distinct temporalities render the monocultural economic transformations of modernity an immediate anachronism to actual lived experiences in times of social and ecological breakdown. Yet, the temporal discipline of economic production also depends on these unruly anachronisms of socionature emergence to further reproduce itself. Through examples, we argue that the political impetus for responding to changing social and ecological environments lies in the activation of alter-temporalities that do not coordinate to mechanistic representations of temporality.

**Vijay Kolinjivadi** (he/him) is a postdoctoral researcher at the Institute of Development Policy of the University of Antwerp. His research explores the ways in which “greenness” emerges as a new frontier of resource activation and exploitation, premised upon historically and geographically-contextualised relations rooted in racialized, class, gender, and caste hierarchies. His work attends to the ‘messy’ implementation of neoliberal environmental policies like “Payments for Ecosystem Services” that shape how and why “greening” projects differ in practice from how they are theorized. His work takes understands temporality as imperative to revealing the (un)workings of colonial power in so-called “sustainability” policies.

### **C:5e Piercy Room | Temporalities of the Lithosphere and Cryosphere**

Chair:

Support:

*This panel suggests a new critical method and ecological orientation for tracking the nesting of temporality between the cryosphere and lithosphere in media res. The receding (and enlivened) cryosphere actively yields new ground upon which to touch, taste, and interpret the temporal force of earth systems. Deeper down, the lithosphere portends future flows of fossil fuels, tectonic collisions, and inhuman entanglements for late capitalist habitus. We want to consider boundary objects, concepts, and situated encounters that focalize the knotting of time between these two spheres. To do so, we draw from recent fieldwork in Greenland, Turkey, and the United States. The newly enlivened lithosphere blooming into view in the wake of a recalcitrant cryosphere means new stock is on its way. As the frozen layer of the earth melts into the atmosphere and hydrosphere of the planet, altering its human and non-human political ecologies, new access points to long buried and frozen hydrocarbon deposits are coming into the crosshairs of the resource aesthetic this century inherited from the mid-nineteenth century. This panel proposes a new direction for ecological inquiry that neither historical nor new materialism can fully satisfy:*

*focalization of research and critique through the interactive dynamics of the lithosphere and cryosphere as fossil fueled modernity contorts the very ground beneath its feet.*

### **Temporalities of Expiration, Expansion, and Excess in Turkey's Oilfields**

Zeynep Oguz, Northwestern University

This paper follows the separate but entwined temporalities of the geological and political that are materialized in abandoned oil wells from conspiracy theories about a specific moment in Turkey's history to geopolitical expectations about the future that characterize state policy and public life in Turkey. According to a prevalent urban myth in Turkey, the Treaty of Lausanne—the document internationally recognizing Turkey in 1923—will expire in 2023, rendering the Turkey's borders obsolete. Proponents of this theory claim that the treaty includes secret clauses that have prevented Turkey from having full sovereignty over its resources and thereby extracting its supposedly abundant oil reserves. I examine the politics of the absent presence of oil in Turkey, by tracing oil conspiracies through moments of expiration, expansion, and excess. Oil conspiracies become the medium through which the year 2023 is reconfigured as a temporal device of historical revisionism, simultaneously fueling spectacular, irredentist, and populist politics of the ruling Justice and Development Party (AKP) in Turkey. Further, the uncertainties in oil exploration and the indeterminacy that the forces, materiality, and temporalities of the earth entail, open existing territorial and temporal orders into question.

**Zeynep Oguz** is a Mellon Postdoctoral Fellow in Environmental Humanities with a joint appointment in the Department of Anthropology at Northwestern University. She received her PhD in cultural anthropology from the Graduate Center, the City University of New York in 2019. Her book project, tentatively titled *Spectral Matters: The Geopolitical Life of Oil in Turkey*, examines how oil, petroleum geology, and energy infrastructures have been central to the making and unmaking of temporal and territorial formations in Turkey, especially in relation to contested geographies of Kurdistan and Cyprus. Her essays have appeared in *Cultural Anthropology*, *Middle East Report*, and forthcoming in *Political Geography* and several edited collections. She recently edited a *Theorizing the Contemporary* issue for *Cultural Anthropology* on "Geological Anthropology."

### **The Retroaction of Glacier Melt**

Amanda Boetzkes, University of Guelph

This paper will consider how glacier melt registers as a retroactive effect on the human relationship to the lithosphere. I will propose that the dynamics of planetary ice,

including its unprecedented melt, do not so much register as an immediate cause of ecological perturbation but rather appear as an uncontrollable effecting of the present with traumas from the past, sometimes as far back as prehistory. Through a discussion of South African artist Stupart's video *After the Deluge, the Fall (the Awakening)* (2018) I will consider how glacier melt sets new temporal terms by which to understand geopolitics. Further, I will propose that Stupart's video elaborates a planetary posture, an approach to navigating the reciprocal relationship between imagining glacier melt through mediatized images and terraforming the lithosphere through the material practices of occupying it. The concept of the posture, as Laruelle defines it, insists on theorizing bodily disposition as an integral facet of the formulation of critical positions. Yet, as the terms of this panel suggest, critical positions must also account for their temporal rhythm of anchoring in and also becoming perturbed by geological agency. I will therefore consider how planetary posturing takes place through the temporality its geological (un)grounding.

**Amanda Boetzkes** is Professor of Contemporary Art History and Theory at the University of Guelph. Her research focuses on the aesthetics and geopolitics of art as these intersect with visual technologies of the late 20th and early 21st centuries. She is the author of *Plastic Capitalism: Contemporary Art and the Drive to Waste* (MIT Press, 2019), *The Ethics of Earth Art* (University of Minnesota Press, 2010), and editor of *Heidegger and the Work of Art History* (Ashgate, 2014).

### **Geosocial Futures and Lithospheric Temporalities Beyond Geology**

Laura Pannekoek, Concordia University

This paper seeks to challenge the geological consciousness provoked by the United States Geological Survey (USGS) through its set of political-economic and technoscientific mediations between the geophysical and the human imagination. The geologic temporalities that the USGS' institutional geology extracts from the material life of the lithosphere, and the increasingly off-center predictions of accelerations of cryospheric movement are crucial points of tension in ecological thinking. This paper foregrounds how the USGS's geological time register falls short of the emerging planetary ecologies that span across and beyond geophysical and social systems. I argue that geosocial, geocultural or geoaesthetic ways into planetary thinking are hindered by the dominance of the USGS' institutional geology for two reasons. First, institutional geology offers a geologic register on which modes of perception and mediation are techno-materially rooted in colonial histories. Second, the USGS's geologic realism in which the materiality of the geologic gets foregrounded as a solid substratum for thinking and imagining climate futures overemphasises the geological as exclusively

material category. This undermines a way into the planetary as a mode of climate responsive subjectification that necessarily understands itself geosocially.

**Laura Pannekoek** is a Ph.D. student in Communication Studies at Concordia University in Montreal. Her research focuses on political ecology and technology in the overlapping geological and social crises of the present. She received an MA in Comparative Literature from the University of Amsterdam with a thesis that traced a geologic index in cultural production and energy policy.

### **Hydrological Transition in Greenland and the New Concerns of Ice**

Jeff Diamanti, University of Amsterdam

Melting ice fuels Greenland's postcolonial condition along two axes: on the one hand, the nation-state developed during the transition between 1979 (Home Rule) and 2009 (Self Rule) powered itself domestically and commercially by building five hydroelectric dams, powered entirely by water flowing from the ice sheet that covers eighty percent of its surface. Today, over sixty percent of the nation's energy is renewable, distributing the energy of its terminal landscape through five independent grids. On the other hand, Greenland's sovereignty coincides with global concerns for its ice. The Greenland ice sheet is expected to contribute upwards of one third of all water responsible for rising sea levels in the next century—a planetary inheritance of hydrocarbons accumulating amidst colonialism and industrialism's political ecology. Greenland's transition toward indigenous sovereignty is thus marked by a doubled sense of hydrological flow in late modernity, conditioning in turn its relationship to both energy and climate amidst the same flow of melting ice. This paper builds on recent research in the environmental and energy humanities to develop a concept of "hydrological transition" informed by both the geophysical and the socio-historical, and offers the hydrological as a core concept of the post-oil condition.

**Jeff Diamanti** is Assistant Professor of Environmental Humanities (Cultural Analysis & Philosophy) at the University of Amsterdam. In 2016-17 he was the Media@McGill Postdoctoral Fellow in Media and the Environment where he co-convened the international colloquium on Climate Realism, the results of which appear in a book collection on Routledge and a double issue of Resilience. His first book, *Climate and Capital in the Age of Petroleum: Locating Terminal Landscapes* (Bloomsbury, forthcoming) tracks the political and media ecology of fossil fuels across the extractive and logistical spaces that connect remote territories like Greenland to the economies of North America and Western Europe.

**C5f Room 6 | SOUND ARTWORK Possible vehicles for time travel**

Ally Bisshop, University of New South Wales

This session will consist of a reading from the book, *Possible Vehicles for Time Travel*, accompanied by a live 'natural radio' stream recorded on the VLF band, which may include sferics, tweeks, whistlers and other energetic signatures from the Earth's magnetosphere and ionosphere. *Possible Vehicles for Time Travel* is a meditation on the plasticity and multiplicity of time, duration, temporality. It attempts to trouble linear constructs of time, in order to open a relation to time's differentiation. It includes provocations for experimenting with the experience of time's passing, and for feeling into the durations of other material bodies and forms.

**Ally Bisshop** is an Australian artist, writer and researcher living in Berlin. She draws on methods and concepts across multiple disciplines to think critically and creatively about the material, affective, ethical and relational thresholds between human and nonhuman. In 2018 Ally completed her practice-based doctorate in visual arts (UNSW National Institute for Experimental Arts) with an exploration of more-than-human techniques in processual artistic praxis. Previously, she studied art at UdK Berlin through Olafur Eliasson's Institut für Räumexperimente, and microbiology (B.Sc. Hons 1) at UQ. Since 2017 she has been an associate researcher in Tomás Saraceno's transdisciplinary interspecies Arachnophilia project.

**C:5g Room 7 | Book Talk: Hugh Raffles in conversation with David Farrier**

Chair: David Farrier, University of Edinburgh

Support:

**Meet the Author: Hugh Raffles in conversation with David Farrier**

Hugh Raffles, New School

David Farrier, University of Edinburgh

Hugh Raffles will discuss his new book *The Book of Unconformities: Speculations on Lost Time* with David Farrier, and respond to questions from attendees.

**Session 6 (Block A) (22.00-23.30 GMT)**

**Local Time**

Dr. Becky Vartabedian, Department of Philosophy, Regis University

This session invites participants to engage their localities by considering first traditional political boundaries; second, these political boundaries in light of traditional indigenous

land use; and third, both of these in relation to the most recent major geological shift in the land on which our places are located. We will discuss together the prospects for thinking of ourselves as permanent guests in relation to our localities, and strategize ways of living well in light of this recognition. Our main aim would be an opportunity to be in community and conversation with others, to engage in some low-stakes art-making and sharing (mapping activities are part of the engagements I describe above), and connect in times of deep disconnection with others, with our places, and with other places!

**Becky Vartabedian** is Associate Professor of Philosophy at Regis University in Denver, Colorado USA. Her present research concerns the prospects for hospitality in new materialism.

**A:6b Banneker Room | Media in/of the obsolescent now**

Chair:

Support:

**A Critical Use of Time and Space**

Marina Costin Fuser, Research Fellow in Technology Intelligence at PUC - SP (Brazil)

The relation between nomadism, time and space is marked by a series of heterotopias and heterochronies which deterritorialise the striates that configure conventional cinematic time and space. I analyse Trinh T. Minh-ha's films *Night Passage* (2004) and *The Fourth Dimension* (2001), which are films that deterritorialise cinematic conventions through breakages in the time-space configuration, by the use of "heterotopias" (Foucault 1984, p. 3), "intervals" (Trinh 1999, p. xii) and "time images" (Deleuze 2013, p. 41). The lack of precision in the film's time-space configuration can potentially make spectators feel lost. I investigate Trinh's strategies of deterritorialisation, which produce temporary abstractions of space and time in these two films. That is, how can a nomadic approach to film puzzle viewers' expectations, so as to open interpretation to endless becomings?

**Marina Costin Fuster** has a Ph.D in Gender and Film Studies from University of Sussex, Sandwich-Doctorate at UC Berkeley, MA and undergrad in Social Sciences at PUC. She now works as a Research Fellow in Technology Intelligence at PUC - SP, Brazil. She has published two books and several articles on gender and semiotics.

**Media in the Balance: Contemporaneity and the Materiality of Fictional Time**

Karl Manis, University of Toronto

What are media today? When are media now? Scholars are quick to point out that the contemporary is a slippery thing: “now” has an incessant habit of slipping into “then” (e.g., Giorgio Agamben, Theodore Martin). Similarly, media theorists like Lisa Gitelman and Wendy Chun describe the slippery newness of new media, which are in the process of becoming obsolete before they even arrive. In this paper, I argue that media (new and old) materialize the abstract notion of the contemporary: particularly in fictional narratives, media embody the convoluted time of the present. Drawing on recent fiction (Richard McGuire’s graphic novel *Here*, the Netflix series *Maniac*, and Madeleine Thien’s novel *Do Not Say We Have Nothing*), I will make two interrelated points about the temporal materiality of media. First, I’ll discuss how narratively embedded media index particular historical moments and periods, generating an aesthetic of present-ness that slips continually in other temporal directions. Second, I’ll suggest that the fashions and functions of media, when placed in fictional habitats, configure the contemporary as a multi-temporal entanglement. Ultimately, I argue that stories told with and about media present the nowness of the present as an ever-changing experience of holding multiple temporalities in a precarious balance.

**Karl Manis** is a PhD Candidate in the Department of English at the University of Toronto. His dissertation, titled “Embedded Media,” examines instances where a narrative in one medium invokes, references, or incorporates other media. Although he focuses on contemporary novels, films, and videogames, his research and teaching frequently lead him back into the 20th century histories of media, realism, and literature.

### **Are We There Yet? Measuring the Distance from Now to the Future**

Olga Ast, The Archetime project

Over the last several centuries, we have completely broken with the traditional cyclical understanding of time, and have crafted artificial lines between a dark past and a bright future; conversely, between a Golden Age and an Apocalypse. This shift is symbolic not only of our changing perception of the nature of time, but of our attitude toward the natural world. In our artificial environments, we look at nature as a resource – a starting point with the end-goal of an artificial product. Technology - especially digitization - has allowed us to produce and transfer goods and information easily and predictably. It has empowered us with the ability to imagine, accelerate and swiftly manufacture our anticipated future, shortening our perception of the imaginary distance to it. My presentation seeks to address our perception of this distance to the future through an analysis of visual metaphors of time and their connection to present-day advertising practices that uncover, stimulate, forecast and enforce our desires; influence everyday

models of life; raise our anxiety; attract and push us to move ever faster toward our short-term expectations; and finally, hide their own impact on our environment.

**Olga Ast**, an interdisciplinary artist, curator and independent scholar, has exhibited and lectured internationally presenting her work at various art shows and multidisciplinary conferences, including at Rutgers, New York, Gottingen, Moscow and other universities; the Massachusetts Institute of Technology; the National Academy of Sciences; the Museum of Natural Sciences of Turin; the Bridges Math Art exhibit and the International Conferences on Time Perspective. Ast has published several books, including 'Infinite Instances: Studies and Images of Time', a collection of papers and artworks by contributors to the ArcheTime project, which Ast has been curating since 2009.

**From Microseconds to Millennia: AirPods, Planned Obsolescence and Technofossils**  
Sy Taffel, Massey University

Apple's AirPods exemplify cutting-edge 21st-century digital technology. Introduced in 2016, AirPods have helped forge a multibillion-dollar market for true wireless hearable devices. AirPods transmit or receive a million bits of information per second, allowing digital audio to be seamlessly streamed from connected mobile devices. This inhuman speed is typical of the microtemporal durations at which contemporary digital artefacts function. However, when we consider the political ecology of AirPods, a rather different story emerges; these are complex and costly artefacts composed of materials that in many cases took millions of years to coalesce, yet they are designed to function for just a few years before becoming long-lived toxic trash, what geologists refer to as technofossils. This temporal discrepancy is indicative of the political ecology of 21st-century digital capitalism. Digital technologies are vaunted as commodities that will improve productivity and ultimately make us happy. Conversely, the material impacts of this consumption have a range of long-lived deleterious impacts for life on earth. These impacts are not equally distributed; child labour, water shortages faced by indigenous communities resulting from corporate mining activities, and communities being poisoned by electronic waste are not experienced by those who can afford luxury items such as AirPods.

**Sy Taffel** is a Senior Lecturer in Media Studies and co-director of the Political Ecology Research Centre at Massey University, Aotearoa-New Zealand. He is the author of *Digital Media Ecologies* (Bloomsbury 2019). His research focuses on digital technology and the environment, digital media and society, automation, media and materiality, and digital labour.

**A:6c Momo Room | More-than-human temporalities: Sensed, Embodied**

Chair:

Support:

**Temporalities Materialized, Tested, Inflected: Which/Whose Temporalities Count in Food Related Health Risk Management Practices?**

Myriam Durocher, Carleton University & University of Sydney

Which/whose temporalities are considered when one is tested for potential health related risks with relation to food? Which/whose temporalities are neglected? Using Sharma's (2013, 2014) critical time approach, I address the limited range of temporalities that take place within health risk management practices, so as to highlight how they contribute to unequal power relationships in-between (human and more-than-human) bodies. I discuss how temporalities are materialized, tested, expected and excluded in practices such as blood and DNA testing as well as in works emerging in epigenetics (e.g. Mansfield et Guthman (2015)). I spend a bit more time with epigenetics works as I contend that they allow for a broadening of the scope of the relationships and temporalities that can be taken into account while evaluating one's health in relation to food. I highlight how these works suggest a shift away from an understanding of one's health as solely determined by anthropocentric, human driven actions obeying to the sole logic of anticipation (Adams et al., 2009). I conclude by building on Schrader's (2015) approach to care to suggest that care should encompass avoiding foreseeing bodies as fixed and closed entities whose health would be determined by what is ingested, but rather as intimately linked to others' (human and more-than-human) becoming.

**Myriam Durocher** is a postdoctoral fellow at Carleton University (Ottawa, Canada) and at the University of Sydney (Sydney, Australia). Her research interests revolve around critically addressing the power relationships and issues that take form at the intersection of (healthy) food, bodies, health and environments. Her PhD research thesis, anchored in a cultural studies perspective, questioned how "healthy" food is produced within the contemporary Quebec food culture and how it contributes to the (re)production of uneven and unequal relationships in-between human and more-than-human bodies. In her current postdoctoral research, Myriam explores the temporalities and materialities involved in practices applied to bodies and food materials (such as blood and DNA testing, or pesticides analysis) that aim to prevent health-related risks associated with food ingestion.

**Sounds Like Time: Affect, Materiality, and Bodies in Motion**

Franziska Strack, Johns Hopkins University

Live panel presentation, Prerecorded presentation, Live discussion or Q&A

This essay explores the relationship between sound, bodies, and nonlinear temporalities. To describe such temporalities, chaos theory uses the “butterfly effect,” which exemplifies relays between minor motions (the butterfly wings) and large-scale events (a tornado). My presentation interprets the butterfly effect as a sonic phenomenon, tracing the tornado’s thunder back to the butterfly’s quiet flapping noise. It argues that variations in sound can make audible the affective and material dimensions of nonlinear temporal pathways. To make this argument, the essay brings sound studies literature and Deleuzian philosophy into conversation with the film “Run Lola Run” whose temporary endings result from ostensibly minor changes that the main character Lola makes on three runs through Berlin. The film soundtrack’s techno rhythm echoes the temporal currents of the story or the way that Lola’s decisions are entangled with her surroundings. It thus suggests that temporality is embodied and experienced through worldly materials, and that sound makes time scales and material environments affectively felt by translating them into sensations on the nonconscious register of the spectators’ bodies. Moreover, it indicates that temporal repetitions can bring about new futures. Altogether, the essay treats film as a sonic medium that materializes time flows and changing realities.

**Franziska Strack** is a doctoral candidate in Political Science at Johns Hopkins University. She holds an MA in Political Science from Freie Universität Berlin and a BA in Cultural Studies and Social Science from Humboldt Universität Berlin. Her current research examines the role of sound in conceptions of the political, studying both the sonic-musical tropes in various traditions in political philosophy and the socio-political dimensions of sound studies literature. Her wider research interests include Deleuzian philosophy, affect theory, environmental political thought, philosophies of time, and feminist and queer theory.

### **Beyond the Thrill of the Chase: Birdwatching as Embodied Temporal Experiences**

Ruth Barcan, The University of Sydney

Jay Johnston, University of Sydney

This paper draws on the authors’ experiences of birdwatching in the Capertee Valley of NSW, Australia as the starting point for a critical phenomenological analysis of some temporalities of non-competitive birdwatching. The global rise of interest in birdwatching has sparked a small but growing literature. Much of this has focused on the economic value of avitourism (e.g. Steven et al. 2014); its potential ecological value or danger in terms of human impact on habitat or bird behaviour; and its empirical relationship to hunting or to conservation (Cooper et al. 2015). The sociocultural

literature on birdwatching as an embodied phenomenon is by contrast relatively sparse and has tended to concentrate –usefully – on the intermeshing of power-knowledge regimes with particular sensoria, especially ocularcentric ones (Schaffner 2011). In such analyses, the lists, field guides and binoculars quintessentially associated with birdwatching are understood as technologies of capture enmeshed in colonial extractive logics that rely on and reproduce particular sensory hierarchies. In such analyses, birdwatching appears as a form of “symbolic hunting” (Sheard 1999). Some recent analyses, however, stress the need to understand birdwatching in more particularised contexts, noting that as a social world, it functions not as an institution so much as an assemblage – a “dispersed, loosely institutionalized, complexly networked, social activit[y]” that lies at least partly outside of larger regulatory apparatuses (Prior and Schaffner 2011: 51). This paper builds on and extends this emerging line of inquiry by introducing the question of temporality into the power-knowledge-perception analytical matrix. It examines the temporal and sensory dimensions of many characteristic moments in birding, using autoethnographic observations how about perception, attunement, the senses, and different ways of moving through space relate to temporal processes/categories like waiting, patience, stalling, and anticipation. It notes that experiences of waiting, silence, stillness, listening and “failure” are as common in birding as those of stalking, chasing, seeing and capturing. Moreover, these moment-by-moment temporal/sensory experiences need to be situated within longer temporalities, including embodied ones, such as the slow cultivation of new perceptual capacities, as well as those implicated in the much-maligned technologies of “capture,” in which the thrill of a “new tick” or a “lifer” signals birding as a potentially life-long endeavour. The paper also acts as an illustration of the slow multisensory methodologies – such as nature journaling (Warkentin 2011) and embodied and walking methodologies (Snepvangers & Davis 2018) – required to richly apprehend these assembled practices.

**Ruth Barcan** works in the Department of Gender and Cultural Studies at the University of Sydney and is affiliated with the Sydney Environment Institute. Her research areas include embodiment, sustainability and academic labour.

