

reimagining museums for climate action

edited by Rodney Harrison
Colin Sterling

feat. Anab Jain + Ashish Ghadiali, Henry McGhie & Subhadra Das + Barker Langham + Chris Garrard / Culture Unstained + DESIGN EARTH
feat. Donna Haraway + Rania Ghosn, El Hadi Jazairy & Peg Rawes + Dundee Museum of Transport + Existences Museums + The Great
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& Walter Francisco Figueiredo Lowande + Justine Boussard, Celine Nguyen, Victoria Bennett, Margot Drayson / V&A-RCA History of Design
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MASH & RESOLVE Collective + Mark Chambers & Miranda Massie / The Climate Museum + pppoooll + Takumã Kuikuro & Thiago Jesus

Reimagining Museums for Climate Action
Edited by Rodney Harrison and Colin Sterling

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MUSEUMS OTHERWISE:
A COMPENDIUM OF POSSIBLE FUTURES
Rodney Harrison & Colin Sterling

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Colin Sterling is Assistant Professor of Memory and Museums at the University of Amsterdam. His research focuses on critical-creative approaches to heritage, memory and museums. He is interested in how artists, designers, architects, writers and other creative practitioners engage with museums and heritage as spaces of critical enquiry. Colin is the author of *Heritage, Photography, and the Affective Past* (Routledge, 2020) and the co-editor of *Deterritorializing the Future: Heritage in, of and after the Anthropocene* (Open Humanities Press, 2020). He is co-editor of the journal *Museums & Social Issues*.

This book is not a typical academic edited volume. Nor does it subscribe to the usual dictates of an exhibition catalogue. It does not seek to provide a comprehensive overview of work on climate change and museums or claim to have discovered One Quick Trick to Solve the Climate Emergency. Instead, the book reflects the main characteristics of the *Reimagining Museums for Climate Action* project: it is collaborative, distributed, conversational, subversive, nomadic and, at times, playful. The arguments it puts forward emerge through dialogue and speculation just as much as they respond to and build on empirical research. In this sense, the book is perhaps best seen as a partial and in many ways still evolving artefact of the *Reimagining Museums* project. It can be read from cover-to-cover, or its varied contents can be traversed in a less rigid fashion. It is one “output” among many, and its main aim is to prompt further transdisciplinary alliances, rather than set out a particular position or manifesto. To this end, the book invites peripatetic readings and strange deviations. It is anchored by eight concepts that reflect the diversity and creativity of museums, but it is also motivated by a desire to (re)situate this field within a broader set of debates on the roots of social and environmental injustice, and the role of museums in these histories.

Our earliest conversations about the *Reimagining Museums* project took place in January 2020, when news of a novel coronavirus was still relatively muted. As the gravity and urgency of COVID-19 became apparent, timelines and priorities shifted. With many museums closed and COP26 postponed, we debated whether to continue the project. Other tasks and responsibilities, both personal and professional, seemed infinitely more pressing than the call to “reimagine” a particular field of practice. And yet COVID-19 has also been a stark reminder of the constant need for reflection and reimagination across all walks of life. As Arundhati Roy wrote in the early weeks of the pandemic, such a rupture can be

‘a portal, a gateway between one world and the next. We can choose to walk through it, dragging the carcasses of our prejudice and hatred, our avarice, our data banks and dead ideas, our dead rivers and smoky skies behind us. Or we can walk through lightly, with little luggage, ready to imagine another world. And ready to fight for it.’¹

The necessity of “reimagining” the world was also brought into sharp focus by that other seismic event of 2020: the murder of George Floyd in Minneapolis and the subsequent intensification of Black Lives Matter protests across the world. The growth of the BLM movement crystallised and accentuated a range of issues simmering beneath the surface of

museological discourse and practice for at least the past decade, not least around questions of decolonisation, restitution, diversity and inclusion. Whether or not this will be a watershed moment for the cultural sector remains to be seen, but there is a sense that certain ways of working and ways of thinking should not – indeed cannot – go “back to normal.” As filmmaker and activist Ashish Ghadiali argues in this volume (see ‘Genealogies of the Emergency’), the events of 2020 may well come to be understood a ‘precursor of the consciousness and the awareness that is to come ... the impacts of that event [the murder of George Floyd and the BLM protests] will be felt over exactly the same timeframe in which the transition towards global justice, towards ecological equilibrium, has to unfold.’

As Ghadiali highlights, the pandemic and the widespread calls for racial justice seen across the world cannot be disentangled from the climate crisis. This is not to say that climate change “transcends” COVID-19 and BLM, or that it represents a “bigger problem” on the horizon, as some commentators have suggested, but rather that it prefigures, intensifies and in many ways undergirds crises as seemingly disparate as biodiversity loss and systemic racism. Here again Ghadiali provides a useful provocation for thinking through these interwoven problems, arguing that understanding the roots of climate change means understanding ‘the 500-year history of slavery, of colonialism, of neoliberal structural adjustment, as part of one continuous narrative.’ Only by recognising the multiple connections between these ‘seeds of oppression,’ as Ghadiali puts it, can we ‘start to create a community of care around the world.’

It is in this light that *Reimagining Museums for Climate Action* can also be seen as a call to reimagine museums for a post-pandemic world, or for racial and social justice, or for care and reciprocity between human and non-human kin. “Climate action” in our reading crosses all these registers and more. Within policy circles, the two main pillars of climate action – mitigation and adaptation – help to guide the reduction of greenhouse gas emissions and implement the changes necessary to adapt to a warming world. Museums can contribute to both these trajectories in various ways, but they are also well placed to address the social, cultural, political and economic dimensions of the climate crisis. They can encourage new forms of governance and participation, support progressive research and education, and (potentially) provoke systemic change across society. At the same time, climate change poses significant challenges to the way museums operate. Practices of collecting, conservation, exhibition making and community engagement may all need to be rethought in times of rapid social and environmental change. What might museums look like in a world altered by

rising seas and intense heat domes? How will they function and who will they serve? What role might they play in reconnecting nature and society, and in combatting the knotted problems of climate change, inequality and social justice?

This book approaches these questions through dialogue, concrete case studies and speculative proposals. There is a sense across the following pages that we may well be at an epistemic (or even existential) “tipping point” when it comes to museums, galleries and other cultural institutions. What has come before no longer seems fit for purpose. The cultural infrastructures of the fossil-fuel era risk being stranded in the same way as outmoded extractivist mining technologies if they do not evolve to meet the challenges of a warming planet. Here it should be noted that many museums would not be innocent victims of such a collapse. The emergence and spread of museums around the world is closely bound up with many of the forces that have led the planet to the brink of climate breakdown, including the separation of human and non-human life; the marginalisation and oppression of Black, Indigenous and minority ethnic peoples; and the celebration of progress narratives dependent on unlimited economic growth. Recent years have witnessed a profound shift in the way museums engage with such legacies, but their underlying logics of preservation, interpretation, curating, education and research remain largely unchallenged.

Reimagining Museums for Climate Action seeks to push these debates forward through critique and creativity. It advocates for a kind of forwardness that is also an unravelling: a deep questioning of the way things have been done that can also act as a framework for what might be possible. The conversations and essays included in this volume speak to this idea in different ways, responding to and building on a set of core “concepts” developed for the *Reimagining Museums* project and exhibition, held at Glasgow Science Centre from June to November 2021. Below we give a brief background to the project, before revisiting some of the key themes and questions that have emerged through this ongoing process of reimagining.

Process

How can we expand the dialogue around museums, and how might we move from speculating about what museums could be, to practically reimagining their role in and for the future?

Reimagining Museums for Climate Action began life as an international design and ideas competition. Launched on International Museums Day 2020, the competition aimed to open up the discussion around the subject of museums and climate change to new publics and

new constituents, asking how museums could help society make the deep, transformative changes needed to achieve a net-zero or zero-carbon world. Rather than focus on a specific location or type of museum, the competition invited proposals that aimed to unsettle and subvert the very foundations of museological thinking to support and encourage meaningful climate action. It specifically asked for design and concept proposals that were radically different from the “traditional” museum, or that explored new ways for traditional museums to operate. The competition brief invited ‘designers, architects, academics, artists, poets, philosophers, writers, museum professionals, Indigenous groups, community groups and the public at large to radically (re)imagine and (re) design the museum as an institution, to help bring about more equitable and sustainable futures in the climate change era.’ We received over 500 expressions of interest from around the world, resulting in 264 submissions from 48 countries. These ranged from the fantastical to the highly practical, and encompassed a broad spectrum of museum typologies (social history, science, community, natural history etc.).

Following the competition, eight teams were invited to be part of an exhibition at Glasgow Science Centre which would open in advance of, and continue during, COP26. The exhibition was integrated with the science centre’s permanent *Powering the Future* exhibit to highlight the crucial role cultural institutions have to play in shaping the world of tomorrow. Crucially, this way of designing a temporary exhibition in and around under-utilised spaces within an existing permanent exhibition mirrored aspects of the competition brief itself, forcing us and our designers to practically explore ways of reimagining an existing exhibition for climate action. This experiment was challenging, but rewarding, creating unexpected synergies and juxtapositions between permanent and temporary exhibits. The exhibitors included established designers, curators, academics, sound artists, digital specialists, Indigenous filmmakers, emerging architectural practices and museum managers – a good example of the transdisciplinary conversations and alliances required to “reimagine” museums in any meaningful way. Their concepts are included in these pages, along with varied essays and reflections on the broader ideas of the project. The international scope of the competition also underlined the fact that critical and creative thinking about museums often involves moving between different scales and contexts, from the hyper-local to the planetary, from city centres to forest ecosystems.

A number of different research trajectories came together in co-authoring the competition brief, including Henry McGhie’s policy-oriented work on museums and the Sustainable Development Goals², Harrison’s speculative approach to heritage as a future-making practice³, and Sterling’s interest in critical-creative design practices in heritage

and museums⁴. While these trajectories overlap in some ways, the gaps and tensions between research that is quite theoretical in outlook and work that is more concerned with policy and practice provided a useful foundation for thinking holistically about museums and climate action. To this end, the brief encompassed issues of collecting, conservation and exhibition making, the links between decolonisation and decarbonisation, the need to challenge foundational principles, the desire for speculative ideas about what museums could be, and the relationship between museums and climate justice. As an activity linked to the UK's hosting of COP26 in Glasgow, the brief also paid particular attention to the various UN programmes connected to museums, including Action for Climate Empowerment⁵.

This book and the associated website and “toolbox” act as artefacts of a project that – by necessity – could only have a limited lifespan. We hope these resources will remain useful well after COP26 and the exhibition at Glasgow have finished. The concepts and commentaries contained in this volume bring together a number of academics, activists, architects, artists, curators, designers and others to reflect on the broad themes of the project. As the title of this chapter suggests, we would like to think of the book as a kind of speculative sourcebook for exploring possible museum futures; futures that might inspire radical action within and beyond the museum and heritage sectors to address the climate emergency.