**Jay Johnston** is a bad birdwatcher and Associate Professor in the Department of Studies in Religion, University of Sydney. An interdisciplinary scholar, her academic work is at the interface of philosophy, arts and religion and is centrally concerned with subtle bodies, the cultivation of perception and ethic-aesthetic relations.

### **Embodied Encounters with Material Time: Scuba Diving as Method in the Feminist Environmental Humanities**

Jianni Tien, University of Technology Sydney

Situated in the wider context of the environmental humanities and drawing on the rich tradition of feminist new materialism, this paper argues that scuba diving in the watery subterranean space of Cenotes is a fruitful method of enquiry that can attend to the complexities of ecological urgency. Cenotes are naturally-occurring freshwater sinkholes situated along the Yucatan Peninsula of Mexico. They are created when limestone rock is eroded and collapses, exposing subterranean water. Scuba diving in the cenotes is a bodily, immersive, uncanny act of engagement with mind-bending geologic timescales. Diving around stalactites and stalagmites formed thousands of years ago is an encounter with a material representation of unthinkable time. Diving in the cenotes is therefore an embodied encounter with deep time, and this paper argues that such encounters spur ontological transformations that redress the problematic framing of the Anthropocene, opening up our relationalities with the environment.

**Jianni Tien** is a PhD candidate in the School of Communication at the University of Technology Sydney, a UTS Research Excellence Scholarship recipient, and a former Visiting Research Fellow in the Department of Literary Arts at Brown University. Her research lies at the intersection of Digital Media, Cultural Studies and the Environmental Humanities. Jianni's current research investigates the affective power of bodily immersion in Subterranean space, and how that power can be harnessed to formulate critically engaged responses to the Anthropocene.

**A6d Saar Room | Building temporalities in the centre of the disaster**

Chair:

Support:

**“This Fluid Situation”: Sequencing the Cybernetic Highway at Ciudad Guayana, Venezuela, 1961–1966**

Peter Ekman, Lecturer in Human Geography, University of California, Berkeley

Between 1961 and 1966, in consultation with a regional authority modeled on the TVA, a group of planners and social scientists from the Harvard–MIT Joint Center for Urban Studies built an industrial city from scratch, along with a steel mill and hydroelectric dam, on a putative “resource frontier” in oil-rich Venezuela. Rather than settle for an old-style “model town” — a relatively static object, defined geometrically and publicized by photograph or view — the Joint Center sought to document the planning process itself, necessarily elapsing over time, and abstract its lessons for application to American cities and their futures. They also fundamentally reconceived urban fabric in terms of mobility, rhythm, and flow: the centerpiece of the new Ciudad Guayana, and the focus of this paper, was a high-speed road, the Avenida Guayana, a piece of region-

making infrastructure and an experiment in choreographing the “visual sequence” of automobility as an information-rich chain of approaches and arrivals. (Among the collaborators were MIT’s Kevin Lynch and Donald Appleyard, who in 1964 would devise a notation system to chart the sensory dimensions of travel on a proposed ring road around Boston.) On perpetual display, the Avenida Guayana did much to introduce cybernetic understandings of environmental signal and response into urban infrastructural planning. Moreover, along transnational circuits of the Center’s own making, it offered Cold War urbanists, in Venezuela and elsewhere, a way to link the felt temporality of everyday life — “arrival” at a sequence of destinations — with the presumed temporality of stepwise state “modernization” itself.

**Peter Ekman** is Lecturer in Human Geography at the University of California, Berkeley. His work has appeared in *History of the Human Sciences*, *Planning Perspectives*, the *Journal of Planning History*, and the *Journal of Urban History*. His first book manuscript, *Timing the Future Metropolis: Planning, Knowledge, and Disavowal in America's Postwar Urbanism*, inquires into the political temporality of what it is “to plan,” writing an interdisciplinary history of urban knowledge and expertise through the microcosm of one U.S.-based center propagating “organized research” on urban form and life during the early Cold War. His interests include landscape studies broadly conceived, buildings and infrastructures, social and geographic thought, materiality and material culture, ruins and ruination, futurity and memory, and the history of historical writing.

### **Living in and out of time: Youth-led activism in Aotearoa New Zealand**

Karen Nairn, University of Otago College of Education

Joanna Kidman, Victoria University of Wellington

Addressing past and present injustices in order to create more just futures is the central premise of most social movements. How activists conceptualise and relate to time affects how they articulate their vision, the actions they take, and how they imagine intergenerational justice. Two social movements for change are emblematic of different relationships with time: the struggle to resolve and repair past injustices against indigenous peoples and the struggle to avert environmental disaster, which haunts the future of the planet. We report ethnographic research (interviews and participant observation) with young activists in these two social movements in New Zealand: Protect Ihumātao seeks to protect indigenous land from a housing development, and Generation Zero are lobbying for a zero-carbon future. Protect Ihumātao participants spoke of time as though past, present and future were intertwined and attributed their responsibility to protect the land to past and future generations. Generation Zero participants spoke of time as a linear trajectory to a climate-altered future, often laying

blame for the current crises on previous generations and attributing the responsibility for averting the crisis to younger generations. How activists conceptualise time and generational relations therefore has consequences for the attribution of responsibility for creating social change.

**Karen Nairn** (University of Otago) is based in Dunedin, Aotearoa New Zealand. She draws on her geography and education background to engage in interdisciplinary research with young people. Her current research is about youth-led activism across diverse political agendas and the role of emotions such as hope and anger as catalysts for action.

**Joanna Kidman** (Victoria University of Wellington) is an indigenous Māori sociologist with tribal affiliations to Ngāti Maniapoto, Ngāti Raukawa and Ngāti Toa. Her research interests are centred on the politics of indigeneity, Māori youth and decolonisation. She has worked extensively in Māori communities across Aotearoa and with indigenous communities in central Taiwan. Her current research focuses on tribal memories of colonial violence.

### **Orchestrating housing: challenges in the legal and everyday timelines of life in the city**

Jess Linz, University of Kentucky

Pratichi Chatterjee, University of Sydney

This paper examines the failure of housing law in the context of temporal pressures. We use examples from Australia and Mexico to examine how the legal status of time organizes the actions of renters, owners, and developers. We draw on qualitative research that was conducted during our respective PhD fieldwork between 2016 and 2020. Through interviews, participant observation, and archival research of housing law, we analyse how the temporal rhythms of everyday life and the materiality of space come into conflict with the demands of legal/bureaucratic time in cases of eviction from private rentals, compulsory property acquisition and low income housing redevelopment. We take note of the way that conflicting temporal rhythms and cycles cause great troubles for renters, owners, and developers alike. We conclude by reflecting on the implications of critically thinking about time as a facet of law's capacity to deliver justice in increasingly competitive housing markets.

**Jess Linz** is a PhD candidate in the Geography Department at University of Kentucky, conducting research on the affective and emotional register of gentrification and eviction in Mexico City. She is interested in how understanding this register could change how housing and property struggles are mediated in the city.

**Pratichi Chatterjee** is a postdoctoral researcher in the Sydney School of Architecture, Design and Planning. Her PhD analysed contemporary urban processes of dispossession in Sydney. She is interested in geographies of dispossession, in critical perspectives on time, property and land, and in working collectively to create just urban spaces.

### **An Invasion From The Future: Condos & Dystopia**

Scott Schwartz, City University of New York

The words 'time' and 'weather' are the same in several languages; time words overlap frequently with traditional economic activity (e.g., agricultural cycles or migration patterns). This demonstrates an attachment of time to materiality that many suggest was severed with the rise of clock-time, which refigured time as abstract and alienated. Against this, I argue that clock-time is very much grounded in material conditions, reflecting the novel scales of industrial-digitization. Rather than changes in season setting society's clock, the compulsion to grow wealth configures capitalized duration. Capital is material used to grow wealth in the future. Capitalism is the transformation of materials into future wealth. As capitalism now globally dominates, are we occupied by the future? Noted lunatic Nick Land writes: "capitalism is an invasion from the future that must assemble itself from its enemy's resources." Taking this seriously suggests 'we' (entities residing in the present) are the enemies of capitalism and it plunders our resources to build itself. In this work, I examine the convergence of luxury real estate and dystopian sci-fi over the preceding decades to explore this premise, framing the glass and neon skycondos in global capitals as exemplifying the material life of capitalized time—condos replaced harvests as cultural timepieces.

I am a PhD candidate and Lecturer at the City University of New York (CUNY). My research centers on the material culture of knowledge production, specifically the intersection of quantification and vulnerability. My disciplinary affiliation is (contemporary) archaeology, but my work equally engages science & technology studies, comparative literature, human geography, and queer ecology. I have conducted fieldwork in Iceland, Italy, and New York City. I am a frequent collaborator with artists and curators around the world.

### **Session 7 (Block A) (00.00-01.30 GMT)**

#### **A:7a Mary Anning Theatre | WORKSHOP Mystery, Intimacy, and Pleasure in the Study of Time**

Nadia Chaney, The Time Zone Research Lab

The Time Zone Research Lab is a community arts collective (300 international members) that studies the nature of time and temporality. At the time of the conference we will be on week 69/100. Our main instructors are a ceramic octopus named Epok the Usher who is designed to generate quantum oscillations and tentacular transversals across sociopolitical materialities and a 100 year old sourdough starter who hears everything. Through practices of reading, carework, absurdity, listening, singing, dreaming, interrupting, transpersonal shift and rhythm(s) (and more) we investigate two major questions: 1) how can we be more intimate with time 2) how can we help to liberate time / how is time incarcerated. Our methods and findings have been delightful and extraordinary and we are thrilled to share them with a likeminded community. We would introduce the Temporal Belongings conference to some of our community arts practices and our unique style and tone of reading and thinking together. Our methods are both a- and interdisciplinary, deeply social, intentionally secretive (both secret and secretion), generous, gentle, and fun. Further information is available at [www.nadiachaney.com/timezoneresearchlab](http://www.nadiachaney.com/timezoneresearchlab).

**Nadia Chaney** is a community arts facilitator, and working artist. She holds an MA from Simon Fraser in Imaginative Education and a Certificate of Advanced Graduate Study from the European Graduate School in Expressive Arts Therapy. She has facilitated well over 2000 events since 2001. The Time Zone Research Lab is an epic personal project that is designed as her embodied response to the problematic temporalities of afterschool, adult, informal and higher education as well as the NGO industry.

### **A7b Banneker Room | Artefacts of the Deep Present**

Chair:

Support:

*Drawing together understandings of time developed from physics, Indigenous Australian storytelling, philosophy, biology, archaeology and literature, this panel examines artefacts of the present. In so doing, it explores the relation that the present has to the past and the future. These overlapping times are seen in human and nonhuman domains, and illustrate how the present is not a thin 'point of the arrow' but a deep present, entangled with the duration of diverse beings and matter.*

### **All the times of this country'': relation and paradox in Physics and Aboriginal storytelling**

Anthony Uhlmann, Writing and Society Research Centre, Western Sydney University

This paper weaves together three threads around the idea of time. Firstly, it returns to Henri Bergson and Albert Einstein's argument over the nature of time, and specifically the idea of the possibility or impossibility of simultaneity. Secondly, it considers Alexis Wright's interest in the overlapping of timeframes which she discusses as essential to her understanding of Aboriginal storytelling in 'On Writing Carpentaria', tying this in with T. G. H. Strehlow's readings of Central desert oral poetry. Thirdly, it will consider the metaphorical implications of a new theoretical model which claims that the paradoxes of quantum entanglement (spooky action at a distance) can be solved with reference to Planck's constant  $h$  (the quantum of electromagnetic action that relates a photon's energy to its frequency) just as Einstein rid space-time of the need of 'ether' through reference to the constant  $c$  (the speed of light). The threads will weave together ideas of the field, of overlapping frames, and the implications of this for the concept of 'relation'.

**Anthony Uhlmann** is Professor of English in the Writing and Society Research Centre and the School of Humanities and Communication Arts at Western Sydney University. He is the author of four monographs including, *Beckett and Poststructuralism* (Cambridge UP, 1999), *Samuel Beckett and the Philosophical Image* (Cambridge UP, 2006), *Thinking in Literature: Joyce, Woolf, Nabokov* (Continuum, 2011). His most recent monograph is *J. M. Coetzee, Truth, Meaning Literature* (Bloomsbury, 2020). He is the author of a novel, *Saint Antony in His Desert* (UWAP, 2018).

### **Do Non-Human Agents Have a Cosmo-technics?**

Jason Tuckwell, Writing and Society Research Centre, Western Sydney University

This paper will return to Bernard Stiegler's original dating of human agency as the emergence of an artificial/technical prosthesis, resulting from an 'organised inorganic matter'. On these terms, human *différance* is traced to a 'zootechnological' reconfiguration of matter, inaugurating a second artificial nature. However, in the terms that Stiegler identifies, it remains unclear whether this necessarily excludes non-human agents, who might be argued to have already carried out a more primordial organization of inorganic matter — the bacterial terraforming of the early Earth that led to the Cambrian explosion. This is not to claim a primordial use of tools, but rather an emergence of technique, rendering it as the most decisive activity of technical agents. This would be to predate the emergence of artifice in a technics of the non-human, deep into geological time. In order to outline this case, the paper will focus on two potential sources of technics' origin in non-human agents: the first follows as a consequence of positing a purposive *telos* that belongs to all living agents. This will raise a number of questions about the ways that agents have been excluded from the "self-productive" evolution of technics, including some commentary on creativity. The second concerns

the genesis of technics itself, to ask whether non-human agents might initiate their own technical genesis. This would not only include non-human agents in the category that remains almost exclusively anthropic, but to raise the more speculative proposition that a non-human technical genesis might unfold in a cosmological dimension. This will be to ask whether non-human agents might also satisfy Yuk Hui's condition that any well-formulated concept of technics "is always a cosmotechnics" (Question 19).

**Jason Tuckwell** teaches literature and theory at Western Sydney University. His research focuses on aesthetics and technology and particularly upon problems of creative and technical praxes. His recent publications include articles in *Angelaki* (2020), *Philosophy Today* (2020; 2019), and *Transcultural Studies* (2018) and a monograph, *Creation and the Function of Art: Technē, Poiesis and the Problem of Aesthetics* (Bloomsbury Studies in Continental Philosophy, 2018).

**The Atomic Present: Literary Culture's Role in Nuclear Waste Storage in Australia**  
James Gourley, Writing and Society Research Centre, Western Sydney University

Many have written evocatively on the temporality of nuclear waste and plans for its storage (van Wyck, *Signs of Danger* 2005; Joyce, *The Future of Nuclear Waste* 2020; Macfarlane, *Underland*, 2019). The challenge is, apparently, to secure nuclear waste from 'human intrusion' for millennia; that is, until the waste is no longer dangerous. A number of intriguing proposals have been made: to build a monumental structure at a storage site so as to warn potential intruders of the danger at hand, or, alternatively, to provide no sign or memorial to the waste that is buried below. There are seductive, questions to consider often asked within a specifically anthropocentric frame: for instance, how might one plan to communicate to humans 10,000 years in the future? This paper examines the atomic temporality of nuclear waste and reads it as one cipher of the current climate crisis. It surveys multiple dystopian proposals for the disposal and surveillance of nuclear waste – such as Thomas Sebeok's proposal for an 'atomic priesthood', itself a refraction of Miller's *A Canticle for Leibowitz* – and argues that these proposals are doomed to failure because of their incapacity to orient themselves to the present (viz. Joyce, they "acknowledge only an ancient past, bound to a distant future"). Instead, this paper turns to the present, where the Australian federal government is proceeding with planning for a nuclear waste facility at Napandee, near Kimba (South Australia). It considers Indigenous community storytelling, memoir and other literary texts which testify to art's entangled endurance with and alongside nonhuman actors in the region. As protest and government action both continue, this paper asks how might thinking about the role of literature and art facilitate a more utopian approach to Australia's atomic present?

**James Gourley** is a Senior Lecturer in Literary Studies at Western Sydney University where he is a member of its Writing and Society Research Centre. His research addresses 20th and 21st century literature. His recent work has been published in *ISLE: Interdisciplinary Studies in Literature and Environment*, *English Studies*, *College Literature* and *Thomas Pynchon in Context* (Cambridge UP). James is currently researching the literature produced in Australia as a consequence of its historical medical epidemics.

### **Respondent**

Kate Fagan, Writing and Society Research Centre, Western Sydney University

**Kate Fagan** is the Director of the Writing and Society Research Centre. She is a Senior Lecturer in Literary Studies at WSU and an award-winning poet and songwriter, whose most recent book *First Light* (Giramondo) was short-listed for the NSW Premier's Literary Awards and the Age Book of the Year Award. She is a former editor of *How2*, the eminent U.S.-based journal of contemporary poetry and poetics. Her album *Diamond Wheel* won the National Film and Sound Archive Award for Folk Recording and she supported Joan Baez on her 2013 tour of Australia/NZ.

### **A:7c Momo Room | Reproductive time across thresholds of life-death**

Chair:

Support:

### **Compost Time: Death, Life and Becoming in the Anthropocene**

Danika Jorgensen-Skakum, University of Alberta

In this paper I explore the concept of life-death time and what it means to think-with compost (Haraway 2016) alongside the many long, durational and quickened crises experienced at this stage in the Anthropocene. Compost illustrates that the timescape of life-death is, fundamentally, a state of always becoming (Hall 2014; Rose 2012). Consequently, I ground life-death-becoming in a land-based understanding of relational (in)finitude co-created with more-than-human kin.

**Danika (Dani) Jorgensen-Skakum** is a queer and Métis (Michif) PhD student in Political Science at the University of Alberta. She has an MA in Gender and Social Justice Studies, and spent the last two years as the research coordinator on the Just Powers research project. Dani also facilitates climate change dinner parties with Jessie Beier -- research creation encounters designed to provoke thoughtful consumption and time-oriented eating practices.

### **Emmenegog: DIY Abortion of the Ancient Digital Present**

Yvette Granata, University of Michigan

DIY instructions for self-induced herbal abortions has surged in online forums in recent years, especially in the US and countries where abortion is illegal. In this talk, I will present my critical media art project, 'Emmenegog,' which focuses on the complex history of herbal abortions, from colonialism to today. I look at the revival of DIY herbal abortions in the context of and alongside the history of indigenous women using abortifacient plants within colonialism -- about how slave women in the colonies used abortifacients as an act of rebellion so that their children would not be born slaves, how bio-prospecting colonists took the knowledge of the plants from South America and brought it back to Europe, claiming the knowledge of the plants as their own discovery. I then look at how the use of these herbal plants surfaces both a contemporary and historical issue at once – as if time has collapsed – and how herbal abortion can be framed simultaneously as an act of resistance, as ancient knowledge, as exploitation, as a colonial history and a current one, and now as a new danger to women's health around the globe, shared via digital forums.

**Yvette Granata** is Assistant Professor of Digital Media at the University of Michigan in the Department of Film, Television, and Media and the Digital Studies Institute. She works across multiple media and various forms of digital art to create immersive installations, interactive environments, video art, and hypothetical technological systems. She writes about digital culture, cyberfeminism, media theory, and socio-technical systems. She holds a Phd from SUNY Buffalo, a masters from the University of Amsterdam, and a BA from the University of Michigan.

### **Time circles, developmental origins and epigenetics in Indigenous Australia**

Jaya Keaney (Deakin University)

Megan Warin (University of Adelaide)

Emma Kowal (Deakin University)

Henrietta Byrne (University of Adelaide)

Some Indigenous Australians have embraced developmental origins of health and disease (DOHaD) and epigenetic discourses to highlight the legacies of slow violence in a settler colonial context. Despite important differences between Indigenous and scientific knowledges, Indigenous scholars are positioning DOHaD and epigenetics as a resource for improving Indigenous health. This paper argues that time plays a crucial role of brokering disparate knowledge spaces in Indigenous discourses of postgenomics, with both Indigenous cosmological frames and DOHaD/epigenetics centering a circular temporal model. Drawing on interview data with scientists who

work in Indigenous health, and broader ethnographic work, this paper explores how different circularities of space and time become entangled to co-produce narratives of historical trauma. We use biocircularity to understand the complex ways that Indigenous and epigenetic temporalities are separated *and* connected, circling each other to produce a postcolonial articulation of epigenetics as a model of collective embodiment and distributed responsibility.

**Dr. Jaya Keaney** is a Postdoctoral Research Fellow at the Alfred Deakin Institute at Deakin University in Melbourne. She is a feminist science studies scholar, whose research explores the intersections of race, reproduction, and science and technology. She is currently working on two projects: a book manuscript about race and queer kinship in assisted reproduction, tentatively titled *Refiguring Race: Racial Technology and Queer Kin*; and a post-doctoral project about epigenetics, intergenerational trauma and reproductive justice in Indigenous Australian contexts. In 2018, Jaya was a visiting scholar in the Reproductive Sociology Research Group at the University of Cambridge.

### **Matter of Time: Thermal Politics of Christian Embryo Saving**

Risa Cromer, Purdue University

The fates of hundreds of thousands of human embryos left over from in vitro fertilization procedures and frozen in fertility clinics across the United States have become the focus of thermal politics advanced by white evangelical Christians. The same year biologists established the first human embryonic stem cell line from a donated leftover embryo, a group of white evangelical Christians initiated the world's first "embryo adoption" program designed to "save" embryos from "frozen orphanages" by providing them a chance at birth. Christian embryo saving expresses a thermal politics that aligns time, temperature, and theology in advocating for the re-use of leftover embryos via transfer from cold storage into warm uteruses called "homes." Use and re-use, according to Sara Ahmed (2019), is how time comes to matter. Changing temperature through thaw and changing location through uterine transfer, are the two main actions required to "save" embryos from their interrupted divine fates, according to proponents. Supporters mobilize thermal metaphors to transform cryopreservation, fertility medicine, and secular America into risky domains and uteruses, bodies that bear them, and the hoped-for future Christian nation into warm saving spaces governed by God. In doing so, America's frozen embryo supply becomes politicized matters of time: frozen entities awaiting an anticipated "home" that Christians strive to realize.

**Risa Cromer** is an Assistant Professor of Anthropology at Purdue University whose research examines how religion, race, and law animate reproductive medicine, technologies, and politics in the United States. Her research bridges scholarship in medical anthropology, feminist science studies, and critical data studies. Her current book project, *Ex Utero: Frozen Embryo Politics in the United States*, investigates the afterlives of human embryos left over from in vitro fertilization. [www.risacromer.net](http://www.risacromer.net)

**A:7d Saar Room | Materialising patterns of complex time II**

Chair:

Support:

**Stones on Stools: Temporal Repositories**

Paul Harris, Professor of English, Loyola Marymount U

*Stones on Stools* is a series of displays of rocks on antique footstools accompanied by commentary. Stones and stools are humble, often overlooked objects; beneath our feet, they are often beneath our attention. Yet both serve as supports for human bodies, and over time, both become temporal repositories. These stone-stool assemblages represent intersections of two collections: rocks I have collected over decades, and “crickets” (antique footstools) my mother collected as an antique dealer. Each display brings together objects with unknowable histories. As Jeffrey Jerome Cohen writes: “Stone conveys into present simultaneity the lingering traces of promiscuous relationships” with “mineral seams, fossils, enfolded strata, inscriptions from rivers, from glaciers, from human hands” (Stone, 98). Similarly, stools have worn surfaces and layers of flaked paint that bear witness to decades or centuries of human use for standing, sitting, or working. Conceptually, *Stones on Stools* comprises a layering of lithic and sapien timescales. Each display’s geologic and antique provenance histories are analyzed. Psychologically, this series represents a work of mourning (my mother passed away 18 months ago). Both stones and stools embody and evoke “lost times,” in the phrase of Hugh Raffles in his recent *Book of Unconformities: Speculations on Lost Time*, in which he links mourning and geologic time.