Mobilising

This project is not the first to raise the potential for museums to contribute to climate action, and it is unlikely to be the last. Over the past decade museums globally have mobilised to address the challenges of a warming world through curatorial work, collecting programmes, public engagement activities and new development strategies that do not shy away from the profound consequences of the climate emergency⁶. At the same time, a broad range of initiatives have challenged the familiar idea of the museum in direct response to the climate crisis. These include activist-oriented climate museums in New York and the UK, both of which are featured in this volume, as well as the proposed Museum for the United Nations, whose first project – *My Mark, My City* – aimed to galvanise climate action in communities around the world. Alongside these, we cannot fail to mention the urgent work of protest groups such as Culture Unstained and BP or Not BP?, who seek to end fossil fuel sponsorship across the cultural sector (the activities of these groups are also featured in this book in the form of a visual essay by Culture Unstained co-Director Chris Garrard).

A growing sub-field of climate related publications in museums studies has also begun to explore this topic in recent years, including three special issues of relevant academic journals in 2020 alone⁷. The breadth of case studies, creative interventions and conceptual approaches found across this literature provides a valuable overview of the manifold ways in which museums intersect with climate action. Some of the main dimensions of this work include the idea that museums are “trusted spaces” in which different publics can engage with the science of climate change⁸; the possibility for collections – especially natural history collections – to inform new approaches to biodiversity conservation⁹; the need for museums to promote alternative forms of consumption¹⁰; the opportunities for cross-cultural engagement that may emerge around specific objects and narratives related to climate change¹¹; and the potential to break down the boundaries between nature and culture through different modes of conservation and curating¹². What such work highlights most clearly is the fact there is no single pathway or theory of change for the sector in relation to climate issues – addressing this crisis involves new imaginaries, new practices, new concepts and new strategic alignments.

There are important parallels here with broader initiatives that aim to address the ongoing role of museums and heritage in supporting systemic forms of racism and inequality. In the UK and the US, campaign groups and forums such as Museum Detox, Museums Are Not Neutral, Museum as Muck and Decolonize This Place have drawn attention to the historical and contemporary injustices of the field in ways that often coalesce with the political dimensions of climate action. Such work helps to surface the dense entanglement of museums with questions of colonialism, imperialism, nationalism and industrial capitalism. Museums have never been isolated from the world, but their complicity in a range of oppressive and damaging structures is now being thrown into sharp focus on multiple fronts.

Across much of this work we find a recognition – sometimes explicit, sometimes implicit – that the emergence and spread of museums around the world tracks the rise of carbon emissions and environmental degradation in ways that can no longer be ignored. In his book *Museums in a Troubled World*, Roberts Janes describes the global museum ‘franchise’ as a valuable tool in the fight against climate change¹³. This franchise however may also be read as an artefact of the Industrial Revolution, or of various empires, or of the Great Acceleration. Museums are being called into question in this moment precisely because they can be seen as both an instrument and a legacy of the processes that have led to the climate crisis. Mobilising the infrastructure of museums to address this crisis means reckoning with a set of practices, institutions and

ways of thinking that may need to be wholly repurposed, rather than simply “reimagined.”

Uncertain futures

Imagination, however, remains an essential tool in this process. Writing in his book *The Great Derangement*, Amitav Ghosh argues that ‘the climate crisis is also a crisis of culture, and thus of the imagination’¹⁴. As such, there is an urgent need for new creative imaginaries to help confront the challenges of a warming world. *Reimagining Museums for Climate Action* has aimed to inspire and promote such imaginaries in a number of key areas. First, by recognising that museums are historically interwoven with the *problem* of climate change, we sought to underline the need for an epistemic shift in museological practice to bring about meaningful climate action. Second, by highlighting the manifold ways in which museums are to some extent already embedded in the work of climate action, we hoped to draw together disparate strategies and approaches from across the sector. Third, by expanding the conversation around this problem to those outside the rather narrow field of “museum studies,” we sought to encourage transdisciplinary perspectives and positions. Finally, by embracing speculative design as a creative methodology for the field, the project has aimed to challenge preconceptions about what a museum could or should be.

The impacts of climate change are felt not just in rising temperatures, biodiversity loss and other environmental consequences, but in psychic experience, cultural responses, business, politics and our relationship to time and history¹⁵. This is the change museums are currently navigating, just as much as they are confronting the damaging effects of a warming world. This vastly expands the scope of museological “reimagining,” which in our view can no longer be left to museologists alone.

Taken collectively, the concepts, stories and commentaries assembled in this book highlight a number of important transformations that might take place for museums to facilitate climate action. The first relates to breaking down boundaries and moving away from authoritarian values of order and control. In an inevitably altered future world, museums must accept and embrace the creative possibilities of uncertainty and change rather than work against these forces. This will mean rethinking the familiar structure of museums. Instead of centralised spaces and buildings, many of the ideas put forward for the competition emphasised non-hierarchical “networks” supporting decentralised methods of collecting, curating, education and research. Such a shift would bring museums closer to the communities they ostensibly serve: another key theme that can be observed in different ways across the book. It is no doubt

telling that many of the ideas submitted to the competition highlighted the relationship between traditional museums and the varied processes by which capitalism extracts and accumulates value from the world. Working *with* and going to people rather than taking objects *from* them may seem like a modest strategy, but – if implemented properly – such an approach could fundamentally reorient the purpose of museums.

As many contributors to this volume and the project as a whole noted, all of the above would require a significant rethink of the way museums have typically been governed and managed. Certain crises demand new forms of decision making where experts and lay people can come together to imagine new futures. As Mark Chambers puts it in his conversation with Climate Museum Director Miranda Massie (see ‘Climate Commons’), ‘we need creatives and the public to cocreate clear visions of possible futures that include and support those who’ve been excluded from traditional official visions of who makes the future.’ As Chambers also notes, design is ‘the first manifestation of intent.’ In many ways this project and this book attempt to address the questions that inevitably follow: ‘what do we intend to do? What exactly is our intent now?’ The “intent” of climate action is usually communicated through numbers, charts and diagrams: reduce global greenhouse gas emissions to a certain level to ensure average temperatures do not cross a particular threshold. It hardly needs stating however that the simplicity of this intent masks a complex array of possible actions and future scenarios.

With each new Assessment Report from the Intergovernmental Panel on Climate Change, there is greater clarity on what kind of future the planet’s biosphere is racing towards without concerted action, but the social, political, cultural and economic dimensions of this future are less clear-cut. Put simply, if certain systems do not change, the impacts of climate breakdown are likely to be so severe that things will *still* change beyond recognition; by the same token, the transformations required to avert such changes will mean altering the familiar contours of life for many people around the world to an unprecedented degree. “Reimagining” museums in this context means navigating a constantly shifting terrain of social, political, economic and environmental transformations that are likely to veer between the inescapable and the desirable. As a participatory thought experiment, *Reimagining Museums for Climate Action* asks how museums and other cultural institutions might help to deliver the “intent” mapped out by the IPCC, but we remain mindful of the fact addressing this goal may well involve fundamental changes to the very substance of museological thinking and practice.

¹ Arundhati Roy, "The Pandemic is a Portal," *Financial Times* April 3, 2020, accessed August 12, 2021 <https://www.ft.com/content/10d8f5e8-74eb-11ea-95fe-fcd274e920ca>

² Henry McGhie, *Museums and the Sustainable Development Goals: A How-to Guide for Museums, Galleries, the Cultural Sector and Their Partners* (Curating Tomorrow, 2019)

³ Rodney Harrison, *Heritage: Critical Approaches* (Abingdon and New York: Routledge, 2013); Rodney Harrison, "Beyond 'Natural' and 'Cultural' Heritage: Towards an Ontological Politics of Heritage in the Age of the Anthropocene," *Heritage and Society* 8, no.1 (2015), 24-42; Rodney Harrison, Caitlin DeSilvey, Cornelius Holtorf, Sharon Macdonald, Nadia Bartolini, Esther Breithoff, Harald Fredheim, Antony Lyons, Sarah May, Jennie Morgan and Sefryn Penrose, *Heritage Futures: Comparative Approaches to Natural and Cultural Heritage Practices* (London: UCL Press, 2020); Rodney Harrison and Colin Sterling, eds., *Deterritorializing the Future: Heritage in, of and after the Anthropocene* (London: Open Humanities Press, 2019)

⁴ Colin Sterling, "Designing 'Critical' Heritage Experiences: Immersion, Enchantment and Autonomy," *Archaeology International* 22, no. 1 (2019), 100-113

⁵ "What is Action for Climate Empowerment?," United Nations Climate Change, accessed August 12, 2021 <https://unfccc.int/topics/education-youth/the-big-picture/what-is-action-for-climate-empowerment>

⁶ Sarah Brophy and Elizabeth Wylie, *The Green Museum: A Primer on Environmental Practice* (Lanham: AltaMira Press, 2013); Fiona Cameron and Brett Neilson, eds., *Climate Change and Museum Futures* (New York: Routledge, 2014); Jennifer Newell, Libby Robin and Kirsten Wehner, eds., *Curating the Future: Museums, Communities and Climate Change* (London and New York: Routledge, 2016); L'Internationale, eds., *Ecologising Museums* (Paris: L'Internationale, 2016)

⁷ Joy Davis, ed., "Museums and Climate Action" [special issue], *Museum Management and Curatorship* 35, no.6 (2020); Sarah Sutton and Cynthia Robinson, eds., "Museums and Public Climate Action" [special issue], *Journal of Museum Education* 45, no.1 (2020); Bergsveinn Þórrsson and Nørskov Vinnie, eds., "Curating Climate" [special issue], *Nordisk Museologi* vol. 2020, no.3 (2020)

⁸ Fiona Cameron, Bob Hodge and Juan Francisco Salazar, "Representing climate change in museum spaces and places," *WIREs Climate Change* 4, no. 9 (2013), 9-21

⁹ Henry McGhie, *Museum Collections and Biodiversity Conservation* (Curating Tomorrow, 2019)

¹⁰ Helen Arfvidsson and Ann Follin, "Connectedness, consumption and climate change: the exhibition human nature," *Museum Management and Curatorship* 35, no.6 (2020), 684-696

¹¹ Newell, Robin and Wehner, *Curating the Future*

¹² Bergsveinn Þórrsson, "When matter becomes a monster: Examining Anthropocenic Objects in Museums," *Museological Review* 22 (2018), 44-53

¹³ Robert R. Janes, *Museums in a Troubled World: Renewal, Irrelevance or Collapse?* (London: Routledge, 2009), 179-180

¹⁴ Amitav Ghosh, *The Great Derangement: Climate Change and the Unthinkable* (Chicago and London: The University of Chicago Press, 2016), 9

¹⁵ David Wallace-Wells, *The Uninhabitable Earth: A Story of the Future* (London: Penguin, 2019), 155; Andreas Malm, *The Progress of This Storm: Nature and Society in a Warming World* (London: Verso, 2018), 11

museum of open windows

UK

1

Livia Wang; Nico Alexandroff; RESOLVE Collective:
Akil Scafe-smith, Seth Scafe-smith, Melissa Haniff;
Studio MASH: Max Martin, Angus Smith, Conor Sheehan

What if museums
became centres
for community-led
climate research
and action?

‘Today, you are going to do something quite different. Today you’re going to go on a walk, but not just any old walk. Today you are going to be a citizen scientist, observing your surroundings for signs of a changing climate and contributing to a global collection of data’.

Museums today are much more than simply storehouses for treasured artefacts. They are places of research, entertainment and debate, and their work often extends far beyond their own walls.