**Paul A. Harris**, Professor of English at Loyola Marymount University, is co-editor of the literary theory journal *SubStance*, and served as President of the International Society for the Study of Time 2004 – 2013. His work under the appellation “The Petriverse of Pierre Jardin” encompasses a rock garden, blog, and open-access e-book in the experimental digital theory series *SubStance@Work*. He has designed “slow time gardens” at LMU and exhibited stone installations at the National Gallery of Denmark, Chapman University, and the Arizona State Art Museum Project Space. His recent collaborative work includes a story co-authored with David Mitchell and

Contemporary Viewing Stone Display (VSANA, 2020), a book co-authored with Richard Turner and Thomas S. Elias.

### **Perceptions of Climate and Time in the Natural Archives**

Melissa Charenko, Michigan State University

In 1892, Albert Seward won the Sedgwick prize for the best essay in geology for his treatise “Fossil Plants as Tests of Climate.” His paper combined botany with geology to “deduce the relative temperatures of various latitudes in the past from such solid data as assemblages of ferns, cycads, and conifers.” Seward’s proposal was one of several recommendations through the late-twentieth-century that suggested that scientists could use remnants of vegetation found in tree rings, sediments at the bottoms of lakes, sloth dung, or packrat middens to understand earth’s history over geologic time. This paper explores the time-making properties of the diverse natural archives used to know past climates. It argues that time and the climate manifested themselves differently depending on which material traces scientists used to study past environments. The yearly temporal resolution of tree rings led to different perceptions of irregular events such as hurricanes compared to the decadal resolution of pollen, which tracked multi-year droughts. Scientists working with these diverse proxies, I suggest, came to different conclusions about the extremes and averages found in the index of past climates. The paper shows how key concepts—climate and time—depend heavily on the ways scientists measure, encounter, and see these concepts through the material reality of vegetation remnants.

**Melissa Charenko** is an Assistant Professor in the History of Science and Environmental History at Michigan State University. Her work explores scientists’ diverse understandings of climate, which, she argues, arise from the various ways that scientists encounter, measure, and see climate. She is particularly interested in the ways that scientists use climate proxies, such as fossil pollen, tree rings, or air bubbles in ice, to understand earth’s climate over the past 12,000 years or longer, as well as the ways these proxies are used to foresee future climates.

### **Durable Forms, Enduring Pasts: Landscapes, Polychronicity, and Morphic History**

Alex Claman, Texas Tech University

Along with archaeology’s “turn toward things” has come an ongoing reckoning with time. Time is relational, variable, and pluripotent; it is tied to forms and matter (as in Aristotle’s hylomorphism). Landscape forms like crop marks exist as the result of ongoing processes of (re)inscription, transmission, and duration. Such forms (including roads and field boundaries) can all be understood as the repeated emanations of

enduring subsurface objects through surface forms. Drawing variously on archaeological and geographic theorizing on space, time, and materiality (particularly archaeogeography), I argue for the importance of form and duration in the context of landscape(s), advocating for a “morphic history.” Such an approach pays attention to the entangled forms that comprise landscapes by regarding them as things, memory objects, in their own right. Landscapes, things, forms, and the various assemblages thereof are all inherently polychronic, storing previous time(s) within themselves. Regarding landscapes as temporal loci, rooted in the present while reverberating backwards and forwards through time, expands opportunities and avenues of understanding pasts and their persistence, as well as envisioning and planting futures.”

**Alex Claman** (they/he) is an MA student at Texas Tech University studying Ancient Mediterranean archaeology, archaeological theory, geography, and reception of Mediterranean antiquity in speculative fiction. Their thesis research advances a morpho-historical approach to landscapes, paying attention to the persistence and resonance of underlying forms. Alex has published an essay, “The Avenging Mother: Essun, Clytemnestra, and Inter-generational Trauma in N.K. Jemisin’s Broken Earth Trilogy,” in *Strange Horizons*, and several other articles on archaeological, literary, and geographic topics are in preparation. They are an active member of the Sinis Archaeological Project and the Small Cycladic Islands Project

### **Heterochronologies: a platform for correlation and research in temporal graphics**

Pietro Santachiara, UCLA

Peter Polack, UCLA

Johanna Drucker, UCLA

The Semantic Web and Linked Open Data promise to interlink diverse sets of data through subscription to uniform structures and standards. This formal and operational requirement subsumes individual ontologies into a single standard, which enables interoperability at the expense of specificity. In this talk, the authors present their work on Heterochronologies, a project devised to support the correlation and comparison of diverse ontologies without obscuring their epistemic and cultural specificity. The Heterochronologies project regards temporality as an ontology expressed through various graphical and cultural representations of time, such as timelines and chronologies. In the talk, the authors will discuss the design of the Time Capsule system, a software environment that embodies the conceptual, methodological and operational foundations of the Heterochronologies project.

**Pietro Santachiara** is the Bernard and Martin Breslauer Fellow and PhD student in the department of Information Studies at UCLA. His research deals with ontology,

knowledge modelling, classification of cultural heritage artifacts, and artificial intelligence. He holds a MSc from University of Lugano (Switzerland).

**Peter Polack** is a PhD candidate in the department of Information Studies at UCLA. His work and research address how algorithmic systems are designed to inform our perception, and the role of art making in illustrating what technology makes perceptible. This focus is informed by his background in game design, data visualization, and grassroots organizing.

**Johanna Drucker** is the Breslauer Professor of Bibliographical Studies and Distinguished Professor in the Department of Information Studies at UCLA. She is internationally known for her work in the history of graphic design, typography, experimental poetry, fine art, and digital humanities. Her recent title, *Visualization and Interpretation*, was published by MIT Press in 2020.

### **Session 8 (Block B) (07.00-8.30 GMT)**

#### **B:8a Mary Anning Theatre | Creating care across temporal thresholds**

Chair:

Support:

#### **'I have now divorced myself so completely from time': Mass Observation respondents and the transition to retirement**

Valerie Wright, University of Stirling

This paper considers the responses of older adults to a 1988 Mass Observation directive about Time. It focuses on respondents' affective relationships with time particularly in the context of transitions to retirement. Emergent analysis focuses on the intersection between the experience of 'retirement time' as a social phenomenon and the material embodiment of time. Experiences of 'retirement time' ranged from articulations of freedom 'from the tyranny of the clock', a sense of regaining control over time and the unimportance of time, to those who felt the need to impose a routine and keep a tight time-bound schedule to maintain a sense of purpose and 'productivity'. Experiences of embodied time included a sense of 'slowing down' while simultaneously feeling like time was 'flying by'. Therefore this paper explores how older adults relate to social constructions of time and age in terms of dominant narratives of how time 'should be' used in retirement. We argue that this analysis of past responses to, and experiences of, time in retirement provides insight into how older adults may approach this transition in the present and future in the light of changing retirement ages and discourses on 'active' and 'productive' ageing.

**Valerie Wright** is a research fellow in sociology at the University of Stirling where she is working on the ESRC-funded project Reimagining the Future in Older Age. This project employs utopian and qualitative methodologies to explore the relationship between older age and future time.

**Melanie Lovatt** is a lecturer in sociology at the University of Stirling. She is PI on the ESRC-funded project Reimagining the Future in Older Age. Her current research interests concern the relationship between time and ageing, particularly how future time is represented and constructed in social discourses about older people.

### **Crafting time to practice self-care**

Tamsin Fisher, Keele University

*Prerecorded presentation*

This research has been designed to understand how people are crafting time to engage with self-care activities through predominantly textile crafts. I aim to develop the idea that time to care for the self and time to 'do' are very much intertwined. I recognise and emphasize the importance of creating, or in this case crafting, time to achieve this. Craft research focuses heavily on the importance of the community and much less on the individuals' experience of the activity. Furthermore, self-care is often seen as a still activity, one which involves taking time out to passively engage in an activity, away from the busyness of everyday life. However, I will begin to challenge this and argue that self-care is active and requires an initial investment of time and willingness to challenge the self, which is often not recognised. By participating in and observing a series of workshops in collaboration with Keele Students Union we have been able to identify how people learn new skills and how these skills are used for self-care. This has challenged the normative perceptions of how people achieve well-being and how activities are marketed for self-care and well-being. Self-care practices involve a process of learning and well-being is only a benefit for some individuals and not a direct or guaranteed outcome of crafting. The idea that students were creating time to care for the self by 'actively procrastinating' away from their everyday life and demands of university work, will be investigated to explain how people they the creation and investment of time for the self.

**Tamsin Fisher** is a 3rd Year PhD candidate and Keele University. I am funded through the ESRC NWSSDTP Health and Well-being pathway. My research focuses on the ways in which young people practice self-care through crafting practices, specifically textile crafts, for their well-being.

**Anticipation and Expectation at the End of Life: Materializing time in Palliative Care**

Natashe Lemos Dekker, Leiden University

Time matters at the end of life, to the extent that temporalities of dying are subject to evaluation and influence how death itself is experienced. Based on ethnographic research in nursing homes in the Netherlands, I discuss in this paper how palliative care, a paradigm of care for the dying, is infused with expectations of future needs and estimations of the nearness of death. This points to the particular importance of anticipation and expectation. I address some of the ways in which palliative care tools (e.g. care models, checklists, guidelines) materialize these dominant temporal orientations. These tools, I show, seek to capture and frame the unruly temporalities of the dying process, aiming to get a grip on the course and rhythms of decline and eventual death. As such, palliative care to a large extent builds on the conviction that being able to anticipate and to form concrete expectations will facilitate control over the end of life and “improve” care. Striving toward a good death through palliative care, then, is a temporal-material project of future-making.

**Natashe Lemos Dekker** is a postdoctoral researcher at the Institute of Cultural Anthropology and Development Sociology at Leiden University. Her research addresses questions of end-of-life care, aging and dynamics of time and future-making in Europe and Latin America. Her current project focuses on the temporalities of palliative care in the context of rapid aging in Brazil. She was awarded her PhD in anthropology by the University of Amsterdam for her research on time and value at the end of life with dementia in the Netherlands.

**“The feel of alreadyness”: cyclical relations and interpersonal responsibility**

Anna-Katharina Laboissière, Ecole Normale Supérieure and Curtin University of Technology

In *The Years of Rice and Salt*, Kim Stanley Robinson sketches out an alternative history spanning several centuries through the perspective of interconnected characters enrolled in a continuous and fraught cycle of rebirth. These interlinked lifetimes are narrated linearly, but are also marked by a recurring sense of “alreadyness” in the characters’ reencounters, a diffuse sense of having already been in a relationship of reciprocal responsibility that I take as a guide in exploring how circular temporal conceptions might reshape the practice and ethics of relating to family, friends, and any other members of potential communities. In this talk, I propose to explore not the question of cyclical versus linear time but rather some of the concrete social effects of treating time as circular and relationships as always reprising the past and containing the future. How does the idea that one’s grandparents will be one’s children, and one’s

parents one's grandchildren (Yunkaporta), affect and transform potential family relations? How could thinking about degenerative diseases such as Alzheimer's as opening the possibility of meeting long-lost relatives and friends again (Abram) remake practices of loss and grief? And is there a place in Euro-Western contexts for practicing – rather than merely thinking – circular time and kinship relations in a way that does not rely on the extractivist appropriation of Indigenous knowledge and stories?

**Anna-Katharina Laboissière** is a PhD candidate at the Department of Philosophy of the Ecole Normale Supérieure and the Centre of Culture and Technology at Curtin University. Her current research focuses on emerging transformative proposals in conservation biology as biopolitical and cosmopolitical gestures; her wider interests span the history of conservation biology and, extinction and counter-extinction, philosophical ethology, feminist and queer ecologies, and death studies. She has published and upcoming work in *Cultural Studies Review* and with Ohio University Press, and forthcoming book translations with Springer Science and Edinburgh University Press.

### **B:8b Banneker Room | Afterlives of Extraction**

Chair:

Support:

### **Entangled (after)lives: spatialtemporalities of human-plant encounters in the Congolese rainforest**

Catherine Windey, Institute of Development Policy - University of Antwerp

Yangambi, a small town about 100km west of Kisangani, DR Congo, used to be the 'quintessence' of colonial agro-scientific capitalism: a world-renowned research institute served agricultural productivity and exports. Today, in the midst of shutdown agricultural factories, decrepit colonial buildings and cash crops plantations that conservation-development projects attempt to restore, heterogeneous 'unruly' forms of human and vegetal (after)lives and relations have (re-)emerged spontaneously. This paper argues that post-agroindustrial ruins and their restoration act as material and symbolic sites of struggle between the hegemonic linear, compressed spatio-temporal frame of rational ecomodernization and the extended cyclical spatio-temporality of shifting cultivation. The low-wage, labour-intensive cultivation of short-cycle commercial food crops and export tree crops on permanent land plots owned by wealthier farmers, causes a rupture in communities' long-term reciprocal relations with both forests and kin. Simultaneously, in the same landscape, the sequence from field to fallow to forest to field and the slow growing, slowly harvested crops eaten locally,

coincides with reciprocal labour systems, allowing the reproduction of the nonhuman world such as weeds and forests and of relations with the living and non-living kin. I show that such tensions in socionatural times shape local understandings of socio-ecological change. Attending to various human-plant encounters and their spatial-temporalities, I suggest, offers new ways to think about pathways to social and environmental justice.

I recently completed my PhD at the Institute of Development Policy of the University of Antwerp where I am now a postdoctoral researcher. In 2019 I was a visiting PhD scholar at Columbia University's Anthropology Department. My broad scholarly interest lies in environmental politics, in the spatial-temporal aspects of human-nonhuman relations and in uneven landscapes' structures and histories. My current research project focuses on native and nonnative (mono)crops and multispecies entanglements amid imperialist rubble in DR Congo. I draw on anthropology, critical geography, science and technology studies and related fields. While my work engages with complexity and multiplicity rather than linear thinking, it is built on decolonial and feminist epistemologies and political ecology's concerns, and it thus makes explicit links to various structures of domination.

### **Figurations of timely extraction**

Jara Rocha, Helen Pritchard & Femke Snelting, The Underground Division  
(interdependent research collective)

This piece engages with three figurations of timely extraction: consortium, borehole and amalgam. It makes use of the contaminated and contaminating practice of figuration to plot stories that highlight some of the milestones of deadly collaboration, of optimised acceleration, and of sedimented damage. These stories might provide a way to make present the time-space complexities that emerge from the connections between extractivism, computation and semiotic-material values. Attempting to expose the rocky figures of consortium, borehole and amalgam, implies exposing also some of their interdependent articulations such as transnational alliances, gold mining and geocomputation and how they shape life/non-life temporalities. The dynamic crossings of time and matter that they are embedded in establish a dynamics of repeated damage, via latent regimes which maintain extractive forces, practices and modes. In this paper we amalgamate the clock time of turbo-computing with the megaannums at the timeline of digitally mediated rocks to present agential combinations of exclusion and occlusion that each create unique modes of discrimination and privilege. By attending to the differentiated realities that are constituted by these ongoing, irregular and unstable intersections, we try to account for the specific complex measures of time that

co-emerge with the contemporary industrial and techno-scientific continuum of extractive volumetrics.

**The Underground Division** is a collective research project on techniques, technologies and infrastructures of subsurface rendering and their imaginations/fantasies/promises. It is dug by Helen Pritchard, Jara Rocha, Femke Snelling with the help of many other others. As a follow-up on Possible Bodies' research on co-constitution of so-called bodies and 3D paradigms, the-body-of-the-earth is now attended as the framework for a study on similar sensibilities but different spacetimes. Which are the presences, latencies, absences and potentials that need to be accounted for, in relation to that deep and thick complexity? The Underground Division bugs contemporary regimes of volumetrics that are applied to extractivist, computationalist and geologic damages. The research will eventually culminate in the Trans\*Feminist Rendering Program, a hands-on situation for device making, tool problematizing and "holing in gaug".

### **Checking in with Deep Time - Inheriting materializing futures**

Christina Fredengren, Department of Archaeology and Classical Studies  
Cecilia Åsberg

This paper draws on archaeology and heritage studies in order to explore the queerly materializing temporalities at the heritage/garbage disposal place at Gärstad in Linköping, Sweden. Inspired by Bastian (2012, 2017) it deals with how to better re-tie the material and immaterial knots between past, present and future generations, and to suggest ways forward for moving towards innovative ways of checking in with our post-natural and materializing clocks in the case-study location.

Christina Fredengren bio  
Cecilia Åsberg bio

### **Slow, Continual Violence: the asbestos histories and futures of Wittenoom**

Jaxon Waterhouse, Independent researcher  
Chantelle Mitchell

We take as our focus Wittenoom, designated Australia's Chernobyl, "largest contaminated site in the southern hemisphere." Located 1,420 kilometres north east of Perth, Wittenoom has been poisoned by the asbestos mining operations that birthed the town; a long, slow violence which persists despite the mine's closure in 1977 and the town's degazetting in 2007. Transposing Lauren Berlant's 'Slow Death' to this geologic and extractive framework, we explore the slow violence unleashed through asbestos extraction upon both landscape and bodies. Asbestos extraction presents a rupture of

traditional causality -- a temporal muddying/embrace of other-than-human temporalities -- that speaks to our critical climate context. Through Wittenoom we consider real and speculative futures of contamination, crucial given extensive mismanagement of the site. We also read backwards in time, tracing exposure across bodies through the extraction and use of this hazardous material. In the abandonment of Wittenoom, we return to notions of place and the significance of place-making. This enables us to consider the disproportionate effect of asbestos mining and on Traditional Landowners; affected not only physiological but through the cultural and spiritual significance of Country being disrupted by this minerological and biological threat.

**Chantelle Mitchell** and **Jaxon Waterhouse** are researchers and writers from so-called Australia, working across academic and contemporary arts settings through their research project Ecological Gyre Theory. Together, their work has appeared in e-flux, art+Australia, On\_Culture and Unlikely Journal, with other publication outcomes currently under peer review. They have presented their work at conferences nationally and internationally, most recently through the Australian Centre for Contemporary Art for the Writing&Concepts series. They have recently shown their work at Sawtooth ARI, Launceston (deluge, Jan – Feb 2020) and are teaching their curriculum ‘Abyss Lessons’ through BUS Projects in September 2020.

### **B:8c Momo Room | Theorising Time’s Materialities**

Chair:

Support:

#### **Materialities of Times in Contemporary Critical Time Studies. A Metatheoretical Perspective**

Jürgen Portschy, University of Vienna

Structures, norms and affective arrangements of time and temporality often exist or proceed in an unrecognized, pre-conscious, habitualized way, as long as they are “in tune” with the normal functioning of everyday life. In situations of crisis and conflict, like the ones we are currently facing, ritualized structures of time move from the background into the front, so that they lose their status as a natural given element of social life. One could say that in such moments of radical suspension, we are confronted with time in its material form (Baraitser 2017)? Whether old or new materialist in perspective, recent critical time scholars have directed our attention to the multiple material aspects of social times and temporalities, pointing to the fact that they can neither be understood along a dichotomous-cartesian frame, nor reduced to aspects of language and discourse. But what then does it mean to approach the multiplicity of social times via a material/materialist lens and what do they add to a “cultural politics

of time” (Sharma 2014)? This talk will try to give (some tentative) answers by exploring these questions through a close reading of recent feminist, queer, neo-marxist and post-colonial approaches, which - explicitly focussing on time, power and agency - move different material aspects and dimensions of social time and temporality centre stage. What are the commonalities and differences between these various conceptions of materialities of times? What implications follow from such reflections for central issues of social and political theory, like agency, identity, relationality?

**Jürgen Portschy** studied political science and philosophy at the university of Vienna. In 2012, he began teaching and working at the political science department and as a member of the interdisciplinary research platform „Life-Science-Governance“ (LSG) (under the lead of Prof. Herbert Gottweis), focusing on the theoretical and empirical study of new forms of biopolitical governance emerging in the fields of the life sciences. Currently he is finishing his PhD on “Political Temporalities“ as a research fellow of the Austrian Academy of Science (ÖAW), exploring changing relations of time, power and the state. Since 2015 he is also a member of the “Critical State and Governance“ research group (lead by Prof. Birgit Sauer) at the department of political science in Vienna, Austria.

### **The Repressive Hypothesis of Acceleration: “Modernity” qua “Tradition”**

Hizky Shoham, Bar Ilan University

This theoretical paper proposes interpreting the concept of tradition as a temporal meaning-maker, which connects the present of groups, memories, social practices, institutions, and so forth to their past and future. The old dichotomy of static “tradition” vs. dynamic “modernity” presented a triumphal and overly stereotypical narrative of acceleration and detraditionalization. However, paradoxically, since the Industrial Age the term “tradition” also became a yardstick for the durability of modern nations, businesses, organizations, institutions, families, and so forth, who perceiving the world as rapidly changing and searched after continuity. Tradition was therefore recognized as part of the present. To explain the paradox, I turn to theoreticians who emphasized “modernity” as temporalization such as Blumenberg, Koselleck, and Latour. Interpreting tradition as the “non-modern” necessitated marking temporal boundaries between the perceived static and dynamic. However, and similarly to Foucault’s “repressive hypothesis” argument, the persistent talk about the dwindling tradition as the other side of “acceleration,” combined with the constant movement of the temporal boundary between “modernity” and “tradition,” temporalized tradition itself as well. Modern societies thus use tradition as a temporal meaning-maker more than many so-called “traditional” societies; this explains the rise of the public discourse about tradition, coupled with the discourse about modernity-as-acceleration.

**Hizky Shoham** is an associate professor in the Graduate Program for Hermeneutics and Cultural Studies, and co-director of the Center for Cultural Sociology, Bar Ilan University, Israel; and a research fellow in the Kogod Institute for Advanced Jewish Studies at the Shalom Hartman institute in Jerusalem. His works consist of anthropological history and cultural sociology of Zionism, the Yishuv, and Israel; and cultural theory. His publications include *Carnival in Tel Aviv: Purim and the Celebration of Urban Zionism* (Academic Studies Press, 2014); and *Israel Celebrates: Festivals and Civic Culture in Israel* (Brill, 2017).

### **Materialities of Time and Transitions in Settlement Growth**

Roland Fletcher, University of Sydney

The materialities of time have been embedded in the deep structure of our settlements over the past fifteen thousand years in three punctuated transitions. We familiarly know these great accelerations in the rate of settlement growth and the pace of cultural change, as the formation of sedentism (from 10,000 BP), the development of agrarian urbanism (from circa 3000 BCE) and the development of industrial urbanism (from the 19th century CE). Each was preceded by changes in the material assemblages of their societies which were the antecedents of the great changes in time management which were essential for the next settlement size transition to occur. An example is clocks which were developed to manage ritual time in European churches in the 15th century CE and are the essential time manager of industrial urban society. The key issue is that we create new, material time managers in a rudimentary form long before the development of the kind of society which will, in due course, utilise and depend upon the descendant of that time manager. We can expect that we are already creating new time manager, which are currently in a rudimentary form, for societies which do not as yet exist.

**Roland Fletcher** is Professor of Theoretical and World Archaeology at the University of Sydney where he has worked since 1976. In 1995 he published *The Limits of Settlement Growth* with Cambridge University Press. From the Interaction-Communication model which he outlined in that book he developed an interdisciplinary research program on the giant, low-density city of Angkor in Cambodia, in collaboration with colleagues in Cambodia, France and the USA and staff in the University of Sydney. He has been a Fellow of Durham University's Institute of Advanced Study and an annual residential fellow at the Danish national Urban Networks Centre.

### **Timing Concepts: Embodied Time(s) and Concept Analysis**

Mirko Palestrino, Queen Mary, University of London

Research on time and temporality is increasingly popular among social scientists. While recent contributions have productively explored the conceptual parameters of these ideas and discussed their socio-political consequences, the implications of re-thinking time in conceptual inquiry remain overlooked. Put differently, whilst extant accounts engage time as a concept, the time of concepts is left unattended. To fill-in this gap, this paper looks closely at the understanding of time that concepts embed and discusses its implications. Building on Reinhart Koselleck's Conceptual History – arguably the most time-focused approach to concept analysis – I offer an innovative method for the analysis of concepts that foregrounds time and its materiality. Firstly, I problematise Koselleck's distinction between 'natural' and 'historical' time as well as his focus on language. To tackle both issues, I turn to Andrew Hom's 'timing theory' and queer-theoretical accounts of time as embodied. Secondly, I propose complementing Koselleck's language-centred method with its material-focused parallel. In particular, I suggest identifying, tracing, and analysing concepts as embodied in matter while simultaneously attending to their (material) temporal structure – i.e. the understanding of time they hint at. Lastly, I showcase this method empirically on the under-theorised concept of 'military victory' through the analysis of Greek trophies.

**Mirko Palestrino** is a PhD Candidate and Graduate Teaching Associate at the School of Politics and International Relations, Queen Mary, University of London. His research investigates the concept of military victory from a Critical War Studies perspective, specifically through the lenses of time theory, and de-colonial and post-colonial approaches. Prior to joining Queen Mary, Mirko completed an MSc in International Relations Research at the London School of Economics. He also holds a BA in International Studies and an MA in International Politics and Regional Dynamics from the University of Milan.

### **B:8d Saar Room | Telling time in more-than-human worlds**

Chair:

Support:

### **Planetary Synchronization: Reconciling Multiple Temporalities in Early Earth System Science 1975-1986**

Erik Isberg, KTH Royal Institute of Technology

In 1986, NASA's Earth System Sciences Committee released its first major report and stated, on the first page, that its goal was to "obtain a scientific understanding of the entire Earth System [...] by describing how its component parts and their interactions have evolved, how they function and how they may be expected to evolve on all

timescales". In this paper, I will focus on the last part of this statement: the timescales. Where did they come from? And how could they be aligned in a way that enabled a coherent Earth System? The 1986 report was the result of a longer work of translating material times –ice cores, deep sea cores, atmospheric chemical composition, to name a few – into a singular system. My aim with this paper is to explore this process of synchronization and show how the temporal work of Earth System scientists was part of a larger process of temporalizing the planetary environment itself. Despite the ambition to encompass "all timescales", Earth System Science enabled a particular temporal order, which gave primacy to geophysical rather than ecological timescales, which in turn had implications for the politics and epistemologies of planetary-scale environmental knowledge.

**Erik Isberg** is a Doctoral Student in the Division of History of Science, Technology and Environment at KTH Royal Institute of Technology, Stockholm, Sweden. In 2018, he received a M.A in the History of Ideas and Sciences from Lund University and was a visiting student at Center for Science, Technology, Medicine and Society at UC Berkeley in 2016-2017. His research interests include the history of paleoclimatology, the history of planetary-scale environmental knowledge and the making of Anthropocene temporalities.

**Elephant Time: Multi-Temporality as Attunement With More-than-human Others**

Khatijah (Kat) Rahmat, The School of Geography and The Environment, University of Oxford

Time is a politically malleable device and multi-temporality can be introduced to uncover new ways of reanimating epistemologically confined subjects. The paper forwards the concept of poly-temporal animal temporality and its conceptual opportunities to expand understandings of animal agency, with a focus on Asian elephants. Viewing elephants as multi-chronometric beings, performing multi-temporal relationships with other-than-elephants, unveils a greater diversity of agential expression relational to an 'elephant time', viewed through three epistemic frames: The elephant's individual experiences, its participation in trans-species histories and exposure to changing landscapes. It will be argued that through a chronobiopolitical lens (the temporal in Foucauldian biopolitics), the study of 'elephant time' can help reveal how expressions of agency have been suppressed by overly linear narratives and consequently dulled attunements to recognise elephant agency. Drawn from multi-disciplinary literatures across the humanities and elephant-related sciences, the paper explores ways 'elephant time' may serve as a more-than-human analytic that expands interpretations of nonhuman agency beyond the human and factors trans-species ecological knowledges and subjectivities embedded with a temporally fluid landscape.

In this way, thinking of animal's temporalities and critically applying 'elephant time' as an epistemic frame may help rethink concepts of 'wildness', 'tradition' and even 'nature' in human-elephant entanglements.

**Khatijah (Kat) Rahmat** is a doctoral candidate at the The School of Geography and Environment, University of Oxford. Presently, her research focuses on the role of critical temporality to expand notions of more-than-human agency and understand trans-species attunements, specifically between humans and Asian elephants in Southeast Asia. In 2016, she came across a foraging wild elephant on a dark morning and was struck by its sentience and multi-millennial corporeality.

Kat is also a writer and artist, with an MFA from The Ruskin School of Art, University of Oxford. She has a degree in Philosophy and Politics from Edinburgh University.

### **The negative substances of coral time**

Cameron Allan McKean, Deakin University

Once folded into dreams of endless oceanic abundance, coral reefs now tell a different story about the passage of time in Earth's oceans. By extracting the skeletal matter of living, dead and fossil corals observers can "read" an individual's responses to changing conditions. Anticipatory regimes, concerned with predicting planetary-scale climatic changes, use these "coral chronometers" to thicken the imagined shape of saltwater environments in 2100 and beyond. It is a "chronometry" only possible because certain corals—scleractinians who build stony skeletons—record changes through their layered carbonate structures. To encounter the substances of coral time, I visited the coral core archive at the Australian Institute of Marine Science where I witnessed the practices and technologies that make ossified skeletons legible as "chronometers". But during extended underwater fieldwork with marine researchers on inshore reefs near the Australian port of Townsville a different kind of temporality emerged. Among those who I worked with underwater, specific articulations of coral's absence, its negativity, became a heuristic for assembling future saltwater timelines. Thinking this negativity is a means of critically evaluating the materiality of coral time and a way of accounting for the practices and ideas behind the "voids" structuring coral chronometry.

**Cameron Allan McKean** is a PhD candidate in anthropology at Deakin University in Melbourne, Australia. Through underwater fieldwork with divers on degraded reefs in the Pacific Ocean, his research addresses how corals are used to understand ecological loss. Before beginning his doctoral studies, Cameron spent a decade in Tokyo working as a journalist and editor, contributing to *The Japan Times*, *The Guardian*,

ArtAsiaPacific and other publications. He is a PADI Divemaster, and a member of Deakin University's Culture, Environment & Science Research Stream.

**Towards a more-than-human commons: Shared temporalities in a more-than-human world**

Rupert Griffiths, Lancaster University

As our planet makes a turbulent collective transition from the Holocene to the Anthropocene, it becomes increasingly clear that there is a mismatch between the social and economic cycles associated with humanity and those of environmental, evolutionary, and geological change. However, the standardised measures of time, such as Coordinated Universal Time, which we use to coordinate everything from daily life to transport, energy production, and global trade, build anthropocentrism into our world view at many levels. How then might we introduce into daily life ways of thinking time from a more-than-human perspective that can decentre the human? This paper considers this question through a work of speculative design developed by the author, conceived as a trisection of fieldwork, artwork, and timepiece. Through this work, the paper considers the experience of time at various temporal scales to articulate a temporal commons among humans, non-humans, celestial mechanics, and technology.

**Rupert Griffiths** is Research Associate at Lancaster University, UK in the Cities and Urban design research lab, ImaginationLancaster and a visiting research fellow at Goldsmiths, University of London at the Centre for Urban and Community Research (CUCR), Department of Sociology. His background is in Social and Cultural Geography (PhD), Architecture and Urbanism (MA), and Microelectronic Systems Engineering, and he has worked as an artist and designer for many years. Rupert's work considers the cultural imaginaries of urban nature, waste, and wastelands and asks how art and design practices can be used to develop more-than-human descriptions of the urban environment.

**Session 9 (Block B) (10.00-11.30 GMT)**

**B:9a Mary Anning Theatre | Lightning Talk Session (II)**

Chair:

Support:

**Haunted Homes: Ghostly Co-embodiments and Trans Inhabitation**

Chiara Pellegrini, Newcastle University

The temporality of the 'haunted home' is often employed by contemporary trans writers. On the one hand, it expresses a desire for stability (a home) 'in' a body and 'in' an intelligible gender category. On the other, it shows the difficulty of fitting neatly into the spaces of this home, leading the trans subject to materialise as ghost. The authors I examine find in metaphorical haunted homes either an affect to be resolved or an empowering position from which they can partly resist chrononormative forms. While they define themselves as haunted by their own past and future embodiments, they are simultaneously haunting the normatively defined spaces of 'man' and 'woman'.

**Chiara Pellegrini** is a Ph.D. candidate in English Literature at Newcastle University. Her project focuses on contemporary novels and autobiographies with gender-variant first-person narrators. Her background is in queer theory, trans studies, narrative studies and continental philosophy. She has recently published two articles: 'Posttranssexual Temporalities: Negotiating Canonical Memoir Narratives in Kate Bornstein's *Gender Outlaw* and Juliet Jacques' *Trans*' (*a/b: Auto/Biography Studies*, 2019) and 'Adaptation as Queer Touching: Transgressing the Boundaries of Bodies and Texts in *The Safety of Objects*' (*Queer/Adaptation*, ed. by Pamela Demory, Palgrave 2019). Her interview with author Juliet Jacques has been published in *Transgender Studies Quarterly* (2020).

### **The Tyranny of Clocks in the Films of Jiří Barta**

Dr Adam Whybray, University of Suffolk

Czech stop-motion animator Jiří Barta has shown the reductive and degrading socio-cultural, psychological and metaphysical tendencies of clock time across his career. This short talk will briefly contextualise, explain and decode the allegorical importance of clock faces and pocket watches in Barta's filmography, providing examples from *Disc Jockey* (*Diskzokej*, 1981), *A Ballad About Green Wood* (*Balada o zeleném dřevu*, 1983), *The Club of the Laid Off* (*Klub odlozených*, 1989) and *Toys in the Attic* (*Na půdě aneb Kdo má dneska narozeniny?*, 2009). Ultimately Barta champions natural rhythms over rational, spatialised time.

**Adam Whybray** lectures in Film Studies at the University of Suffolk, having received his doctorate from the University of Exeter. His monograph, *The Art of Czech Animation: A History of Political Dissent and Allegory*, was published by Bloomsbury in 2020. He has previously published articles in the journals *Comedy Studies*, *Childhood Remixed* and *Gothic studies*. He co-hosts the children's horror podcast *Still Scared* and has protested with and volunteered for *Extinction Rebellion* over the last two years.

### **High Speed / Slow Making**

Rebecca Struthers, Struthers Watchmakers

In an age of societal acceleration (Wajcman, 2015), does traditional heritage craftsmanship still have a place in education and/or industry? Mass production can often supply goods needed for daily life at a lower cost, both in terms of currency and time, than creating objects by hand (UNESCO, 2003). The loss of haptic skills in primary and secondary school education is having a knock-on effect in the undergraduate study of medicine (Kneebone, 2019). Through the reflections of a watchmaker, who makes time for a living, this high-speed talk will ask whether slow making still has a place in the C21st.

**Dr. Rebecca Struthers** is a multi-award-winning watchmaker, designer, and, historian. She co-founded a workshop with her husband and fellow watchmaker Craig in 2012. In their Georgian atelier, based in the heart of Birmingham's Jewellery Quarter, they use a combination of heritage machines, equipment, and traditional artisan techniques to restore and make watches. In 2020, Struthers was commissioned by Hodder & Stoughton (UK, HarperCollins, US) to write a book on the history of time told through the invention and evolution of the watch. She is a Fellow of the British Horological institute and a member of the All-Party Parliamentary Group for Craft.

### **T4T 4 the Future**

Chloe Turner, Goldsmiths College, University of London

The short paper uses Hil Malatino's formulation of a 'trans4trans praxis of love' as a means by which trans\* communities mobilise remixing to make perceptible a future where trans\* people are free from a straight, cis-centric logics. By attempting to 'feel the future' through kin making that simultaneously ventriloquises previous trans\*cestors and acts as a future trans\*birthing practice, cisgender logics of time, space and reproductive bodies are all speculatively remixed. "

**Chloe Turner** is a writer, curator and PhD candidate in the Media, Communications and Cultural Studies Department at Goldsmiths College. Chloe's work navigates critical-creative explorations at the intersection of feminism, queer/ transgender theory, critical race theory, crip studies and visual culture. More info here:

<https://www.chloeturner.info/> Tweets: @chloeturner\_uk

### **The Taphonomy of Time**

Benjamin Gearey, University College Cork

Rosie Everett, University College Cork

*Taphonomy*, Greek: τάφος "burial" *nomos*, νόμος "law". Reconstructing the rate and tempo of past cultural and environmental processes over time scales measured in thousands of years is a central component of palaeoenvironmental and archaeological study. We consider how chronologies derived from methods of scientific dating (e.g. radiocarbon) are always intrinsically material. The physical processes that act on the buried record, samples selected for dating, our interactions via collection and measuring devices: 'time' derived from this process is never an immanent quality of excavated remains. We suggest this reification of time is better conceived as taphonomic: subject to and composed of multiple material interactions. (1) The study of events and processes that affect the remains of an organism after death.

**Benjamin Gearey** is Lecturer in Environmental Archaeology in the Department of Archaeology, University College Cork, Ireland. He has a wide range of research interests ranging from environmental archaeology, to palaeoecology, alluvial geoarchaeology, wetland and experimental archaeology.

**Rosie Everett** is a Research Associate in the Department of Archaeology, University College Cork, Ireland. She has research interests in environmental archaeology and paleoecology, with a special research interest in peatland archaeology. She is also currently completing a PhD at the University of Warwick with a specialism in sedimentary DNA as a novel proxy for palaeoenvironmental reconstruction.

### **Temporally Dissecting a Videogame**

Laura op de Beke, The University of Oslo

Videogames are temporally curated experiences. They invite players to set aside some time for leisure – from minutes to hours – to enter what in videogame studies has been called the magic circle, a special playground demarcated in space and time where different rules may apply, and different freedoms are afforded. Although the time spent inside the magic circle is, in some sense virtual, unreal – it is also material and experienced in a deeply embodied fashion. My talk begins to dissect some of the temporalities that converge in the playing of a videogame, specifically *The Oil Blue* (Vertigo Gaming Inc., 2010), in order to illustrate how videogames can function as intensely concentrated actualizations of lived temporalities in the Anthropocene.

**Laura op de Beke** is a PhD fellow at the University of Oslo whose work is part of the Lifetimes project. Her dissertation explores Anthropocene temporalities in videogames.

She is also the organizer of an environmental humanities reading group in Oslo, and an avid horror aficionado to boot.

**B:9b Banneker Room | WORKSHOP Performing the Archive: Generating Feminist Time**

Lead: Niamh Moore, University of Edinburgh

The telling of feminism's archive has been a site of contention, with questions of time, historiography and generation key to these tensions. This workshop takes up the invitation to explore the material life of time through our project that brings interviews from a 1988-89 feminist social science study back to a network of feminist youth workers, and to a northern city in the UK, Manchester, using participatory archival practices. In the workshop we will focus on how one group of young women re-performed our archive of interviews through creating a piece of public theatre, in the process creating new juxtapositions of time and generation, and new non-linear accounts of feminism. We explore the performance through articulating a temporal dimension to Haraway's account of the cat's cradle as a form of feminist story-telling – which allows us to materialise the knotty work of passing on and making new story webs of feminism. In the workshop we will show some of this performance, as well as using some of the archival materials as prompts for participants to create new feminist stories and an opportunity to make and curate new materials together to add to our feminist archive.

**Niamh Moore (Edinburgh), Rachel Thomson, Ester McGeeney, Sharon Webb, Rosie Gahnstrom (Sussex)** are feminist academics, youth workers, archivists (not mutually exclusive categories). We are working together on the Reanimating Data: Experiments with people, places and archives project, in collaboration with Manchester-based Feminist Webs, and informed by participatory archival practices. We are working through what it might mean to rematriate social science data/stories to the communities where those stories were originally generated through creating a digital archive and engaging in a series of participatory experiments with the archival materials.

**B:9c Momo Room | Ecological transitions and the time of carbon**

Chair:

Support:

**Disassembly and the heterotemporalities of low-carbon transitions**

Bregje van Veelen, Uppsala University

Magdalena Kuchler, Uppsala University

Time plays a central role in (re)imagining low-carbon energy futures. Whether through apocalyptic visions or deadlines for action-taking, characteristic for these imaginaries is an often unspoken, assumption of linear time with neatly identified interim targets and future endpoints. In this paper, we propose studying low-carbon transitions through the lens of disassembly helps us problematise the ‘unmaking’ of high-carbon materialities by examining heterogeneous temporalities underpinning various processes of disassembling. More specifically, we explore these heterotemporalities from two distinct, but interrelated scholarly vantage points associated with disassembly: one concerned with decay, namely how future expectations of decarbonised societies turn material life-worlds of today into tomorrow’s ruins; and the other focused on lingering and heritage, bringing to the fore the multiple ways in which these high-carbon materialities of the past/present are folded into the future. By doing so, we argue that imaginaries of low-carbon futures are not constrained to unitary and linear timescales concerned with bringing things into being or phasing them out. Rather, low-carbon (energy) futures necessitate processes of both assembling and disassembling that entail heterogeneous experiences of time suspended between memory and abandonment, nostalgia and neglect, finality and regeneration.

**Bregje van Veelen** is a Researcher in the Department of Earth sciences at Uppsala University. She is a social researcher whose work centers on the intersection of low-carbon governance and transformative social change. She is especially interested in sub- and trans-national forms of low-carbon governance, the sociomaterial dynamics of carbon lock-in, and the potential for low-carbon transitions to contribute to societal transformation and political democratisation. Her current research project, ‘Post Carbon: Imagining the Future to Unmake the Present’ explores how we can ‘unmake’ fossil fuel infrastructures, and the social, economic, and political relations entangled in them.

**Magdalena Kuchler** is Senior Lecturer in Global Energy Systems in the Research Programme Natural Resources and Sustainable Development at the Department of Earth Sciences, Uppsala University. Her scholarly work encompasses interdisciplinary research concerned with sustainable energy transitions, future energy visions, energy security and governance, as well as resource-(un)making and resource materialities. Kuchler focuses primarily on how energy imaginaries are (re)shaped and (re)produced both discursively and materially, by whom and for whom energy futures are described and prescribed, as well as how energy visions are governed through different practices and technologies.

### **Materializing time in ecological economics, 1965–1995**

Julia Nordblad, Department of History of Science and Ideas, Uppsala University

Ecological economics (EE) is a heterodox subfield of economics that seeks to identify and overcome discrepancies between economic theories and the physical and biological world, between ecosystems and economic systems. The 1960s and early 70s saw the publication of works that now count as classics in the field, but EE was academically institutionalized in the 1980s. One important strand of EE has been a temporal critique that challenges presumptions about time in mainstream economics by suggesting alternative temporalities anchored in different kinds of materialities (e.g. physical, and ecological processes) or intergenerational communities. This paper explores key temporal critiques within EE and discusses some of their ramifications for other issues, for example economic subjectivities (“economic man”). The paper also examines how this temporal critique was tied to conceptions of societal and historical change, such as “rise of consciousness” and “sustainable development”. The paper reframes the temporal critique formulated within EE as something broader than a debate internal to economics, and instead discusses it as an important attempt to materialize time in societal and political thought. As such it ran counter to a pointedly abstract conception of time drawn from Rawlsian philosophy that dominated anglophone political thought during the same time period.

**Julia Nordblad** is Associate senior lecturer at the Department of History of Science and Ideas at Uppsala University. She works on different historical aspects of the contemporary ecological crisis. In a recent project she has studied political temporalities in 19th century French forestry debates, and is now venturing into the history of ecological economics. She also has a forthcoming article in *Critical Inquiry* comparing the temporal frameworks of climate change and the Anthropocene.

### **Temporal Configurations of Carbon Emissions**

Ingmar Lippert, Brandenburg University of Technology

Climate change politics and carbon emission governance are easily recognised as configuring emissions with temporal coordinates, such as baseline years or this year’s emissions. This paper argues that emission management’s temporal politics are far more distributed within this configuration than this straight-forward understanding recognises. To ground this argument I ethnographically attend to neoliberal climate governance: the enactment of positive and negative emissions in a transnational corporation. The corporation’s carbon emission baseline exists relationally to later positive emissions, an emissions reduction target, and instruments that serve to reduce emissions in relation to a baseline. I explore the material and semiotic managerial practices through which emissions come to matter, are contextualised and reconfigured. Analysing these practices, the paper develops two suggestions. First, we need to

overcome the imaginary of baselines as isolated and internally stable entities; instead, baselines exist relationally and multiply. Second, in this relational apparatus, the environments are enacted as placeholders. In sum, baselined emission statements are configured as an appropriately flexible environmental reality.

I work on the intersection of environmental STS and digital studies. I specifically focus on data practices and the politics of and within data – engaging in the overlapping empirical domains of the environment and technology. I ask questions about how human agents approach doing data well; I scrutinise the values and commitments embedded in data management and governance; and I analytically problematise how knowledges are shaped by digital systems, including their bugs, frictions and seamless integrations. Distributed affiliations: BTU Cottbus, Germany; ITU Copenhagen, Denmark; Museum of Natural History, Berlin, Germany.

### **Temporality within Energy Demand – Seasonality, Rhythms and Practices**

Michael Greenhough, Lancaster University

Seasonality is a concept that has hidden importance within the energy sector, because renewable energy suppliers rely on the meteorological seasons for forecasting when supply is highest or lowest. With current policymaking focused on decarbonising the energy grid, increasing forms of renewable energy, that is notoriously intermittent, will be required to plug the gap left by fossil fuels. The configuration of energy demand is shaped by multiple, overlapping seasons comprised of practices that change over different, but intersecting time scales. In this context, aspects of synchronisation, e.g. of mealtimes, rush hour etc. are critical along with ‘social seasons and events’, e.g. Christmas, and longer periods of more intense demand, e.g. ‘the heating season’. Within these challenges, the potential to modify the timing of supply and demand is now more essential than has ever been before. This paper looks to develop an account of seasonality that takes into consideration the social, seasonal and institutional timing of demand, and identifies how societal and temporal rhythms at multiple ‘scales’: days, weeks-weekends, seasons and decades are embedded within energy demand.