The *Museum of Open Windows* expands on this idea by placing citizens and communities in the role of curators and researchers, with the Earth itself seen as a precious artefact in need of protection. Rather than document faraway places, however, the *Museum of Open Windows* focuses attention on the nearby and the particular. The museum in this context takes the form of an audio Field Guide directing people on a guided walk of their local environment, encouraging the listener to engage directly with the ecosystem they inhabit and identify signs of a warming climate.

With access to expertise and equipment, a community group might “open a window” onto their world by providing real-time footage of a landscape or industrial activity, to be accessed and shared globally with other communities online. They will be able to share quantitative information on water, soil and air quality, as well as more subjective accounts of their environments, redressing the predominance of cold scientific data in this field.

Museums are reimagined as a networked infrastructure in this scenario – a global set of tools and resources enabling citizen science that is attuned to local cultures and environments. By providing

access to their collections, knowledge and hardware, any museum might become part of the *Museum of Open Windows*, helping communities to engage in climate action by gathering and sharing environmental data. By uncoupling the idea of the museum from any single building or site, the *Museum of Open Windows* asks how communities worldwide might research, catalogue and ultimately care for their own distinct terrains.

Museums help us to look at things differently – to see the beauty in the mundane, and the significance of the overlooked. The Field Guide aims to provide a set of tools to help people read their surroundings as part of a broader ecology, to see landscapes and organisms as part of a wider whole, and to understand their own position within these systems. The Guide reminds us that action at a local level can help to bring about change in governments and big organisations.

‘You – and all the other people listening to this field guide around the globe – are going to “open a window” into your surroundings, to help build a living picture of the different ways climate change is affecting us all’.





'Data' collected following *Museum of Open Windows*
Field Guide, South London. Anonymous.

EXHIBIT

REFLECTING ON THE MUSEUM OF OPEN WINDOWS

Nico Alexandroff

Nico Alexandroff is a research-architect based in London. Since graduating with an MA in Architecture from the Royal College of Art his work has featured in exhibitions in Glasgow, Prague and Karlsruhe, and he has written for Columbia GSAPP and the RIBA. Nico is a design tutor at the Bartlett School of Architecture, and he recently established After-Bodies – a design-research collective. He is currently a PhD candidate at the Royal College of Art, researching cosmologies of ice in relation to climate collapse.

Members of the *Museum of Open Windows* team work across a broad range of disciplines; climate and ecological research, activism, design, education, museums, public programming and architecture. The climate emergency, the way it is communicated, and the role of the built environment are key concerns in each of our individual work.

Introduction

Museum of Open Windows begins by questioning the relationship between familiar representations of the climate and biodiversity crises and the mobilisation of climate action. In order to reimagine actions, it is necessary to extend our visual and sensory understanding of climate change. To this end, we ask how climate change can be represented through lived experience and shared through collectivisation, with the institution of the museum acting as a bridge between experience and action. In so doing we question the western scientific aesthetic, which at times feels abstracted beyond the material world and ends in “information overload”.

The Coronavirus pandemic has been a fast catastrophe, operating at a pace that evaded collective human cognition. Societies, via decision-makers, have been forced into a mode of action that is of a viral temporality. These actions have been severe and trans-national. We typically understand climate change to be a slow catastrophe, but it is also subject to radical simplifications as it weaves between scientific fields, bureaucratic systems, and public media. Coronavirus could be better understood as a climate emergency *geoglyph*, a planetary scale diagram, or a catastrophic revealing of habitat destruction, industrial farming practices and species extinction in a globalised world¹.

We need to not just throw away our simulations because of what happened in 2020, though – we need to make them more populist, more legible, more shape-able...What does a collectively designed simulation for complex system governance – look like? What other shapes, beyond curves, can it enable? How can it be built?²

The *Museum of Open Windows* project views the planet as a metabolic process. By this, we mean to focus attention on the exchange and movement of energy flows at the scale of the planet. This metabolism can be expressed as an entanglement of bodies – bodies of air, bodies of rock, bodies of the living and bodies of the dead. The project aims to frame landscapes as a medium for broadening democratic participation in climate change protocols. Surprisingly, museums may be seen as the ideal institution to make this shift, maturing into a mediator between bodies of knowledge and modes of action.

What's mine is yours, whether you like it or not

While the climate crisis is now firmly ingrained into our collective conscience, and although communities globally are witnessing and feeling its catastrophic effect, climate action does not do justice to the urgency of this existential threat.

Although framed as objective, climate change is contingent on an information aesthetic that is riddled with subjectivity, from the way questions are formulated and the recording devices used to study landscape typologies, to the way in which data is presented to a selective audience – not everyone can read scatter graphs. These aesthetics are usually far removed from the people that experience change on the ground. In response, the *Museum of Open Windows* places an emphasis on communities; it aims to repurpose subjectivity in the hope of initiating localised movements of climate action. The proposal enables communities to claim back the museum typology as something that might reflect all individuals and all landscapes, rather than a select view of the world. This builds on the work of some museums' outreach projects, which aim to facilitate community-led endeavours, public programs and citizen science to create an institutionalised relationship between people and the ecological systems they inhabit.

Today, resource allocation is still predominantly driven by current systems of perpetual economic growth. Global extraction industries are disproportionately balanced, with ten economies accountable for 68% of total extraction in 2012³. However, a "Rights of Nature" movement has emerged treating natural systems such as rivers, forests and mountains with the same legal status as human beings. The Colombian rainforest, Lake Erie, the River Ganges and New Zealand's Te Urewera Forest are all examples of environmental personhood being written into national legislation. The *Museum of Open Windows* builds on this framing of landscape by operationalising perceptions of the "local" as autographic.

Operationalising the 'local'

When it comes to visible traces of ecological disasters, these traces are their direct imprints, and they are encodings of the process into the medium of planet Earth. They announce an aesthetic regime of the surface, claiming an immediate authority to inform our ways of plotting an escape from the Anthropocene⁴.