**Mike Greenhough** is a PhD student in the Sociology Department at Lancaster University. My research focuses on the conceptualisation of seasonality within energy demand, how practices vary across social and natural seasons, and what implications this has for the configuration of demand. I also research the role of societal and temporal rhythms within seasons, and how they relate to supply and demand side challenges within the energy sector.

**B:9d Saar Room | Making time in more than human worlds**

Chair:  
Support

### **Culinary systems of conflicting temporalities**

Julianna Faludi, Corvinus University of Budapest

The clash of the slow and fast that contemporary humans face is tied to the problem of conflicting temporalities of the globalized and digitalized systems of labour and home. Home appliances as refrigerators and microwave ovens have redefined human-technology-food interactions. The easy access to food taming hunger, the post-modern “perpetual consumption without satiation” (Cooper 2015) created the culture of fast. The culinary system of fast alienated the eaters from nature, reinforced by the “desocializing effect” of the microwave by the time of intertemporal consumption of food—not shared. Live streamings and digitally supervised times of performance challenge the leveraging between office and family time within the same space. Eating is lived in the intersection of times, and availability of “good” food, where the notion of slow constitutes itself in fast consumption. The slow sourdough for homemade bread was exposed in social media amidst the lockdown, home-officing, home-schooling and unemployment meanwhile the home-delivery services, and a new range of ready-mades is placed in the domain of fast efficiency. The digitally boosted intertemporality of slow and fast put individuals under pressure & define our contemporary culture. This study looks at the technologies of intertemporalities of food-human relationship in the digital space.

**Julianna Faludi** PhD is a sociologist researching social innovation, the relation of human & technology and digital entrepreneurship. Julianna is interested in the commodification of time, and social in the digital space defining contemporary capitalisms. She obtained her PhD at the University of Trento (Italy) in Local Development, and Sociology at the Corvinus University of Budapest (Hungary). She was an invited keynote speaker at the Graz Design Month with her talk on “Liberate the User”. Julianna is active in lecturing as well as organizing events for communicating science for the wider public, and she is an invited speaker and guide at Art events. She has a record of publications in various fields, including fiction.

### **Bedding into bags: The temporal and material assemblages of upcycling**

Clare Holdsworth, Keele University

*Live + film*

Upcycling involves the creative reuse of materials into new products. It has become a popular component of textile crafting whereby unwanted garments can be upcycled

into new clothes or accessories. The popular aesthetic of this process endorses it as quick, environmentally-friendly activity that does not require much time and reduces waste and the purchase of new material. In this paper I present an upcycling project: bedding into bags which upcycles an everyday household item (a duvet cover) into new forms (bags for different uses). In carrying out this project I dissect the temporal and material assemblages of upcycling to unsettle normative assumptions of speed and reduction of waste/new materials. Rather than fetishizing one particular material (in this case a duvet cover), this project requires the input of new materials and technologies to convert the original into new forms. Moreover the utility of the new bags requires attention to their construction which is necessarily time intensive. This project therefore examines contradictory temporal components of skills. On the one hand crafting is practice to slow down; but equally skills are reinforced through being done quickly and, in the case of upcycling, rapid transformations are part of the appeal of the process.

**Clare Holdsworth** is Professor of Social Geography at Keele University and recipient of a Major Leverhulme Fellowship on 'The Social Life of Busyness in a Age of Deacceleration' (2018-21). She is a keen crafter and has developed her interest in textile craft to explore practices of therapeutic busyness.

### **Domestic Jellyballing: Rendering Marine Self-Portraits**

Matthew Beach, Queen Mary, University of London

Rendering is a process that converts industrial 'waste' animal tissue into usable materials, including a translucent powder/sheet extracted from a body's connective tissues called gelatine. In the last decade, new biotechnologies have shifted innovation from the production of mammalian bodies to the management of a surplus of marine invertebrate bodies in the creation of novel commodities such as joint supplements and cell culture scaffolds. These shifts mirror 'green' capitalism efforts as anxieties over deforestation, methane production, ocean acidification, and nutrient pollution increase. In this paper I present a domestic case study of one such jellyfish species — the cannonball jellyfish. By cohabitating with the jellyfish as a companion, I aim to think-with its materiality and relationship to anthropocentric and deep time through its evolutionary biology, as well as its capacity to be rendered into a biomaterial capable of conserving, preserving, and restoring other bodies. The key aspect of the project is to render the jellyfish after its natural death into gelatine, and then a silver-gelatine emulsion; thereafter producing photographic representations that are simultaneously mimetic and material self-portraits. This object becomes a case study imbued with ethical questions regarding surplus life, value, and intelligence; the boundaries between life and death; and what it means for something to become lively or (un)lively.

**Matthew Beach** is an American-born, UK-based artist-researcher working at the intersection of place, the photographic, and care in more-than-human worlds. He is a PhD candidate at Queen Mary, University of London in the School of Geography, examining the materialities of gelatine and collagen using a combination of 'traditional' humanities methodologies as well as creative practice-based enquiry. His thesis, *Connective Tissues: (Un)lively Materialities of Gelatine and Collagen* holds a particular focus on emergent forms of biotechnological practices rendering two species of jellyfish into novel marine gelatine and collagen commodities, with case studies off Eastern United States and Western Wales.

### **Musical Instruments in Time**

Jenny Nex, University of Edinburgh

Musical instruments are physical and temporal objects that can be conceptualised in a wide range of different ways. Their materiality informs discussions of craft practices and the movement of materials worldwide, as well as how the choice of materials is influenced and controlled by legitimate trade, exploitation and conservation. Their musical use sheds light on the embedding of musical practices and whether there is any fluidity or desire for change in a particular musical culture. Furthermore, we can consider how practices of cross-cultural influence during times of colonial dominance or of constructive collaboration impact on music as seen through the adoption of or changes to musical instruments. The performance of music takes time, while developing the skills required to play an instrument requires time, self-control and self-discipline. Who uses time to do this and how do gender, status, habitus, and culture impact on the choice of specific instruments? Does exploring instruments from the past enable us to connect with musicians from another time? Music is a way of controlling time, passing time, sharing time and the instruments we use can help us to understand these processes. Musical instruments are an entanglement of nature, culture and time.

**Jenny Nex** studied music at the University of Edinburgh and specialised as a singer in historically informed performance at the Guildhall School of Music & Drama. She holds an MA in Museum & Gallery Management from City University and a PhD entitled 'The Business of Musical-Instrument Making in Early Industrial London' from Goldsmiths College. Jenny was Curator of the Museum at the Royal College of Music and is now in a similar role in the Musical Instrument Collection at the University of Edinburgh. Her research centres on the business activities of musical instrument makers in the eighteenth and nineteenth centuries.

### **B:9e Piercy Room | Crisis Times**

Chair:

Support:

**Finding the Emerging Rhythms of the Hyperconnected yet Disembodied University:  
Novel Configurations of Space, Time and Affect**

Fadia Dakka, Birmingham City University

The unprecedented and radical re-orientation of the universities' mode of delivery toward a full online provision in both teaching and research - resulting from the worldwide Covid-19 emergency - has determined the most rapid and profound alteration in the everyday spatio-temporal educational practices and routines ever witnessed in the history of the (higher) education sector. While the shock waves of such a traumatic event can still be emotionally and cognitively felt, a process of rhythmic 'recuperation' (Lee 2016) has begun, whereby the unfamiliar is gradually being normalised, turning intentions 'against the initial design' (Lefebvre 2014, p. 780) and stealthily producing adaptation to the unthinkable. Taking the cue from Berardi's prescient 'Breathing. Chaos and Poetry' (2018) and Lefebvre's Production of Space and Rhythmanalysis (Lefebvre 1991; 2004) the paper explores new material and affective configurations of space-time that are emerging in relation to (higher) education at a point when 'the continuum of conjunctive experience is disrupted by the fractal simultaneity of connectivity' (Berardi 2018, p.98). Based on recent experiences, it compares and contrasts the former rhythms of institutional co-existence with the (different) temporal logics and tensions traversing the rhythms of hyper-connectivity, using illustrative examples to investigate the relationship between enduring (screen) time, stimulation and enjoyment in the post-pandemic university.

**Fadia Dakka** is Senior Research Fellow and Deputy Director of CSPACE (Centre for the Study of Culture in Practice in Education) at Birmingham City University, UK. Her current research interests include rhythmanalysis, philosophy and theory of higher education, and universities futures.

**Temporalities of Mental Distress: Digital Immediacy and the Meaning of 'Crisis' in Online Support**

Ian Tucker, University of East London

Anna Lavis, University of Birmingham [a.c.lavis@birmingham.ac.uk]

The internet is increasingly used to seek support by those suffering with mental distress (Bauman & Rivers, 2015). Drawing on research on a major online peer support forum we analyse discussions around acute distress, self-harm and suicide. The paper argues that new temporalities of mental health 'crisis' are emerging through the intersection of

the immediacy of online support, the chronicity of underlying distress, and the punctuated nature of professional support. This can lead to digital platforms being experienced as online 'waiting rooms' in which peer support is sought and provided 'in between' access to formal mental health services. Online support adds a layer of temporal immediacy that does not traditionally feature in other forms of support (e.g. professional in-person services). This shifts the meaning of a mental health 'crisis' from acute to processual and can lead to definitions of 'crisis' being used when not desired nor necessarily accurate. Our analysis thereby poses a challenge to prevalent assumptions regarding digital immediacy as a one-directional speeding up of life through increasingly networked worlds, with information, connections and media always available through the tap of a keyboard or the swipe of a screen (Sprengrer, 2014). More nuanced accounts have emerged that provide scope to consider ways in which the digital may slow life down, to stabilize and calm (Wajcman, 2015; Duclos et al, 2017; Reading, 2012). These are important points in relation to analyzing the meanings of 'crisis' that emerge through the immediacy of online support. They help to elucidate complexities around role expectations and responsibilities, such as the closeness of seeking and/or providing support in a digital context in which others can feel quite distant, or vice versa. By exploring crises as both ephemeral snapshots of distress felt and embodied 'elsewhere' and yet also tangibly experienced (and/or re-experienced) within the 'real time' of digital interaction, we demonstrate how participants experience and define responsibilities of support online. By attending to the layering of temporalities at the intersections of professional in-person, and online support, we demonstrate how parameters of crisis support are set – by whom, for whom and in relation to whose bodies. This has implications for professional clinical practice internationally in relation to the increased digitisation of support and the meanings of 'crisis' that emerge.

**Ian Tucker** is Professor of Psychology at The University of East London. Ian's research interests include mental health, emotion and affect, digital media and surveillance. He has published empirical and theoretical work on care and recovery in a range of environments for mental health support; digital peer support in mental health and surveillance. Ian is currently working on a UKRI MARCH Network+ project exploring the impact of digital platforms in relation to 'community assets' (e.g. arts and creative communities) and experiences of mental ill-health. Ian is co-author of *Social Psychology of Emotion* (Sage) and 'Emotion in the Digital Age' (Routledge's Studies in Science, Technology & Society Series).

An anthropologist by background, **Anna Lavis** is a Lecturer in Medical Sociology and Qualitative Methods in the Social Studies in Medicine (SSiM) Team in the Institute of Applied Health Research. Her work explores individuals' and informal caregivers'

experiences and subjectivities of mental illness and distress across a range of social and cultural contexts, both offline and on social media. Her research to date has particularly focused on eating disorders, psychosis and self-harm, with theoretical emphases on gender, bodies and embodiment, concepts and ethics of care, and the intersections of mental health and material culture. She has presented and published across the social and medical sciences and is involved in a number of interdisciplinary research collaborations both at Birmingham and externally.

### **Towards possible futures: pedagogy of (time)scales in times of crisis**

Kasia Mika, Dept of Comparative Literature, Queen Mary University London

The paper, anchored in students' differentiated experiences of compound and unequal crisis-times, theorizes a 'pedagogy of (time)scales.' "Scale," as used here, thickens the word's meaning as 'a succession or series of steps or degrees' (Oxford English Dictionary), and entails the varied and often temporary ability to respond to the Other, within one's sense of time and one's field of experience and understanding. The task, however, is not to understand the Other but to juxtapose 'the constitutive concepts and practices of one form of life against those of another [,] to rethink the normative frameworks by which we have come to apprehend life' (Mahmood 2016, 23-4), recognizing the oft discordant socialities and materialities of time. Or, as one student—asked 'how do we cope, and how does time feel now?'—said: 'I became more God-fearing now [...] I pray a lot.' For another, 'what helps [coping] is getting dressed.' Both, sketched their differentiated temporal-material frames—the immediate timescale of quotidian habits and the impenetrable temporality of divine designs—which help them navigate the present as crisis and as being 'cut off from the futures they had once dreamed of, from the futures they had once hoped to inhabit' (Beckett 2019, 8).

**Kasia Mika** is a Lecturer in Comparative Literature at Queen Mary University of London. Prior to that, she worked at the University of Amsterdam and the Royal Netherlands Institute of Southeast Asian and Caribbean Studies. In her monograph, *Disasters, Vulnerability, and Narratives: Writing Haiti's Futures* (Routledge 2019), she turns to concepts of hinged chronologies, slow healing, and remnant dwelling, offering a vision of open-ended Caribbean futures. Her current research focuses on temporality and ideas of 'end times' in the context of compound crises. She has published in *Area*, *Modern and Contemporary France*, *Journal of Haitian Studies*, *Moving Worlds*.

### **In Times of Corona Crisis**

Markus Lundström, Uppsala University

This paper discusses temporal diversity in the light of crisis. The theoretical starting point follows Jordheim and Wiggins (2018) notion that crisis has replaced progress as the main conceptual tool for synchronizing different temporalities between and within globalized localities. From this perspective, phenomena such as financial crisis, the crisis of democracy, the climate crisis – and the Corona crisis – work to synchronize the temporal heterogeneity of lived experiences. This paper aims to debunk that temporal synchronization by looking at the topical time(s) of the Corona Crisis. It brings forth preliminary research findings from 113 in-depth interviews with people living in an economically poor and socially marginalized neighborhood in Sweden. The research indicates that the Corona crisis, although conceptually geared towards experiential homogenization, clearly entangles a diversity of times. The Corona crisis has produced in people’s lives various temporal rhythms, dissimilar experiences and divergent expectations – differences largely structured around material inequalities of class, gender and race. Based on these empirical findings, the paper argues that critical examination of the crisis temporality brings to the fore a diversity of experiences and expectations.

**Markus Lundström** is affiliated to Uppsala University and the Multicultural Center in Stockholm. His research is currently focused on diverse social movement temporalities.

**B:9f Room 6 | Materialising Lifetimes: Matters and Infrastructures III: Infrastructural Timescapes**

Chair:

Support:

Inspired by 18th century natural history, this stream links scales of time to scales of life. The aim is to explore how lifetimes form through the entanglement and synchronization of various time scales and life scales, and how they take on material shape in the world. The concept of “lifetimes” replaces the distinction between natural and historical times with the continuity of scales. Scales of time span from the 15-minute life cycles of microbes to the 4-year cycles of elections and political power through to the millions and billions of years in the geological timescale; scales of life span from the non-life of minerals to the non-human life of microbes and bacteria to human life in societies. The project will explore how biological, geological and climatological chronologies combine with social and political concepts to form temporal arrangements governing human and non-human life, and how these arrangements materialize in technological and scientific infrastructures. In this panel we look at lifetimes that are made manifest in infrastructures, which enable both movement and standstill. We will explore how modern infrastructures like roads, train lines, and dikes bring about very different times, fast and slow, visible and invisible, empty and full.

### **Temporalities of 3D Molecular Cinema: Capturing Proteins in Motion**

Filip Vostal, Institute of Philosophy of the Czech Acad Sci

It is only recently that biological processes have been “brought to the lab” (Latour 1986; Knorr Cetina 1981, 1999) so that the resolutions of hitherto invisible processes became visible to the human eye. Against the background of “‘new’ studies of representation in scientific practice” this paper focuses on 3D molecular cinema, the latest advancement in how almost the lowest level of biological, physical and chemical processes get shaped. Namely it investigates how molecular dynamics gets “arrested”, translated into a different time-resolutions; and what the promise of such new dimension of “microscopy” and representation might mean for disciplines such as structural biology and biochemistry. The key argument of the paper is that representation of scientific practice has largely disregarded highly important temporal dimension, different integrations of different times that make representation and visualization possible. Then two essential moments that underpin materialization of 3D molecular cinema are discussed: a femtosecond pulse and time-resolution technique of “single particle imagining” and “seral femtosecond crystallography” that precede materialization of 3D molecular cinema. I conclude by two contributions. First, the paper suggest that capturing molecular dynamics – particularly the behaviour of proteins – into “cognitive digestibles” is not a frequent theme in STS-oriented studies of “molecular life”. Second, “‘new’ studies of representation in scientific practice” would benefit from a focus on interaction between different time-layers in scientific practices and emerging time studies in science broadly conceived.

**Filip Vostal** works as a research associate at the Centre for Science, Technology, and Society Studies at the Institute of Philosophy of the Czech Academy of Sciences, Prague, Czech Republic. He is the author of *Accelerating Academia: Changing Structure of Academic Time* (Palgrave, 2016) and *Inquiring into Academic Timescapes* (Emerald, 2021, forthcoming) and wrote a number of articles investigating time in/of science and academia. He currently runs a project that examines visual and temporal aspects of knowledge production in molecular biophysics. He teaches STS courses at Charles University.

### **The role of emptiness and infrastructure in the construction of modernity in the Netherlands and colonial Suriname, 1880-1920**

Leonoor Zuiderveen Borgesius, IKOS, University of Oslo

In the study of the social construction spaces and times, attentiveness to imaginaries and claims of emptiness opens up questions into the political and material realities of

this process. Like space and time, emptiness is in the eye of the beholder: it is relative and subjective, and therefore points at power dynamics that tie together particular usages of space and time. Questions include: what temporalities and material realities does it contest, who or what is erased, what technologies and practices construct or maintain it, what political agenda is served, and what futures are projected onto it? A case illustrates the role of emptiness as condition for material infrastructures for modernism. The Zuiderzee-works, a giant technological system by which 1800 km<sup>2</sup> of land was reclaimed between 1928 and 1968 in the Netherlands. The plains were seen as empty, devoid of physical historical markers, a place where time itself just began. It was conceived of as peacefully acquired by technological resourcefulness rather than violently conquered overseas. The works give insight into the labor of the creation of emptiness as a material condition. Following its engineers into colonial settings shows how empty space as category travels, but with different materialities based on its location within the Dutch empire.

**Leonoor Borgesius** is an Environmental Historian, doing a PhD in the LIFETIMES-project at the University of Oslo. She was also a guest researcher at the Division for the History of Science, Technology and Environment at KTH Royal Institute of Technology in Stockholm. Her dissertation deals with the history of the imagining and planning of grand-scale infrastructural works in the Netherlands and colonial Suriname. She is specifically interested in how imaginaries of progress and modernity are shaped by and travel between these spaces.

### **The Stone that Ran to Paris**

Hugo Reinert, IKOS, University of Oslo

Run for Your Life was a live-streamed 4000km relay race and climate protest that took place in November 2015, from Kiruna to Paris. Day and night, over the three weeks of the event, a stream of runners ran thousands of successive segments while passing from hand to hand, runner to runner a small, round stone—in an unbroken chain that ran from the indigenous heartlands of Sápmi through Denmark, Germany, the Netherlands and Belgium to France. The final runner was timed to arrive in Paris for the beginning of the COP 21 climate talks, carrying the stone as an emissary. The paper analyses the transit of the stone as a distributed media event, focusing on the multiple forms of time that were referenced, conjured, performed and assembled as it unfolded—from the choreographed movement of the stone itself, to the catastrophic present-continuous of unmitigated carbon release, to the slow, intimate temporality of human attunement to nonhuman agents (and rhythms), to the subsequent "decay" as traces of the event disappeared, archives were deleted, domain names expired. The event emerges from this as a provisional, collaborative, temporally composite activist assemblage—a

window, in its own right, on the complex time-politics of environmental justice in a moment of accelerating planetary crisis.

**Hugo Reinert** is Associate Professor in the Cultural History of Nature at the Department of Culture Studies and Oriental Languages (IKOS), University of Oslo. He is also a member of the Lifetimes research collective. His current interests include birds, time, ghosts, forests, bionic augmentation and the concept of inheritance.

### **What is the Meaning of Traffic Jams?**

Helge Jordheim, IKOS, University of Oslo

Traffic jams means thousands of people moving, or rather trying to move, in sync, with the unintended side effect that they come out of sync with their surroundings. They cannot make it to work, they cannot eat, they cannot sleep. Excluded from the rhythms of human life, they are stuck on the road, where they should have been driving at extravagant speed. In Critical Theory from Paul Virilio to Robert Hassan, traffic jams have emerged as emblems for a specific dialectics of modernity, what Virilio calls the “dromological law”, stating that increase in speed increases the potential for gridlock (Virilio 1991, 65). We humans rarely find ourselves in situations of unintended and unwanted synchronicity. To discuss this rare situation, I will draw on the work by one of the world’s foremost traffic-jam scientist, the Russian physicist Boris S. Kerner, who emigrated from Russia in 1992 and started working for the Daimler-company in Stuttgart. For Kerner and his predecessors, going back to the 1950s, traffic jams are simply a part of physics. Every car is considered as an elementary particle constrained to move along a one-dimensional trajectory. This is where this paper starts.

**Helge Jordheim** is Professor of Cultural History at the University of Oslo, Professor of German Studies at the Norwegian University of Science and Technology, and PI of the research project and collective LIFETIMES. He has published extensively on 18th-century intellectual culture in Europe. Among his latest books are global histories of the concepts of civility and civilization (*Civilizing Emotions*, 2015) and the world (*Conceptualizing the World*, 2018) as well as a history of universal history (*Universal History and the Making of the Global*, 2018), written with international teams of scholars. Jordheim is heading several projects exploring times in the plural, at the interface between cultural and natural history. He has written extensively on time and concepts, in journals like *History & Theory* and *History of the Present*.

### **Session 10 (Block C) (14.00-15.30 GMT)**

**C:10a Mary Anning Theatre | Waiting Times Collective Session**

Chair:

Support:

*Live + film*

Before Covid-19, and the sudden shutting of doctors' surgeries to waiting patients, the waiting room had for years enjoyed a contradictory status as simultaneously a site of care and neglect: a place you came to be seen, but where you became temporarily (and temporally) invisible, suspended in waiting time. It was often a space strewn with neglected objects; years-old magazines, broken children's toys, unread flyers, blank TV screens. Each 'waiting object' holds within it a similarly neglected moment, making these objects a museum of materialised lost times. Now the waiting room itself is a neglected object, one that may never return in quite the same deep, complex materiality.

We are an interdisciplinary group of researchers working on waiting in healthcare contexts. Our collective session involves a creative re-examination of 'waiting objects', exploring their embedded temporalities through an archaeology of the lost time of waiting. Researchers will bring 'waiting objects' from each of the projects' sites – not only objects from GP waiting rooms, but poems understood as objects in the context of waiting for social justice, puberty blockers as objects in the context of waiting in and for trans-health, 'coughing coffins' in the context of those struggling for breath as an ongoing part of life. Bringing together methodologies of semiotics, performance, psychoanalysis, history and ethnography, we will discuss these temporal treasures, bringing out the meanings and moments materially bound within them, and exposing new forms of neglect and forgetting by healthcare bureaucracies.

As part of the collective session we will screen *Time Being*, a new short film by international artist and researcher Deborah Robinson. The 14 minute film was made in collaboration with a young adult, Ruairí Corr. It replaces narrative storytelling with an intimate attention to four sensory materials, air, wood, clay and metal, exploring time and slowness, and their sensory relationship to the way we come to know about the material world.

### **C:10b Banneker Room | Chronographics: The Timeline, the Countdown, and the Clock of the Long Now**

Chair:

Support:

*This panel proposes to think about three profoundly important ways of representing time: the timeline which emerged in the mid-eighteenth century, the countdown which took shape two centuries later, and the Clock of the Long Now that was installed near the end of the twentieth-*

*century. Each chronograph presents time as passing in relation to past, present and future; but each emphasizes the primacy of a different modality. In doing so, they reflect different temporal politics, possibilities and perils. By considering timelines, countdowns, and what we might call "ideological clocks" like that of the Long Now, this panel seeks to problematize and politicize chronographs. One of today's leading scholars of modern temporalities, Nick Yablon, will comment on the three papers.*

### **Time's Measure: The Timeline**

Daniel Rosenberg University of Oregon

The convention of representing historical chronologies in the form of straight, measured lines is so ubiquitous that it rarely rates a mention. Yet, like the conventions of historical narrative, this graphic convention has a history of its own. This paper explores the emergence of the timeline and related graphic forms in the context of the development of print media in the early modern period and examines the relationship between these developments and that of the modern historical imagination.

**Daniel Rosenberg** is Professor of History at the University of Oregon. His books include *Histories of the Future* with Susan Harding and *Cartographies of Time: A History of the Timeline* with Anthony Grafton. He is also editor-at-large at *Cabinet: A Quarterly of Art and Culture*. In addition to *Cartographies of Time*. His current work focuses on the history of data and data graphics.

### **Time's End or Time's Beginning?: The Countdown**

Alexis McCrossen, Southern Methodist University (Dallas, TX)

During the early years of the Cold War nuclear bomb tests and space rocket launches entrenched the salience of a previously little used term, the "count down." Although a time ball had been dropped at midnight in Times Square since 1907, it was not until the 1970s that the gathered crowds actually counted down. By that decade what I call a "countdown mentality" had taken root. On the one hand, as with A-bombs, it was apocalyptic, on the other hand, as with the New Year's Eve time ball, it was generative. The countdown itself began as an aural count, punctuated at its end by a bomb blast, a rocket launch, or a great shout of "Happy New Year!" It took material form in the late-twentieth century when countdown clocks began to proliferate, whether in Beijing's Tiananmen Square (the Hong Kong Countdown Clock), or in personal countdown devices including virtual and digital clocks and calendars marketed to help individuals "count down to their big days," as one was marketed. This paper considers the history and the politics of the countdown, asking why it is today such an entrenched part of individual and collective temporal practices around the globe.

**Alexis McCrossen** is a Professor of History at Southern Methodist University. She has published extensively in temporal history, including *Holy Day, Holiday: The American Sunday* (Cornell University Press, 2000) and *Marking Modern Times: Clocks, Watches and Other Timekeepers in American Life* (University of Chicago Press, 2013). She is now finishing a book titled *Time's Touchstone: New Year's Observances in the United States* which is under contract with the University of Texas Press. She is on the editorial boards of *Time & Society* and *Journal of Festive Studies*.

### **The Trouble with Clocks: a critical look at efforts to redesign clock-time**

Michelle Bastian, University of Edinburgh

This paper explores how efforts to redesign clocks might contribute to contemporary concerns around the politics of time. It takes a cautionary approach, looking particularly at the potential pitfalls of taking up clocks as a site of intervention. Arguing for a closer attention to analyses of the assumptions embedded within dominant approaches to horology, this paper suggests that the failure to do so has hampered much contemporary work by artists, designers and activists. Drawing on Kevin Birth's (eg 2017) approaches to homochronicity, polyrhythmia and the development of wider horological repertoires, this paper analyses *The Clock of The Long Now*, a 10,000 year clock currently being constructed by the Long Now foundation with funding from Amazon's Jeff Bezos. We will explore both its successes and failures in meeting its objectives. The paper concludes by suggesting that despite the potential trouble they cause, experimenting with clocks remains a promising endeavour.

**Michelle Bastian** is a Senior Lecturer in Environmental Humanities at the Edinburgh College of Art, University of Edinburgh. Her work crosses critical time studies and environmental humanities, with a focus on the role of time in human and more-than-human communities. She is Editor-in-Chief for *Time & Society* (SAGE) and a co-editor of a number of collections including, *The Social Life of Time* (Time & Society), *Field Philosophy and Other Experiments* (Parallax) and *Participatory Research in More-than-Human Worlds* (Routledge). Michelle has recent publications in *Environmental Humanities*, *GeoHumanities*, and *New Formations*.

### **Critique and Comments on Panel's Papers**

Nick Yablon, University of Iowa

Professor Yablon will present a comment on the three papers, bringing together the central themes and asking generative questions so as to abet audience participation.

**Nick Yablon** received his Ph.D. in history from the University of Chicago and is associate professor of history and American studies at the University of Iowa. He is the author of *Untimely Ruins: An Archaeology of American Urban Modernity, 1819-1919* (University of Chicago Press, 2009), and *Remembrance of Things Present: The Invention of the Time Capsule* (University of Chicago Press, 2019). He has also published articles in *History Today*, *Journal of American Studies*, *Journal of Urban History*, *American Quarterly*, *American Literary History*, *Winterthur Portfolio*, *American Nineteenth Century History*, *American Art*, and *History of Photography*.

**C:10c Momo Room | Biotemporalities: Laboratory mice, microbes, viruses, hormones**

Chair:

Support:

**What happens at Christmas? Temporalities and ethical concerns in the breeding of laboratory mice**

Emma Roe, University of Southampton

Sara Peres, University of Southampton

This paper explores the biological temporalities of mice reproduction, the demands for readily available animal research models and the growing ethical interest in animal welfare as encompassing assessment of the duration and quality of the rodent life, as a life worth living (Makowska and Weary 2020). Drawing on ethnographic and interview data with individuals involved in animal care and research in the UK, we discuss the rhythms of mouse breeding and concerns for rodent life experiences' set within the economies of scientific production. There are two temporalities that we are considering here. Firstly, the temporality of rodent reproductive processes in the making of mice as a standardised scientific tool (Rader 2004). The second is the implication of the growing ethical concern for the temporal duration, quality and life-outcome from those animal lives made. This is witnessed in various concerns including cumulative experiences' affecting wellbeing over lifetime, surplus research animals that curtail the purpose of their life, and aspirations and practices of research animal rehoming (Skidmore and Roe 2020). What do we learn from the interplay of these two temporalities for the future of animal research? And, for science and society's wider ethical relations with the temporalities' of the non-human world?

**Emma Roe** is Associate Professor in Human Geography at the University of Southampton, UK. She is interested in more-than-human geographies played out in ethical relations with a range of non-human actors including animals, meat and microbes across the fields of animal research, the agro-food system, public health and food security. Currently she is working on two funded projects – the Wellcome Trust

funded Animal Research Nexus and the GCRF-AHRC funded ‘Changing Food Systems in Kenya and Malawi and the Challenge of Tackling Antimicrobial Resistance’. She is co-author of *Food and Animal Welfare* (with Henry Buller) and co-editor of *Participatory research in more-than-human worlds* (with Michelle Bastian, Niamh Moore and Owain Jones).

**Sara Peres** works in Geography and Environment at the University of Southampton, UK, where she is exploring what the breeding, supply, and archiving of laboratory animals can tell us about the economies of animal research. Her broader research interests lie in applying STS and Human Geography perspectives to the study of biobanks in order to understand the relationship between the circulation of biological materials and the political economies of science.

### **Engineering evolution as microbial time management for bio-design**

Erika Szymanski, Colorado State University

In this presentation, I will address directed and accelerated evolution as biotechnical design tools that (continue to) remake the molecular temporalities of microbial life. Work by Hannah Landecker and others has illuminated cell culture and molecular biology techniques as means of controlling cellular time. I build on this work to consider how synthetic biologists are manipulating DNA replication, repair, and recombination mechanisms to accelerate the genetic time of microbial cells. This drive to not just accelerate but to control “evolution” deepens rifts between microbial genetic time—measured in changes to information systems—and microbial metabolic time, measured in production capacity after genetic time has stopped and during which genetic time ideally stands still. Synthetic biologists thus reconstruct microbial lifestyles to match the tempo of scientific funding and the contemporary bioeconomy—which pervasively demand accelerating toward results, market-readiness, and production—and the cultural values of synthetic biology, which call for decoupling (high-value) mental and (low-value) physical work so that scientists waste less time on the latter. I will detail how such values are being embedded in bio-design tools with an eye toward what other forms of “engineering with evolution” might be possible.

**Erika Szymanski** is an assistant professor of rhetoric of science and a member of the microbiome cluster at Colorado State University. She studies how words operate as scientific tools, particularly in the continual re-construction of microbial life and microbe-human working relationships through contemporary microbe- and microbiome-based biotechnologies. She is also interested in human-microbe coworking in wine and beer, and in how science communication among diverse audiences can enable epistemic co-production. In her previous position at the University of

Edinburgh, she worked with the synthetic yeast project, an international consortium constructing a comprehensively redesigned *Saccharomyces cerevisiae* genome.

### **Viral Timescapes in the Anthropocene**

Astrid Schrader, University of Exeter

This paper explores how the covid-19 pandemic exposes and interrogates temporal assumptions in human-animal and nature-culture relationships, mediated by viruses. A 'timescape' denotes 'the embodiment of practiced approaches to time'. Both viruses and approaches to time are considered invisible 'others' to human spaces and places; viral timescapes are envisioned to render them visible together. The demands for a specific zoonotic origin story, a temporal beginning, not only confuses the 'cause' of the pandemic with a viral particle, which is not 'the virus', and neglects the social conditions that enable infections, but also suggests a source of blame. Chinese wet markets and pangolins are easy early targets. Our attention is drawn to xenophobia and the domestication of the 'wild'. What timescapes are at play in desires to protect 'nature' and shame the 'other'. Can the maltreatment of animals and global biodiversity loss be addressed with the help of alternative figurations of time? The problem with climate change is not the change per se but its speed. Is there a 'natural' speed? The slowing down of global carbon emissions during lockdowns demonstrates what is politically possible and what is clearly not enough. Slow science, however, seems to be the last thing that is wanted in a pandemic, or is it?

**Astrid Schrader** is a lecturer in the Department of Sociology, Philosophy, and Anthropology at the University of Exeter, UK. She works at the intersections of feminist science studies, human-animal studies, new materialisms, and posthumanist theories. Schrader is particularly interested in scientific research on marine microbes, responsible knowledge production, time in the Anthropocene, interdisciplinarity and relations between science and arts.

### **Natural Bodies, Natural Environments? Questioning Nature Through Hormonal Mediation**

Kit Chokly, Carleton University, School of Journalism and Communication

Beginning in the mid-90s, environmentalists have been increasingly reporting changes in sexual characteristics and the growing prevalence of intersexuality amongst numerous aquatic species. These changes come from the contamination of natural waterways by sewage treatment effluents, which carry human-derived chemicals into other species' bodies and alter their hormonal balances. This has raised concerns amongst both scientific and lay audiences about the disappearance of "nature" due to

the presence of humankind. This paper offers a critical examination of this idea of “nature” as it relates to sex, gender, and the environment. By considering reproductive hormones as media, this paper reveals the fluid and temporal characteristics of bodies and environments that move beyond the fixed binaries of male and female or human and nature. It uses an “elemental” approach to media studies to trace the history of hormones and demonstrates their material-discursive role in mediating the falsely concretized imaginings of sex, bodies, and environments. In doing so, this paper aims to make space for the messy ongoing entanglements of species, genders, and sexualities that are frequently condemned as “unnatural.”

**Kit Chokly** graduated from Carleton University in 2020 with a Bachelor of Communications and a minor in Digital Humanities, where they were awarded the Governor General’s Academic Medal. Following their undergraduate research, their interests lie in the phenomena that overlap and fall in between oft-divisive categories such as the natural and unnatural, male and female, and body and environment. Their MA thesis uses media theory to consider more expansive ways of understanding gender and environmental issues. Alongside their research, Kit often considers how they can use their background in graphic design to make academia more accessible and useful for everyone.

**C:10d Saar Room | Objects of time: Dam, meteorite, uterus, dust**

Chair:

Support:

**Time and the Hydroelectric Dam**

Kieran Murphy, University of Colorado-Boulder

The hydroelectric dam is an interface in which contrasting temporalities converge and undergo transformation. Its massive wall sits at the center of operations where age-old ecosystems clash with rapid modernization, white water turns into a placid lake, and dynamos convert the lake’s gravitational pull into high-voltage electrical current. The hydroelectric dam exploits and exacerbates differences among the temporalities distinguishing these operations to generate power. In doing so, it has rendered the variance of time more perceptible. To support this claim I will focus on the works of Gaston Bachelard, Martin Heidegger, Francis Ponge and Joan Didion. The main themes I examine in their works pertain to the notion of temporal interface and to the conceptions of deep, nested and haunted time.

**Kieran M. Murphy** is the author of *Electromagnetism and the Metonymic Imagination* (Penn State University Press, AnthroScene series, 2020). His work has appeared in *KronoScope*, *SubStance*, *Epistemocritique*, *Studies in Romanticism*, and *artUS*.

### **The Temporal Uterus: The time Perspectives of Uterus Transplant**

Limor Meoded Danon, Medical Faculty, Bar-Ilan University

Since the publication of the first birth after uterus transplant, led by the Swedish team (Brännström, 2015), uterus transplants have become increasingly global and dozens of healthy babies have been born. Uterine transplantation, like transplant surgery of other organs, is a very complex procedure, involving preparation and timing between different physical and social parameters, the physical readiness for transplantation, the connection between the recipient's and the donor's body, between living or a dead donor, between the professional and organizational preparation of the medical staff, etc. But, unlike other transplanted organs, such as heart, liver, kidney, or lungs, which, hoped to be function as long as possible, the uterus is initially framed as temporal organ, which expected to enable a successful pregnancy and birth, and once it achieved the uterus usually removed from the recipient's body. Through analytical review of the publications and studies done on uterus transplant surgeries, between 2014-2020, this article examines the dynamics and temporality exist in uterus transplant. It moves between "before-during and after" dimension of the patients' experiences of uterus transplant, as well as the bio-medical perception of time and the uterus transplant.

**Dr. Meoded Danon** is a researcher and a lecturer at the medical faculty of Bar-Ilan University in Israel. She is a medical sociologist, her fields of interest are intersex/Different sex development, body and embodiment, bio-politics and queer studies. Her studies focus on the dynamics between the bio-medical knowledge, patients' physical and emotional experiences, doctor-patient interactions and socio-cultural perspectives on normative and pathological bodies. She was a post-doc fellow at the Martin Buber Society of Fellows of Humanities and Social sciences between 2015-2019.

### **Glitch Geology: Ice Sheets and the Unconformities of Deep Time**

Alexis Rider, University of Pennsylvania

Since 1969, scientists have gathered meteorites—subsumed into the ice and perfectly preserved for millennia—from the Antarctic ice sheet. Pushed to the surface in places where the ice collides with topographical features, the meteorites sit on the surface of the ice sheet "like apples waiting to be picked." The meteorites thus also indicate places where ancient blue ice, normally only accessible through expensive and time-

consuming deep drilling, is exposed. These patches of blue ice, nicknamed “meteorite museums” are therefore bearers of deep time, preserving primordial material that would otherwise be lost to the forces of weathering. At the same time, these icy patches challenge conceptions of polar ice as an “archive,” valued only in places where chonostratigraphic time can be extracted in the form of ice cores. Blue ice is folded, faulted, and distorted—a reminder of the dynamic nature of ice. By exploring how time comes together via meteorites and blue ice, with one being an articulation of a temporal moment of impact the other an articulation of the viscous nature of temporal flow, this paper asks how natural chronometers can help us articulate temporalities that exist beyond the clock time of industrial modernity.

**Alexis Rider** is a Ph.D. Candidate in the History and Sociology of Science. Her research, which is situated between the history of science, environmental history, and the environmental humanities, explores how ice has been used by naturalists and scientists to understand and imagine the deep past and future of the Earth. In addition to her academic writing, Alexis engages in artistic collaborations that explore environmental, particularly cryospheric, change. Alexis completed her MA at the New School in New York, and her BA in English Literature and Philosophy at Victoria University, New Zealand, which is where she is from.

### **Dust of time. Experiencing TIME through the SENSE of Smell**

Anna Barbara, Politecnico di Design, Design Department

The sense of smell is a memory machine capable of incredible temporal connections, it moves back and forth bending, contracting and dilating time, until it forms a memory of a place, of a sensation, of a person (Proust, 1909). The sense of smell represents the passage of time on matter, which transforms itself, which evolves, which dies. It is the smell of entropy, of the energy that is dissipated in the transitions of state of organic matter (from putrescine and cadaverine to sperm) and of inorganic matter (from dust to infra-thin) through the air (Barbara, 2006). When Heraclites wrote “if all things were smoke, the nose would recognize them” it was about that part of matter that becomes volatile over time. The dried 20th century did not clean the dust. It was present as a testimony of the wars, which have crumbled entire pieces of the world; it lived as pollution that changed the air we breathe (Colomina, 2019); it persisted in the dust of collapses of the Berlin Wall and the World Trade Center, that we all breathe not only metaphorically (Belpoliti, 2005). Dust carries the odour of passing time and of the material that produced it (Grazioli, 2004). This paper will explore the traces of dust as historic presence in design of the formless matter, of the entropic materialization of the passage of time, as manifestation of the anosmia’s or overstimulation of the future.

**Anna Barbara** is an Associate Professor in Spatial Design at Politecnico di Milano. She has been visiting professor at Tsinghua University, Beijing (China); Kookmin University, Seoul (South Korea); Hosei University, Tokyo (Japan) and many others. Author of *Storie di Architettura attraverso i sensi* (Stories of architecture through the senses, Bruno Mondadori, 2000), *Invisible Architectures. Experiencing places through the senses of smell* (Skira, 2006) and *Sensi, tempo e architettura* (Senses, time and architecture, Postmedia Books, 2012), *Sensefulness, new paradigms for Spatial Design* (Postmedia Books, 2019) and many other publications. The relationships between senses, time, spaces and design are developed in education, conferences, publications and professional works. "

### **C:10e Piercy Room | Resisting the impositions of standard time**

Chair:

Support:

#### **Slow Care and The Hospice Gaze**

Maurice Nagington, University of Manchester

Busyness is corrosive to the ethical quality of palliative nurse-patient homecare (district nurse) encounters (Nagington 2012). It ensures patients remain docile enough to not test the limits and potentials of their care provision, and results in poor end-of-life care experiences. Conversely, authors such as Gallagher (2012) and Bachman (2012) have theorised "slowness" as resisting these detrimental outcomes. However, understanding how it is cultivated in institutions and practices remains poorly understood from an empirically informed perspective. Drawing from Foucault's work on the medical gaze, and ethnographic data, this paper theorises an alternative form of gazing, the "hospice gaze" which: resists regulation of patient's bodies and minds to conform to "efficient" practices; engages in slow practices of care to attune spaces and processes with patient's bodies and minds; intensively gazes at patients to help them narrate their experiences; operates reflexively so that professionals adapt to patients, rather than patients to professionals; and, aims to help patients and their loved ones narrate severe illness and death in ways that gives them a sense of power over something which can feel profoundly disempowering. Key to all of this is managing the timing of care to appear always and already slow.

**Maurice Nagington** is a lecturer in health sciences at the University of Manchester. He has a long standing interest in how the performative aspects of time structures the ethical quality of the caring encounter, particularly in relation to palliative care and ageing. His work draws on a wide range of in-depth methodological approaches, predominately informed by post-structural thinking.

**Timing Sleep: Shift work, the Arctic and finding the right time to sleep**

Julie Mewes, Ruhr-Universität Bochum

*Prerecorded presentation*

Hospital staff belongs to a high-risk group suffering from sleep deprivation and sleep disorders while, simultaneously its work environment demands a high level of concentration, rapid decision-making, and empathy. Nurses and MDs working night shifts above the Arctic Circle are additionally challenged by extreme circadian changes during the polar night and midnight sun periods. Due to rotating shifts, and the absence of the circadian rhythm during the polar nights and days, Nordic hospital staff cannot sleep within the 'natural' (or any constant) rhythm. Local materialities of sleep related to light/darkness exposure (e.g. ultrabright lighting) imitate and redefine day-night-rhythms. This problem context is relevant to scholars with a focus on time and materiality and their conversations on the entanglements of everyday life practices, its matters, and temporalities as much as to other practice-oriented studies on time organization and labour. The paper contributes to this conversation by drawing on the author's ongoing ethnographic study "Matters of Sleep" which aims to better understand the usage of devices for sleep enhancement under extreme work conditions and seasonal variations of light/dark exposure. It critically discusses the hypothesis that the 'sleep of any time' disproves common conceptions of 'natural' (or healthy) sleep patterns, its temporalities and rhythms.

**Julie Mewes** is a social anthropologist working on the intersection between science and technology studies and health studies focusing on the sociomaterialities of health. She currently holds a position as a DAAD-funded postdoctoral fellow at the Ruhr-Universität Bochum (RUSTlab) and a guest researcher at the University of Oslo (TIK) working on her project "Matters of Sleep – Sleep devices in the everyday life of Norwegian hospital staff". The project aims to add to our understanding of the conditions of shift workers' sleep patterns as well as of the subjective meanings of sleep and temporality for this group and its related day-to-day practices.

**Contested Times: Inglorious Career of Indian Standard Time, 1906-47**

Sugata Nandi, West Bengal State University, Kolkata, India

This paper is a study of the imposition of a standard time over the vast geographical expanse of the Indian subcontinent while it was a colony. Indian Standard Time [IST] was an early twentieth century invention of British colonial rulers and was imposed in 1906. Time measured at the north Indian city of Allahabad, five and a half hours ahead of GMT, replaced the two time zones of Calcutta in the east and Bombay in the west

prevalent officially till then. There was in fact a third time zone, in Madras, established in 1802, which was used as 'Railway Time' for trains running all over India since late nineteenth century and served as an unofficial standard time for travellers anywhere in the country. The existence of these different time zones in India, which continued to be in use till after the end of British rule, made the imposition of IST insurmountably difficult. In this context this paper enquires how the colonizer and the colonized experienced IST. It argues that for colonial rulers it posed the challenge of synchronization of clocks across the country, to which Indians responded with firm resistance due to their strong identification with existing separate time zones.