The deeper we look into our local environments, the more we become aware of irregular "marks". "Marks" are autographic visualisations – autographic meaning "self-inscribing", these are otherwise known as biological indicators. By observing these "marks" through a set of specific lenses we have the ability to reveal the climate crises visually and materially, including anomalies in ecosystems and the asynchronisation of metabolic flows⁵.

The climate crisis is as much a crisis of communication as it is of representation. Climate politics are based on information visualisation; these forms of visualisation leave room for dispute, leading to a situation in which political action rarely does justice to the unfolding

catastrophe. Autographic visualisations reveal environmental changes in a way that might provide the urgent and necessary reflection on the entanglements of planetary metabolism – which, of course, includes human bodies. To this end, the *Museum of Open Windows* utilises landscape, territories, environments and ecosystems as forms of media in and of themselves.

Landscape mediatisation

As an occupant of the global north – which, despite increasing pressures, is not yet under the immediate and intense threat of the climate crisis – I/we are asked to relate to this unfolding catastrophe through a scientific aesthetic, one of graphs, models, simulations and projections of disaster, or of traumatic photographs that circulate in modern public virtual domains. Mediatisation – the process of choosing what, how and why to show an instant, moment, phenomena or mark to specific audiences – is a useful tool for managing complexity. It is the re-orientation of a perspective, a way of seeing, which in turn acts as a way of sensing.

The idea of landscape mediatisation highlights the relationship between the problem (climate and biodiversity crises) and the models we use to understand this situation (isolated scientific findings and climate model simulations that are a simplification of Earth Systems). Action is taken based on how decision-makers present and understand the problem. Rather than provide a new set of images or graphs, the *Museum of Open Windows* looks to develop a new kind of collectivised, high-resolution camera to document the unfolding crisis.

Indexes define the boundaries of models, and models are the way we currently perceive the complexity of life. Indexes are the parameters within which we project and understand the changing Earth System. Indexes however are constructed, selected and curated – they are inherently political. The project aims to redraw the parameters of visualising planetary flux, relying less on translating changes into media (information visualisation) and more on refocusing the camera lens to gather evidence of change (autographic visualisation).

Assembled solidarity

A museum (any museum) in this model can become an institution both for and of coexistence. Museums can be a distributed infrastructure enabling community groups located across the biosphere to come together in the shared interest of ecosystem protection. The proposed *Museum of Open Windows* is a system of change that aims to represent the planet as a living breathing organism.

By uncoupling the idea of the museum from the edifice of a single building or institution, we can reimagine the role museums might play in global learning and preservation: a museum which offers windows into different terrains, catalogued, researched and conserved by the communities who live there. The *Museum of Open Windows* situates the Earth as a myriad of exhibits, and its citizens the curators; a cognitive shift through which the environment is treated with the same reverence as a museum artefact; studied and protected in a similar manner.

Museums worldwide would support and enable a series of satellite museums, sharing their resources via local networks. With access to expertise and equipment, a community group might literally “open a window” into their world by providing real-time footage of a landscape or live data feed, to be accessed and shared globally with other communities online. They will be able to share quantitative information on water, soil and air quality. The museum is therefore regenerative, shaped by the ecologies that form it, and engages with both urban and rural environments to connect communities scattered around the biosphere. This point of connection becomes the window into climate change, making tangible the complex systems of cause and effect. By enabling communities and amplifying their findings, the museum promotes a shift in what might be considered indices of change. In addition to environmental monitoring, we can learn to read the signals in our surrounding landscapes and recognise that the crisis is closer than we might imagine.

The project places an emphasis on youth participation. It is vital for globalised societies to become retethered to ecosystems, understanding both supply chains and waste chains as part of the wider biosphere. Part of the problem is not knowing how one can engage in these processes. Young people and children have the capacity to view the world from a less biased perspective, but they also have more at stake due to the length of time they still have on Earth. The Fridays for Future protests led by Greta Thunberg revealed the role of children in prompting political action. By focusing on younger generations, the *Museum of Open Windows* recognises that the cosmological shift required to confront climate change must come from the bottom up.

Embodying community

For a museum to become part of the broader *Museum of Open Windows* infrastructure, a formal centrepiece is needed to occupy the urban and rural fabric. A place for community collected data to be gathered as well as a medium through which the varied museums scattered around the biosphere can communicate. This formalised centrepiece becomes the window into climate change.

The *Museum of Open Windows* exhibit at Glasgow Science Centre may be seen as the first of these “centrepieces”, revealing the importance of a role reversal between cultural institutions and their surrounding communities. Instead of an exhibition curated *for* communities, it is curated *by* communities, bringing the entanglement between individuals and their ecosystem to the foreground. The exhibition and its accompanying Field Guide provides an infrastructure for this to take shape, designed to be repeated all around the planet, in time creating a network of resilience and action. You can listen to the [Field Guide](#) on most podcast platforms.

¹ Lukáš Likavčan, “Geoglyphs to Live by,” *Sonic Acts Academy* 5, no. 2 (2020): 53-57

² Holly Jean Buck, “The Tragic Omissions of Governance by Curve,” *Strelka Mag*, 2020, accessed August 3, 2021 <https://strelkamag.com/en/article/the-tragic-omissions-of-governance-by-curve>

³ Ria Voorhar and Lauri Myllyvirta, *Point Of No Return, The Massive Climate Threats We Must Avoid*, 1st edn (Greenpeace, 2013), accessed July 8, 2020 <https://issuu.com/greenpeaceinternational/docs/point-of-no-return>

⁴ Ibid

⁵ Dietmar Offenhuber, “Data By Proxy – Material Traces As Autographic Visualizations,” *IEEE Transactions On Visualization And Computer Graphics* 26 no. 1 (2020): 98-108

In March 2021, Barker Langham produced three films for the International Council of Museums UK's "Working Internationally" Conference. The films explored some of the most significant global issues affecting museums and the cultural industry today, including climate change and sustainability. Based on a series of interviews with museum professionals and cultural experts from around the world, the films aimed to give a different perspective and present new ideas to prompt reflection and encourage change.