**Sugata Nandi** (Indian/ Male/46) studied history at the Presidency College, Kolkata, and at the Jawaharlal Nehru University, New Delhi. He earned his doctorate from the said university in 2015. He is the recipient of several national and international fellowships, including the Fulbright-Nehru Doctoral and Professional Research Fellowship (2011-12), Visiting Research Fellowship at the Institute for Advanced Studies in the Humanities of the University of Edinburgh, UK (2018), and the first ever Senate House Fellowship of the University of London (2019). He is Assistant Professor of History at the West Bengal State University, Kolkata, India. He can be reached at [sugatahistorian@gmail.com](mailto:sugatahistorian@gmail.com)

### **Narrating temporal becoming through the lens of autism**

Anna Stenning, University of Leeds

*Prerecorded presentation*

This talk is aimed at considering the project of 'decolonising the Future', through a consideration of the way that autobiographical texts by autistic authors propose multiple ways of experiencing time. Rather than suggesting that there is an essentially autistic experience of time as stasis, which is suggested by the concept of autism as a developmental disorder, the talk offers four examples of texts whose narrators disrupt dominant conceptions of their individual lives. While clinicians frame autism as a disrupted progress towards 'normal' life-stages, disability narratives, including those from the autism community, offer spatially inflected narratives of time where repetition, reflection and reconnection may be more important than concepts of linear progress. Narrating autism is therefore not the recovery of 'authentic' accounts of autistic experience, but reconfiguring received understandings. Through applying Karen Barad's relational ontology of entanglement to the study of patient narratives within the medical humanities, this talk addresses the need to account for the influence of past conceptions of autism – which focus on the idea of impaired subjectivity - in order to create a future for materially enacted and interdependent selves.

**Anna Stenning** is a Wellcome Trust Research Fellow in the Humanities and Social Sciences at the University of Leeds. Her interests include nature writing, poetry and life writing, and her current research is in the field of medical humanities and autism. She is co-editor, with David Borthwick and Pippa Marland, of *Walking, Landscape and Environment* (2019); and of *\_Neurodiversity Studies: A New Critical Paradigm* (2020) with Hanna Bertilsdotter-Rosqvist and Nick Chown. Her first sole-authored book is *Edward Thomas: A Miscellany* (2016).

**C:10f Room 6 | Screening Time: A film session**

Chair:

Support:

**The Underside of Time**

Laura Denning, Bath Spa University UK

The Present as a future archaeological past is, currently, often identified as the Anthropocene. This contested term continues to calibrate our human-scale perception of time. This film draws upon a recent collaboration with a paleo-archaeologist, to question that calibration. Marcia Bjornerud, references literacy in relation to the longer view. She says ‘We need a poly-temporal worldview to embrace the overlapping rates of change that our world runs on. The Underside of Time is an evocation of these insights, realised through visual and sonic metaphor.

Recipient of the inaugural scholarship in Environmental Humanities at Bath Spa University, **Laura Denning** has recently successfully defended her PhD thesis. This practice-led research positioned art practice within experimental geography in order to open up the registers within which art might operate. Laura is now developing new works as proposals for post-doctoral opportunities that have an arts/science crossover. These works explore transcorporealities in relation to temporal shifts –including the moment, and extending to considerations of deep time. Laura is the recipient of a number of awards and commissions and her work has featured in a number of publications. [The Underside of Time can be viewed here: <https://vimeo.com/454969303>]

**Z-Time**

Isabella Martin, Independent artist

Z-Time is an audio-visual work which responds to the strange and surreal timescapes of the chronobiological laboratory. It is interested in how time is manufactured and manipulated in order to study it scientifically – but at the same time, scientists themselves are beings in time. The film aims to highlight, challenge and play with the

overlapping and enfolding time regimes of the lab – which seem to nestle like Russian dolls across the scales from cellular to celestial. Images come from inside and outside the laboratory spaces at the Maersk Tower in Copenhagen – following scientists on their rhythmical journey to complete the impossible task of studying time. Film is the ideal medium with which to explore such a temporal conundrum as it is a time-based medium itself. The final film will use editing techniques to play with the different time rhythms at work in the lab, images will slow down and speed up, repeat and loop. The soundtrack of the film will also reflect these different movements. The final work will be displayed as a part of the ‘Time’ theme for the upcoming exhibition ‘The World Is In You’ at Kunsthall Charlottenborg in Copenhagen in autumn 2021.

**Isabella Martin** is a visual artist whose interdisciplinary practice is context specific, driven by collaboration with the sciences. Her ongoing research focuses on ideas and systems of measurement, navigation and time in relation to place and the body, through work with an expanding group of collaborators. Recent projects include ‘WAVE MACHINES’, exhibited at Kunsthall Charlottenborg, Copenhagen, ‘The Old Recent’ at RYMD Gallery, Reykjavík, and ‘The Burning’ screened at Crosscuts Film Festival, Stockholm.

### **Take your TIME**

Solveig Lønmo, Nordenfjeldske Kunstinstrimuseum, Museene i Sør-Trøndelag, Norway

Welcome to this exhibition – precisely now. Please enter Take your TIME, an anachronistic cabinet of curiosities. Let me show you an eccentric selection of artworks and artefacts that in various ways, and in dialogue with each other, may tell us something about the phenomenon of time. When these haniwa, Japanese ceremonial figurines made 2000 years ago to celebrate fertility, meet jewellery artist Nanna Melland’s piece 687 Years (2008) – a necklace made of hundreds of copper IUD’s (prevention spirals) – stories about lived lives, interrupted timelines, pain, love and the body as a time-site, are thrown out for us to ponder. Things Change (2015) by Maria Bang Espersen, a hand blown glass vase encapsulating a sharp stone in the thin glass wall, reminds the viewer about future’s uncertainty. The material tension is constantly under pressure, and cracks will gradually appear – or the object will suddenly explode into hundreds of shards. No one knows when. The work is durational, and a piece of irony in a museum collection. Then have a look at these bracelets made of human hair (1850’s), perhaps from a lost loved one, just to make them travel in time with you.

**Solveig Lønmo** is an art historian and curator at the Nordenfjeldske Kunstinstrimuseum (National Museum of Decorative Arts and Design) in

Trondheim, Norway. Lønmo recently curated "Ta deg TID / Take your TIME" (2020), an experimental composition based on the museum's collection. She also curated "The Hannah Ryggen Triennial 2019: New Land". Before Lønmo's institutional affiliation in 2014, she worked as a freelance writer and art critic.

*This paper will be an image based curator's tour in the exhibition ""Take your TIME"", on view in Nordenfjeldske Kunstindustrimuseum in Trondheim, Norway from June 13th 2020 – January 31st 2021. Please find a tentative picture presentation at <http://nkim.no/en/paper>*

### **The Propagation of Uncertainty**

Emily DiCarlo, University of Toronto

As alternative programming, I offer a presentation and a six-minute video screening of my recent thesis work *The Propagation of Uncertainty*, which explores the material infrastructure of how Coordinated Universal Time (UTC) is created. Through a month-long process, collected asynchronous data from 82 master atomic clocks around the world is processed at the International Bureau for Weights and Measures (BIPM) in Paris. Once reckoned, BIPM produces a monthly report known as the Circular T – or the world's most accurate clock. The Propagation of Uncertainty takes its name from the statistical calculation used in the Circular T's creation, an equation that assumes error in every value and accounts for variables such as drifted local clock readings and noise interceptions during data transfers. Using a "post-real time" process, the report illustrates how a multiplicity of deviated pasts inform our future's official, singular "present." Ultimately clock time is an estimation of potential errors and a calculation of unknowns. Filmed in Canada's official time dissemination room at the National Research Council in Ottawa, eighteen "talking clock" recordings are collaged together from thirteen time zones as the video's soundtrack. As a meditation on the temporal body at odds with time's infrastructure, the work moves through moments of discordant simultaneity, a chronological survey by time zone and a bass-heavy beat of resistance.

**Emily DiCarlo** is an artist and writer whose interdisciplinary work applies methodologies that often produce collaborative, site-specific projects. Evidenced through video, performance and installation, her research connects the infrastructure of time with the intimacy of duration. A recent graduate of the Master of Visual Studies at the University of Toronto, she was the 2019/20 recipient of the Canadian Social Sciences and Humanities Research Council Scholarship (SSHRC). DiCarlo recently exhibited at SÍM Gallery in Reykjavik, Iceland, as part of their artist-in-residence program, and has been an active council member for the International Society for the Study of Time since 2013. [www.emilydicarlo.com](http://www.emilydicarlo.com)

[A preview link to the video can be found here: <https://vimeo.com/471937100>]

**C:10g Room 7 | Embodied attention to multitemporal environments (I)**

Chair:

Support:

**Fuzzy seasonality – Producing vegetables in climate change times**

Nicolas Loodts, UC Louvain (Belgium)

In Belgium, organic vegetable producers already face consequences of climate change. Both small scale and large scale producers have to adapt to unpredictable weather conditions. A spring too rainy or too hot, droughts, multiple heat waves during summer or mild winter cause many consequences affecting the life of these farmers and of the nonhumans that compose the agroecosystems they are working with. These consequences transversally affect the different aspects of the production. Shift schedule for the workers, early or late harvest for some vegetables, accurate managing of the water resources, production loss, devices to cool the greenhouses... Managing the consequences of climate change becomes a profession in itself. If the weather has always been a concern for farmers, the climate change they have been living with for ten years is more unpredictable. The cyclic seasonality is replaced by a more chaotic one, a fuzzy seasonality. Farmers have to play it by ear and perform a never-ending adaptation. This paper explores the coping mechanisms to climate change of farmers working in European temperate zone and highlights the social and technical complexification of agricultural professions.

**Nicolas Loodts** is a PhD student in anthropology at UCLouvain (Belgium). His fieldwork concerns a network of producers located in Belgium (mainly Wallonia) and Italy (mainly Sicily). His research explores the specificities of the fruits and vegetables production according to the scale, the way the producers interpret the signs of the nonhumans of their field, and the evolution of the farming practices in times of crises.

**Wake Up Calls: Exploring Multiple Temporalities and Material Consequences through Recorded Birdsong**

Rowan Bayliss Hawitt, University of Edinburgh

While not new, recorded sound – particularly that of birdlife and outdoor environments – is becoming increasingly prominent in contemporary folk and alt-folk music in the United Kingdom. Cosmo Sheldrake’s 2020 album *Wake Up Calls*, for instance, is composed entirely of recordings of birds currently on the UK’s list of endangered species. Using Sheldrake’s album as a case study, I will draw on musical and discourse

analysis to ask two questions of such music. Firstly, how are the material voices heard here used to imbricate multiple temporalities? Secondly, in what ways do musicians such as Sheldrake understand recorded (and subsequently manipulated) sound to reflect and shape our current and future relationships with the more-than-human world? Focussing especially on the environmental-political resonance of recorded sound in the UK folk scene, I suggest that the embodied and heard sounds and nonrepresentational potential of this music creates spectral echoes across time, highlighting in particular the uncertain futures of birdlife in the UK. In turn, I position (alt-)folk music as a potent means of understanding multiple and nonlinear temporalities, particularly at the point of a climate crisis.

**Rowan Hawitt** is a PhD candidate at the University of Edinburgh, currently researching mythology and time in British contemporary folk music from an ecocritical perspective. She received a BA(Hons) in Music from Corpus Christi College, Cambridge and an MPhil in Music from Trinity College, Cambridge, graduating in 2019 with the William Barclay Squire Essay Prize. As a saxophonist, achievements included winning the University of Cambridge Philharmonic Orchestra's 2016 Concerto Competition and giving the world premieres of seven works for saxophone. In addition to her current research, Rowan holds a keen interest in musical nationalism, gender studies, and conservation.

### **Gleaning Time: Skill and Attention in Mollusc Lifeworlds**

Sandro Simon, University of Cologne

Routinized practice provides temporal orientation and familiar sensory experiences with the world. Yet, enskillment might go hand in hand with a loss of attention (cf. Mauss 1934). In times of the Anthropocene, where relations multiply and deepen and volatility accelerates, this poses a challenge: How can we be sensually attentive to connection and change in the now, while also maintaining a certain future-bound orientation? Inquiring mollusc gleaning in the Sine-Saloum Delta, Senegal, as I would like to propose, can provide certain starting points to this question. Gleaning is a multisensory practice that consists on an array of variations and involves molluscs, gleaners, spirits, water, soil or wind. It requires skill as well as an attentiveness that is both schooled and distributed and in which one constantly and rather implicitly reattunes to the changing environment. Thereby, absence and presence as well as practice and pause are bound together in an emergent rhythmicity, because letting some molluscs slip and regularly taking days off when the tides are not right, is indispensable for successful, progenerative gleaning. And so mollusc gleaning can be understood as a possible mode of bridging plan and situated action within our epoch of increasing enmeshment and volatility.

I am a doctoral student in the DELTA project at the University of Cologne, Germany. My research inquires mollusc-human-spirit relations in the Sine-Saloum Delta, Senegal with a focus on body and work experience and based on thick participation as well as audiovisual and experimental methods and forms of representation.

**Session 11 (Block C) (16.00-17.30 GMT)**

**C:11a Mary Anning Theatre | ROUNDTABLE Making Time Exhibition Roundtable**

Leads: Blake Ewing, University of Oxford

Tessa Murdoch, Victoria and Albert Museum

Following a workshop held at the University of Oxford in January 2019 (including many involved with Temporal Belongings and affiliated), this roundtable will again bring together curators at the Victoria and Albert Museum and academics working on the materiality of time to help develop an exhibition and research agenda around the idea of 'Making Time'. Covid has caused severe delays to the exhibition planning process, but also offers an opportunity for potentially reframing the agenda. 'Making Time' aims to challenge our perception that time is objective fact, measured in hours and minutes. Rather, visitors will be encouraged to think of time expansively, in the spirit of the V&A: as something that we make, and that also makes us. Through creative objects and design, this will be the first major exhibition to showcase how our individual and social times are constructed and represented, putting our time anxieties into historical, cultural and geographical context, and challenging viewers to think about their own experiences and practices of time. Representations of these times will demonstrate excellence through works that exemplify mastery of materials and techniques to represent, manipulate and control time.

Co-led. **Dr Blake Ewing** is a Smithsonian Research Fellow and Politics Tutor at Oriel College, University of Oxford. **Tessa Murdoch** is a Curator at the Victoria and Albert Museum.

**C:11b Banneker Room | Embodied attention to multitemporal environments (II)**

Chair:

Support:

**The Philosophy of the Senses: The Entanglement with the Geological and Mythological Time**

Martina Saric, University of Glasgow

The paper explores sensual vitalism as an assuaging force between the human and the natural world. I engage with Bergson's concept of "creative evolution" (1907) to illustrate human entanglement with nature as a constant flux of meaning and relations, whilst approaching the notion of time in divergence: stillness vs movement.

The sensual body is made into a site of creative understanding (Berleant, 2010) as I question: What can the sensual borderline reveal about human experience in the context of the environment and time? Can linearity be surpassed to incorporate the cyclicity of mythology, as well as changing ecological systems (Moore, 2017; Tsing, 2015)? Or is it clustered, layered in fossilized remains? Examples are drawn from the late-Victorian work of Thomas Hardy and his concern with geological remains: digging into the soil to recover fragments of defunct cultures (*The Mayor of Casterbridge*, *A Pair of Blue Eyes*). Moreover, myths concerned with fixity/movement are evoked (Orpheus and Eurydice, the pillar of salt in Sodom and Gomorrah), as I will illustrate how these stories conjure various time-scales. By expanding the sensorium, I show the senses in touch with the materiality of time, its physical manifestations, as well as highlighting inner and outer landscapes that can redefine our concept of time.

**Martina Saric** received an MSc from the University of Edinburgh (2019), with a dissertation on mythopoetic imagination and sun myths in *Tess of the D'Urbervilles*. Her main areas of research include Victorian art, Pre-Raphaelite visuality, sensuality, eco-critical thought, and mythos. She is currently working on a PhD project in aesthetics of sensuality, University of Glasgow, under supervision of Dr Andrew Radford and Dr Laura Martin. The project focuses on sensual vitalism, human re-integration in the natural and mythological world, showing how work of Thomas Hardy, a late-Victorian author is pertinent in the postmodern context, expanding into holistic humanities and eco-critical thought.

### **Fusing new horizons? Towards an affective multispecies temporality**

Jeremy Kidwell, University of Birmingham

The question of synchronisation, coordination, or fusion of temporal horizons has been an enduring concern for constructive philosophers, especially those working in hermeneutical and phenomenological traditions and these questions have only sharpened with the intensification of climate emergency and extinction crisis and the scholarly turn to multi-species approaches. Yet approaches pioneered by Gadamer, Ricoeur and others in environmental hermeneutics have often been criticised for logocentrism and a practical inability to connect temporalities which are non-verbal or involve other-than-human cognition. In this paper, I explore the possibility of an affective approach to multi-species temporality. I take as given that temporalities are multiple and complex, so my wider goal here is to see whether there is some range to

develop a constructive account of the ways that human temporalities might be brought into fruitful entanglement or relation with other temporalities across species boundaries. The paper will present the results of a speculative experiment, in the style of field philosophy, which has been ongoing since 2019. I will share a series of three multi-species case studies which probe the content and ecological boundedness of embodied and affective temporalities.

**Jeremy Kidwell** is an associate professor in theological ethics at the University of Birmingham. Alongside ongoing ethnographic fieldwork on spiritual landscapes with environmental activists and landscape workers, he is currently working on a book titled "Ecological Reconciliation".

### **Nascent Becoming(s): Imagination, Progress and the Structure of Time in Eco-eschatology**

Jason Young, Queens University

We live in apocalyptic times. Not in the sense of an ending, but rather in a sense that alludes to the word's original meaning as *apokalyptein* – an uncovering, disclosure or revealing. This essay examines how our sense of time is thus disclosed through eco-eschatological imaginaries that articulate the planet as heading towards an end while simultaneously holding humans accountable for, and capable of ending the end (whether by achieving sustainability, colonizing other worlds, geo-engineering a solution etc.). An overcommitment to this Promethean task however, tends to perpetuate the progressive chrono-logics of an abstract Cartesian-Newtonian universalism that obscures the phenomenological experience of time as a perpetually nascent becoming. Unlike these responses to environmental issues that attempt to maintain "progress" through a projection of calculative rationality, the imagination is here emphasized as that which participates at the emergence of time. For where the former can only manipulate actualized possibilities already present in the world, the latter co-enacts emergent phenomena as events with the capacity to transform our very sense of what is possible. It is through this disclosure of the environmental crisis as event that novel futures can be (co)constituted and that which is being revealed by what is but our most recent apocalypse can be discerned.

**Jason Young** is a PhD candidate in the School of Environmental Studies at Queens University in Canada. His research seeks to reframe environmental issues in order to foster creative modalities of engagement and draws from (eco)phenomenology, process philosophy, biosemiotics and various posthuman perspectives. His most recent focus is on understanding the role of imagination in perceiving, articulating and responding to

the environmental crisis. Along with having worked for more than 10 years on the land in various capacities, Jason also teaches in the School of Environment and Sustainability at Royal Roads University and at the Graduate Institute for Transformative Learning.

### **Glacial Time and creative temporality**

Sarah Elisa Kelly, Schumacher College

This paper draws upon the idea of Glacial Time, “a different way of marking and inhabiting time that offers either respite or contradiction” to normative ideals (Parkins and Craig, 2006). Glacial Time, a term first proposed in the mid 1990’s by sociologist John Urry is a way of thinking about time that is de-synchronised from both Clock Time and its contemporary counterpart, Instantaneous Time (Urry, 2011). When the term was first used, a glacier was arguably still a symbol of slow ponderous meandering and unwavering stability, yet today it is the very impermanence of glacial landscapes that spurs a paradoxical sense of urgency. Life within contemporary climate crises asks us to reconsider our futurity, in turn requiring new forms of narrative. Barbara Adam (2004) reminds us that the social relations of time are a central force in driving cultural change. I propose that imaginative shifts in temporal perspective can become a creative and ethical undertaking. Alternative time-stories both challenge the existing dominant hierarchies of time while de-legitimising the value systems and cultural practices bound up within them. Responding to a sense of urgency seems to require both such movements; revealing or uncovering stories alone is no longer sufficient, affirmative retellings are also required. Through Glacial Time I propose the possibility of temporal transformation as one such tool for the re-imagination of human and environmental connection.

**Sarah Elisa Kelly** is a Lecturer on the MA in Engaged Ecology at Schumacher College

### **C:11c Momo Room | Time Materialised in Performance and Art**

Chair:

Support:

### **Moving at the speed of stones**

Carolyn Deby, University of Warwick

*Live + film*

With planetary systems changing faster than the biosphere’s ability to adapt, as the technosphere facilitates ever more rapid global transfers of data, bodies, commodities, and materials, the deep time of the geologic seems impossible to grasp at the level of everyday, embodied human life. Machine speeds, and multiple, complex,

digital/material flows accelerate lived experience for many human mind-bodies (especially in urban, developed locations). And yet, the cascading crises of the Anthropocene directly implicate certain human ways of doing things and understanding this demands a recalibration towards deep time knowing. Drawing on insights from a performance on Time/Duration presented in Exeter (UK) as part of "Rock/Body: Performative Interfaces between the Geologic and the Body" (2016), this paper will perform a double rendering of the human body as it attempts to slow into the speed of stones. A verbal account of the 2016 performance and its findings will be delivered against the backdrop of a video essay which seeks to evoke a heightened, embodied response in the viewer(s). The two strands, spoken paper and visual paper, will together perform an affective human-body-time that moves into relations with more-than-human materiality, towards the geologic.

**Carolyn Deby** is an artist-researcher who creates work internationally under the collaborative umbrella of sirencrossing, examining the lived experience of humans in cities and their sympoietic entanglement with nonhumans, Earth systems, and landscapes. Her work reveals the urban as a hybrid territory of wildness and, equally, as social space and technologically reconstituted 'nature'. Employing a practice as research method of site specific 'audience experience'; set in the everyday 'urbanwild' the research seeks to enliven individual human's awareness of their biological, ecological, social, and technological entanglement in multispecies and hybrid bio/geo/techno processes. Carolyn recently completed a PhD in Theatre & Performance at University of Warwick.

### **Diffraction Representation: Dramaturgies of response-ability**

Julia Schade, Goethe University Frankfurt, Germany

This paper investigates how contemporary discourses about relational, nonlinear, lateral, entangled, sympoietic, multispecies and non-human temporalities open up new aesthetic and artistic strategies within the field of Theater and Performance. These, as I call them, diffractive dramaturgies subvert the classical western representational paradigm by experimenting with practices of what Haraway and Barad propose as response-ability or thinking with. Taking the Performance work "Living matters" (2019) as an example, I will explore how German performance artist Eva Mayer-Keller introduces a dramaturgical practice of thinking with as a responsibility for and towards the specific materiality of the objects and bodies she uses as well as of the representational dispositif she finds herself in. In her staged experimental arrangements Meyer-Keller not only exposes the theatre apparatus itself and its power structures but rather reinvents it as a laboratory of intertwined temporalities in which human bodies lose their verticality and entangle with the iterative choreography of things, objects,

materials, liquids, colours and sounds. Following Haraway and Barad, I investigate how Meyer-Keller's diffractive strategy is a mapping of interference, not of replication, reflection, or reproduction but something which calls out for a rethinking of the notions of identity, materiality and difference within and beyond the representational frame of the theatrical black box.

**Julia Schade** is a lecturer at the Department of Theatre and Performance Studies at Goethe University Frankfurt (Germany). Her research and teaching focuses on the interrelations of philosophy and contemporary performance with specific interest in the representation of time and its decolonization. In April 2020 she submitted her dissertation titled "Resistant Temporalities" in which she explores aesthetic strategies of the decolonization of time and history in the performance works of William Kentridge, Rabih Mroué and Eva-Meyer-Keller. Currently she works on a project titled "Queer, Feminist, Decolonial: Intersectional Perspectives in the Humanities". In addition to her academic work she is working as a dramaturgical adviser.

**Synchrony in Basel Abbas & Ruanne Abou-Rahme's "And yet my mask is powerful"**  
Maximilian Lehner, Institute of Contemporary Arts and Media, KU Linz

Departing from several artistic examinations of institutionalized archives and the creation of counter-archives, the underlying power of temporal structuring becomes visible through the concept of the archive. Describing a work by artist duo Basel Abbas and Ruanne Abou-Rahme that deals with complex relations of past and present within artefacts from the West Bank and with the connection of individuals to these objects and related places, this talk transfers Elizabeth Freeman's concepts of synchrony and anachrony, further developed within a Queer Studies context, to the field of the visual arts analysis as tools to describe temporal layers in the interplay of the elements of the installation "And yet my mask is powerful". While in works by Zineb Sedira, Melik Ohanian and Lara Baladi, the archive represents the logic of succession versus other possibilities of temporal structuring, Abbas and Abou-Rahme's installation synchronizes historical, current and fictional objects and narratives, visually similar to an archive—and thereby using a familiar visual dispositive. On the basis of this work, it can be argued that the production of synchrony, engendered in the logic of the archive, allows parallel, non-uniform narratives as well as temporal relationships outside of a successional logic.

**Maximilian Lehner** works as curator, researcher, and producer for independent art projects in Salzburg and Stuttgart. After studies of art theory and philosophy in Linz, Stuttgart, and Paris, he participated in several curatorial courses and curated exhibitions in Austria, Germany, Romania, and Slovenia. At the Institute of

Contemporary Arts and Media at KU Linz, he holds a position as research and teaching assistant since 2016 and pursues a doctoral thesis on the critical potential of temporal structures in artistic practices. His other research interests are in art and technology relations and movements and in theories of Artistic Research.

**Reconsidering transience: An ethical and aesthetic apology for the ephemeral from the Japanese ca**  
Angélica Cabrera Torrecilla, The National Autonomous University of Mexico (UNAM)

Even when it is considered that there are many ways of understanding time, transience in globalized societies refers to a hegemonic perspective: As a constant novelty, accelerated consumption, obsolescence, and decline, not only from the markets approach but also from the philosophical and scientific traditions. Transience, however, is an intrinsic temporal process of the human being, nature, and the environment. The following article proposes an apology for the ephemeral taking the Japanese perspective as a paradigmatic case study to exemplify how such a highly developed country has managed to put into practice a well-balanced epistemology of the ephemeral. Historically, Japanese aesthetics have broadly developed the idea of the ephemeral by considering it, beyond other characteristics, the unifying element of its traditional arts and “forms”. Since at all times the ephemeral has remained linked to daily life through art and ritual, it was considered imperative that its aesthetic conditions have also ethical connotations. Therefore, beyond offering an intellectual or metaphysical perspective on the ephemeral, its understanding was explained more from the pragmatics, since it allows both the experiential manifestations (more sensitive than intellectual) and development and improvement of their activities through the body.

**Angélica Cabrera Torrecilla** is an UNAM Postdoctoral Fellow at the Faculty of Philosophy and Letters at The National Autonomous University of Mexico. Previously, she has been Japan Foundation Postdoctoral Fellow at the Faculty of Global and Regional Studies at the University of The Ryukyus (2018), and Visiting Postdoctoral Researcher at The Center for Asian and African Studies at El Colegio de México (2017-2018). In 2017 she received her PhD in Literary Theory, Comparative Literature and Cultural Studies, with a thesis on the Multiverse as an icon of the transdisciplinary dialogue, at the Universitat Autònoma de Barcelona, Spain.

**C:11d Saar Room | Materialising the Politics of Time**

Chair:

Support:

**Temporalities of the climate change/conflict nexus and their implications for environmental peacebuilding**

Natascha Mueller-Hirth, Robert Gordon University Aberdeen

Climate change is widely considered a ‘threat multiplier’ that places increased stress on natural resources and the communities dependent on them with their livelihoods. As the UN’s Pathways to Peace report found, this stress can jeopardise peacebuilding processes or increase the risks of violent conflict, especially in already fragile and conflict-affected contexts. Yet, in addition to providing livelihoods and development opportunities, natural resources have the potential to resolve conflicts by developing shared identities – referred to in recent scholarship and practice as environmental peacebuilding. This paper develops a time-critical analysis of the climate change/ conflict nexus in the arid range lands of Northern Kenya. Here, agro-pastoralist violent conflict has intensified alongside increased temperatures and prolonged droughts. At the same time, traditional and community-based conflict resolution mechanisms have long acknowledged temporalities of environmental change, with seasonal strategic peace made to survive periods of scarcity. Bringing into conversation recent insights around the temporalities of conflict and peace with scholarship on climate change and environmental times, the paper examines the intersections of environmental, political and developmental times, and the challenges and potential they present for peacebuilding, in pastoralist regions of Northern Kenya.

**Natascha Mueller-Hirth** is Senior Lecturer in Sociology at Robert Gordon University Aberdeen, Scotland. She holds a PhD in Sociology from Goldsmiths, University of London. Her research utilises qualitative methodologies to examine issues around time, peace and conflict, environmental change, development and gender. Natascha has published articles on subjects such as the politics of time and temporality in transitional justice, gender and peacebuilding, climate change and sustainable livelihoods, and the governance of development and development organisations. She is co-editor of *Time and Temporality in Transitional and Post-Conflict Societies* (2018) and co-author of *The Sociology of Everyday Life Peacebuilding* (2018).

**Materiality and memory-making: the chronopolitics of stone use in memorials and monuments**

Alice Butler-Warke, Robert Gordon University  
 Matthew Warke, University of St Andrews

The stone under our feet—rocks that have formed over billions of years—are commodified and commercialised, imbued with identity and meaning, and used to construct the built environment that surrounds us, from the smallest village to the global city. In this paper, we highlight how the selective use of stone in monuments and memorials in Britain is bound up in a chronopolitical process that positions a narrative

of Britishness at a particular historical moment. We show that who is remembered and written into history represents a white-washed view of the past. We draw on critical heritage literature and critical theory more broadly and discuss detailed empirical research on the use of Portland Stone in monuments and memorials such as the Cenotaph and the Commonwealth (formerly Imperial) War Graves. We reveal a story of exclusion and empire politics, and we argue that this selective erection of monuments and memorials using value-laden stone serves not only to transmit a discourse of othering and belonging, but also turns Britishness into a temporal entity that is based on—and fixed in—a mythologised past to which only certain groups have a claim.

**Alice Butler-Warke** is a critical human geographer and lecturer in sociology at Robert Gordon University (Scotland). Her research focuses on place identity and stigma, urban experience, discourse and power, and postcolonial framings of the city.

**Matthew Warke** is geologist and research fellow at the University of St Andrews (Scotland). His research mainly focuses on Earth system evolution over deep time, but has recently expanded to aspects of geoheritage, geoethics, and urban materiality – particularly regarding the use of building stone.

### **Time and Impunity: JE SUIS CHARLIE and the time of un-punishment**

Lara Choksey, University of Exeter

This paper will offer some reflections on time and impunity. It will address urgent temporalities across intersecting figurations – electoral time (governance), pandemic time (biomedicine), climate change time (geophysics), and the time of abolishing state-mandated violence (revolution) – as a way of encountering the ambivalence around punitive action in what identifies, in plural and conflicted ways, as contemporary Left-thinking. It will consider how late capitalism’s protracted and multiple crash-landings are anticipated, planned for, and accelerated by extra-state punitive actions, but also how these actions are not able to reconcile their own undecided relation to the scale and subjects of warfare and secret operations, and how certain forms of action involve forging uncomfortable and often impossible alliances. Taking JE SUIS CHARLIE, its precedents, and its afterlives in contemporary French culture as a starting point, this paper suggests the “time of un-punishment” as a problem for imagining what comes next.

**Lara Choksey** is a Research Fellow in the Wellcome Centre for Cultures and Environments of Health at the University of Exeter, a Visiting Research Fellow at the UCL Sarah Parker Remond Centre for the Study of Racism and Racialisation, and the author of *Narrative in the Age of the Genome: Genetic Worlds* (Bloomsbury, 2021). She

has had articles and chapters published in the Journal of Historical Geography, the Journal of Literature and Science, The Palgrave Handbook to Contemporary Literature and Science, Sanglap, Media Diversified, and Global Social Theory. Her work focuses on confluences of embodiment, land, utility, and citizenship in the social reproduction of environment.

**The value of the future. Materialities and temporalities from Latin America**

Gonzalo Iparraguirre, University of Buenos Aires

This work presents an ongoing research focused on the social imaginaries about future in different decision-making political groups as a way to understand the manner they create development agendas in Latin America. From an anthropological perspective, the social value of the future as a conditioning element of any planning practice can be reinterpreted by equating the presence of the future with the presence of the past.

Analogous to the proportion of hours of sleep required by our brain to stay awake for the remaining day, the imaginaries of the future (such as imagination, dreams, projects, visions and expectations) make up half of the process of making daily decisions, since the other half are the imaginaries of the past that we usually call "memory", "experience", "memories", and "knowledge" in general. The usefulness of this model is materialized by analyzing the imaginary and anticipatory rhythmicity applied to groups of political decision-makers and their design of agendas in Latin America. This can be extrapolated to vast decision-making groups in Latin America, since the imaginaries of development and their correlate in management practices and materialities have a chronological matrix, that is, they share the way in which the presence of the past conditions the decision making.

Currently I work as Secretary of Development at Tornquist Municipality, Argentine. I also work as postgraduate researcher at University of Buenos Aires (UBA) and National University of South (UNS). My research focuses on time, temporality and rhythms of life. It arises from a cross disciplinary approach that I have been shaping for twenty years. In 2011, I published my first book, which presented a comparative study of western and indigenous temporality. In 2017 I published my second book about the construction of an ethnographic methodology for studying temporality, spatiality and rhythms of life in different cultural contexts, called "cultural rhythmicity".

**C:11e Piercy Room | Temporal infrastructures of toxic decay**

Chair:

Support:

## **The Multiple Temporalities of Infrastructure: atomic cities and the memory of lost futures**

Leila Dawney, University of Exeter

Nuclear power plants, with their promise of boundless cheap energy, are archetypal figures of progress modernity. As we acknowledge the limits of industrial progress and growth-based capital, places for where the dream is now over, and whose inhabitants are finding ways of living through change, provide a lens for reconsidering the dominant modernist temporalities of progress and decline. Through the case study of the former atomic city of Visaginas, Lithuania, this paper addresses the question of how to account for forms of life that emerge in the aftermath of high modernity. Here, infrastructures act as residual cultural and material resources for practical ontologies and world-building after progress. Building on scholarship on the political aesthetics of infrastructure, I suggest that their ontological transition involves what Fisher describes as the “memory of lost futures”, a future anterior that, through the remains of material connections, technocultures and cultural memory, provide limits and conditions for emergent ways of living “after progress”.

**Leila Dawney** is a cultural geographer and theorist of power, affect and embodiment. Her research concerns forms of experience and subjectivity produced in and through spaces of late capitalism. She is a Senior Lecturer in Human Geography at the University of Exeter, UK, and a member of the Authority Research Network.

## **Eternal care: Nuclear waste as toxic matter and future fantasy**

Anna Storm, Linköping University

Tatiana Kasperski, Pompeu Fabra University

In this paper, we examine how human interactions with nuclear waste, with special regard to responsibilities and temporalities, have changed over time. Based primarily on historic and contemporary accounts and on interviews, we unfold the history of handling and conceptualizing radioactive residue in Soviet and post-Soviet Russia and in Sweden. How have different actors classified and physically handled nuclear residues from the end of World War II up to this day? What have been the underlying assumptions guiding their understandings and actions? By juxtaposing the practices and perspectives of dumping, management and care, our aim is to contribute to current efforts to make sense of waste in the Anthropocene. We argue that the history of human interaction with nuclear waste reveals a necessity to approach radioactive residue not as something that can be moved out of sight and disappear, but instead as an anthropogenic wound or scar of our shared living environment that we have to care

about. We conclude that to acknowledge a need for eternal care is to accentuate the interdependence of historical and geological temporalities.

**Anna Storm** is Professor of Technology and Social Change at Linköping University, Sweden. Among her previous positions could be mentioned KTH Royal Institute of Technology, Stockholm University and Södertörn University, Sweden. She is currently the PI of the multidisciplinary project 'Atomic Heritage goes Critical: Waste, Community and Nuclear Imaginaries', and is senior researcher in 'Cold War Coasts: The Transnational Co-Production of Militarized Landscapes' and 'Nuclearwaters: Putting Water at the Centre of Nuclear Energy History'. She is the author of *Post-Industrial Landscape Scars* (Palgrave Macmillan 2014), which was shortlisted for the Turku Book Award 2015.

**Tatiana Kasperski** holds a PhD in Political Science from Sciences Po, Paris, France. She was as a postdoctoral fellow at Centre Alexandre-Koyré for History of Science and Technology, Paris, and a Marie Skłodowska-Curie Fellow at Pompeu Fabra University, Barcelona, Spain, where she currently works as a senior researcher in the multidisciplinary project 'Atomic Heritage goes Critical: Waste, Community and Nuclear Imaginaries.' She is the author of 'Les politiques de la radioactivité: Tchernobyl et la mémoire nationale en Biélorussie contemporaine' (Paris : Petra 2020).

### **Conflicting multibeings temporalities of material decay**

Lucilla Barchetta, University IUAV of Venice

Mathilda Rosengren, University of Cambridge

In the age of acute geological change, accounting for various time-spaces, and the materialities engendered therein, has become an articulately multi-being endeavour. Reassembling different urban environmental histories, this paper seeks to address how frictions in the temporal processes of decay expose and mediate multi-being relations in urban environments. In these environments of socio-political and climatic change, conflicts over how the temporality of material decay is to be perceived arise not solely through a dominant temporal schema, such as administrative abandonment or structured neglect, but also in relation to divergent and contradicting temporalities (geological, biophysical, chemical, political). Building on ethnographic field research from Italy, Germany, and Sweden, the paper seeks to contextualise the temporal qualities of urban environmental change. It shows how normative, temporal frames have reinforced discursive divisions between urban and natural processes by assigning culpability to those that block change or are seen as the cause of undesirable changes – establishing a division between “matter-in-time” and “matter-out-of-time”. Examining how multi-being notions of decay are lived, evaluated, and contested through our

everyday understanding of urban natures, the paper underscores the importance of considering the conflicts that emerge through these clashing temporalities of decay of plants, animals, and other vital and non-vital matter.

**Lucilla Barchetta**, PhD, is an anthropologist and urban geographer. Her work focuses on the intersection of political ecology with urban studies, with a specific focus on multi beings life and urban environmental change. She is a postdoctoral researcher at the Department of Architecture and Arts, University of IUAV of Venice.

**Mathilda Rosengren**, PhD, is a visual anthropologist and human geographer with a particular interest in more-than-human entanglements, ecologies, and ethnographies of the urban Anthropocene. She is currently a postdoctoral researcher at the Institute for Urban Research, Malmö University.

**C:11f Room 6 | Theorising time's form in the midst of crisis**

Chair:

Support:

**Cultivating an ethico-politics of the thick present: Trans/disciplinary musings on times of crisis**

Evelien Geerts, The University of Birmingham

Josephine Hoegaerts, University of Helsinki

Driven by digital conversations about our personal experiences with the discrepancies between the ever-increasing speediness of neoliberalism-drenched academic time, on the one hand, and the slowness imposed by COVID-19 lockdowns, on the other, we in this co-written paper would like to think through questions relating to the presumed linearity of time, disorienting times of crisis, and our obligations toward the thick present (Haraway 2016) and a post-crisis world that is already materializing itself through our (non-)actions in the here and now. Trans/disciplinarily diffracting (Haraway 1997; Barad 2007) our philosophical and historical voices while following the lines of flight created by queering Hegel's (1820) Owl of Minerva, we reflect upon how we can produce critical theoretical knowledge in and about crisis times, while holding space for a cultivation of a hope-filled ethico-politics of the thick present.

**Evelien Geerts** is a multidisciplinary philosopher, a Posthumanities Hub affiliated researcher, and a Research Fellow at the University of Birmingham, where she is working on the ERC-funded 'Urban Terrorism in Europe (2004-19): Remembering, Imagining, and Anticipating Violence' project. Her research interests include new materialisms & Deleuzoguattarian philosophy, critical epistemologies, and political

philosophical questions of identity, difference, and violence. She has published in *Philosophy Today*, *Women's Studies International Forum*, and *Rhizomes: Cultural Studies in Emerging Knowledge*.

**Josephine Hoegaerts** is Associate Professor of European Studies at the University of Helsinki, and PI of the research project CALLIOPE, Vocal Articulations of Parliamentary and Imperial Identity. She has published on the histories of stammering, vocal health and education, political and parliamentary practice, and constructions of childhood and masculinity in *Women's History Review*, *Radical History Review*, *History Modernity and Culture*, etc. She also blogs about her research at <https://singinginthearchives.wordpress.com/>"

### **The Slender Now**

Ann Light, University of Sussex/Malmö University

Time has a way of changing things. From here (and now), the 20th century's ideal of democratic mass consumption looks as tawdry as the things we were being sold. The short-termism of capitalism is stalking us. Yet, long-term thinking has the ring of empire about it (cf *The Long Now*, designed with the duration of civilizations in mind, <https://longnow.org/about/>). Riffing off Bastian (2017), who argues that 'contestations over the future ...include struggles around which conceptions of time are thought to be best able to get us there' (2019, p37), I propose the Slender Now, a horizon concept that emphasizes fragility and grace. In the Slender Now, respect for far horizons coexists alongside designing with/for agility. The Slender Now is so slender that it is vulnerable to things speeding into it, yet lithe enough to dance and dodge. With this playful image, I question the horizons of design work (including policy design), consider temporal imaginaries and argue that cultivating a sense of being situated in time, rather than at the end of a long run of it, helps promote socio-ecological strategic thinking for creative and flexible futures.

**Ann Light** is Professor of Design and Creative Technology, University of Sussex, UK, and Professor of Interaction Design, Social Change and Sustainability, Malmö University, Sweden. She is a qualitative researcher and interaction theorist, specializing in participatory design, human-computer interaction and collaborative future-making, who has worked with arts and grass-roots organizations and marginalized groups on five continents. She leads a research node on the European Union Creative Practices for Transformational Futures project and her next book is called 'Designs to Reshape Humanity: Integrity and Cunning in the Anthropocene' (Bloomsbury, forthcoming).

### **Temporal Matters: Rediscovering Articulations without Event**

Giulia Rignano, KU Leuven

Considering time as a series of objects that seem to flow into it can hardly lead to understand the scope of the concept of materialization. In fact, it is not about objects, nor about a time in which everything flows – it is worth instead to try to define material times, or temporal matters, in which the binomials of “form and matter”, “time and space”, up to the most submerged binomial of “act and potency” are put to test by an intensive con-constitution. As a theoretical framework, the Spinozian parallelism of mind and body can help to consider time and space as two aspects of the same thing: they cannot interact with each other, as two separate substances would do, but only differ by remaining the same, that is, showing how deep this differences can come to touch. This paper aims therefore to focus on dualism as the problematic heart of the conception of time in an epistemological and ontological context, verifying how a Neomaterialist position allows to recognize the need to critically review the category of “Event” that has dominated the notion of time in the twentieth-century, and that must today be reshape for an articulation properly free from every kind of binarism.

**Giulia Rignano** (Milan, 1993) graduated in Philosophy at the University of Milan with a research thesis in Aesthetics titled “The concept of matter in Gilles Deleuze and the New Materialisms”. Since 2018 she is member of the permanent research seminar PIS. Performing Identities Seminar (University of Milan). Since 2019 is member of CONTRA/DIZIONI – feminist and queer philosophical perspective (<https://bit.ly/31xXGH4>). Her research evolves between theoretical philosophy, especially in the French context of the 1900s and Anglo-Saxon neo-materialist aesthetics. In 2019 she won a scholarship from the CNRS (Paris) to work within the research group IDEM. Identification, empathy and projection in the performing arts under the direction of Mildred Galland- Szymkowiak. She is now a PhD student at the Institute of Philosophy and the Faculty of Arts of KU Leuven.

### **Fleshy Times of Stigma**

Annette-Carina van der Zaag, Birkbeck, University of London

This paper seeks to explore the material life of time through a theoretical contemplation of stigma, not only as a lived cultural economy of marginalisation as Goffman’s ‘spoiled identity’ tends to indicate, but as a fleshy bodily substantiation over time.

Etymologically, stigma cleaves to the fleshiness of the body - the branding of skin, signs of illness, the wounds of Christ. Yet this cleaving is also distinctly temporal - the permanency of branding, the readable progression of bodily states and the pious embodiment of past acts of violence. The paper homes in on ‘the spoiled body’ to pay heed to stigma’s temporal fleshiness. And takes particular inspiration from Hortense

Spillers' hieroglyphics of the flesh, those stigmatising marks through which (post-)slavery subjects emerge, in order to contemplate stigma as a substantiation of time that speaks traces of the past while dis/articulating the break towards an elsewhere to come. Amidst theorisation, the paper argues that this contemplation is relevant to the material temporality of COVID-19, the marks (to be) left in its wake and the manner in which these speak histories of dehumanisation that are in no sense unprecedented. Yet, might these fleshy times of stigma also incite new modes of being/with?

**Annette-Carina van der Zaag** is a lecturer in the Department of Psychosocial Studies at Birkbeck, University of London. She is interested in interrogating figures of the human through posthuman/black/queer theorisations of bodies, empirically with a particular attention to HIV/AIDS. She is the author of *Materialities of Sex in a Time of HIV: the promise of vaginal microbicides*. She is principal co-investigator of Project Stigma, an interdisciplinary international research collective exploring (HIV) stigma as a site of transformative potential. Furthermore, she is currently working on an art project entitled *Nomadic Objects* which explores blackness, sexuality and futurity through wearable sculpture.