For COP26, we decided to take Colin Sterling, Project co-Lead on *Reimagining Museums for Climate Action*, on a virtual journey to meet some of the people, stories and objects we encountered when we made those films. Through this short graphic novel, we want to demonstrate that we already have the means and expertise to tell the story of our planet; any museum can - and must be - a climate change museum. And, even more importantly, now is the time to do it.

TESTAMENTS FROM THE AGE OF HUMANS

AUTHOR
BARKER LANGHAM

ILLUSTRATOR
TOM SEARS

FARAWAY, IN HIS IVORY TOWER, DR COLIN STERLING IS BUSY POSING PROBLEMS... IT'S THE ANTHROPOCENE, AND THINGS LOOK BAD FOR LIFE ON EARTH.



MUSEUMS ARE COMPLICIT IN THIS CLIMATE CRISIS...

SETTING HUMANITY APART FROM NATURE! CLASSIFYING THE WORLD'S RESOURCES FOR US TO EXPLOIT THEM!



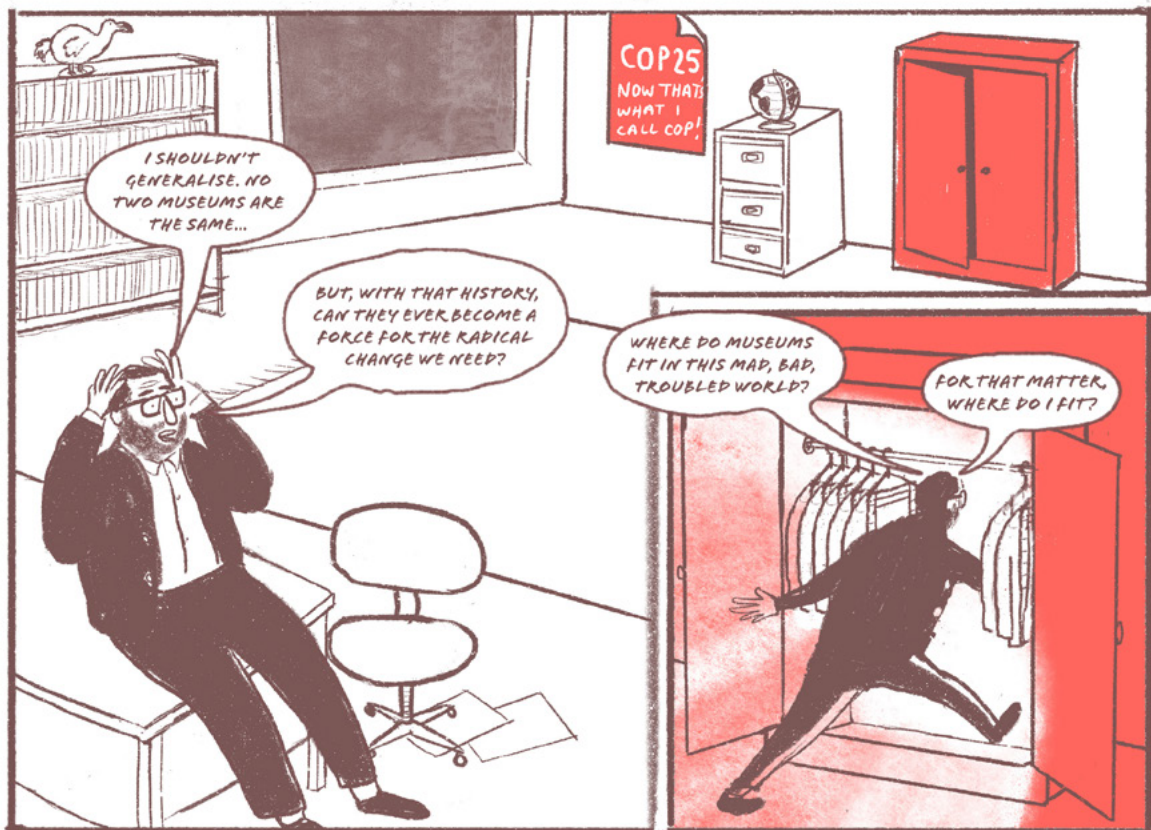
I SHOULDN'T GENERALISE. NO TWO MUSEUMS ARE THE SAME...

BUT, WITH THAT HISTORY, CAN THEY EVER BECOME A FORCE FOR THE RADICAL CHANGE WE NEED?

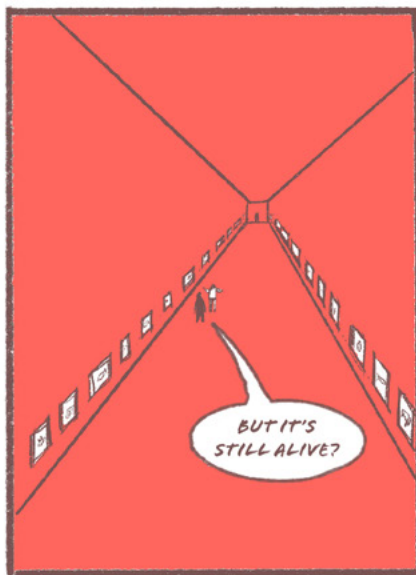
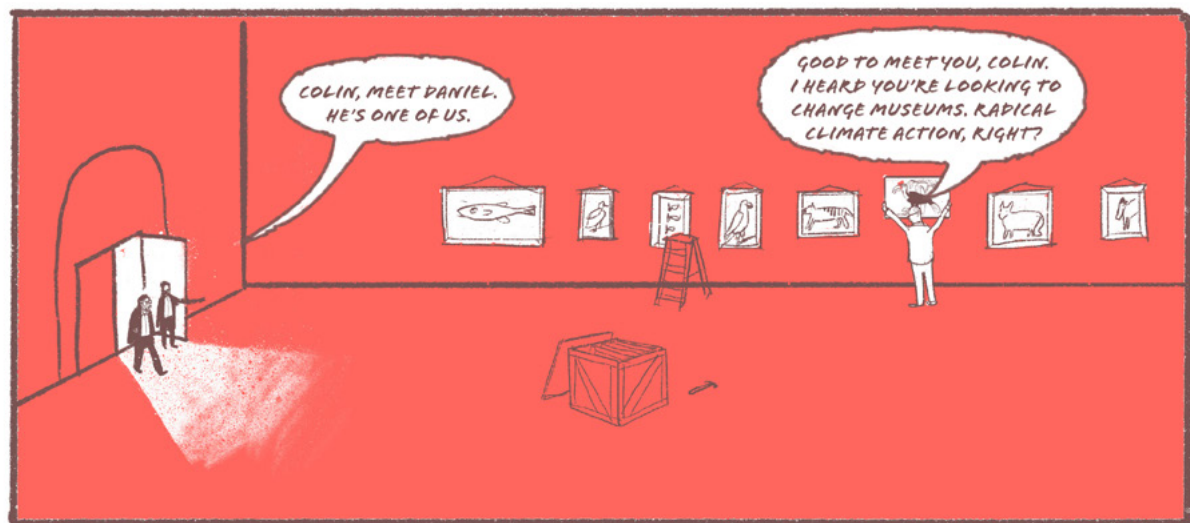
COP25
NOW THAT'S
WHAT I
CALL COP!

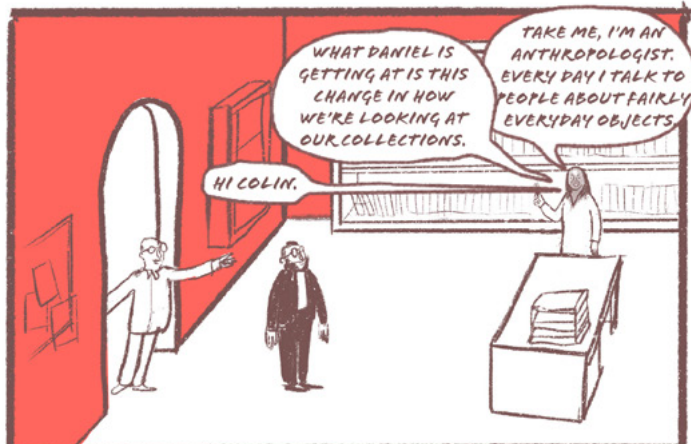
WHERE DO MUSEUMS FIT IN THIS MAD, BAD, TROUBLED WORLD?

FOR THAT MATTER, WHERE DO I FIT?









IT'S BARBARIC THE THINGS HUMANS DO. BUT DO YOU REALLY THINK THESE KINDS OF STORIES MAKE A DIFFERENCE?

HOW DO YOU MEAN?

WELL, THEIR RELEVANCE TODAY FOR ONE. CAN A 150-YEAR-OLD HAIRELIP SPEAK TO A WORLD OF IPADS, AIRPODS, GLOBAL TOURISM, BIG OIL?



AND THEN, THERE'S YOUR AUDIENCE. WHAT CAN THEY DO THAT ALL THESE POLITICIANS, THE IPCC, COP, THE UN, OPEC CAN'T? WE POINT THE FINGER AT REGULAR PEOPLE. BUT THE ONES WITH THE REAL POWER...

MAYBE WHAT I'M ASKING IS, DOES REINTERPRETING A COLLECTION STACK UP TO RADICAL CLIMATE ACTION?



THOSE ARE BIG QUESTIONS. FIRSTLY, IT'S NOT JUST ABOUT MAKING PEOPLE FEEL GUILTY. WE DO TALK ABOUT PERSONAL CONSUMPTION. BUT WE ALSO TRY TO INSPIRE PEOPLE.



TAKE LAYLA, HERE, OR KATIP. THEY'RE SHARING OBJECTS THAT CELEBRATE WHAT WE CAN DO WITHOUT HARMING THE EARTH. THE PEOPLE IN POWER TODAY WON'T ALWAYS BE. WE HAVE TO TALK TO THE NEXT GENERATION, TO HELP THEM THINK AND DREAM AND CHALLENGE THEMSELVES.

BUT YOUR QUESTION ABOUT POWER, THAT'S SOMETHING ELSE. COME ON, I WANT YOU TO MEET CHRISCHENÉ.

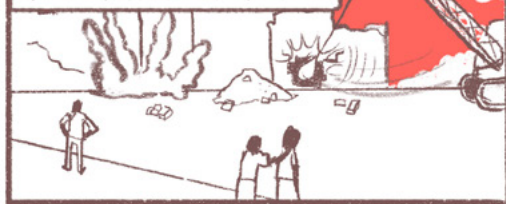




SO THESE STREET SIGNS COME FROM DISTRICT 6, A COMMUNITY OF 60,000 PEOPLE IN CAPE TOWN IN SOUTH AFRICA.



IN THE 60S, AS PART OF THE APARTHEID REGIME, MANY OF THE PEOPLE WHO LIVED THERE WERE FORCIBLY REMOVED BASED ON A SYSTEM OF RACIAL CLASSIFICATION.



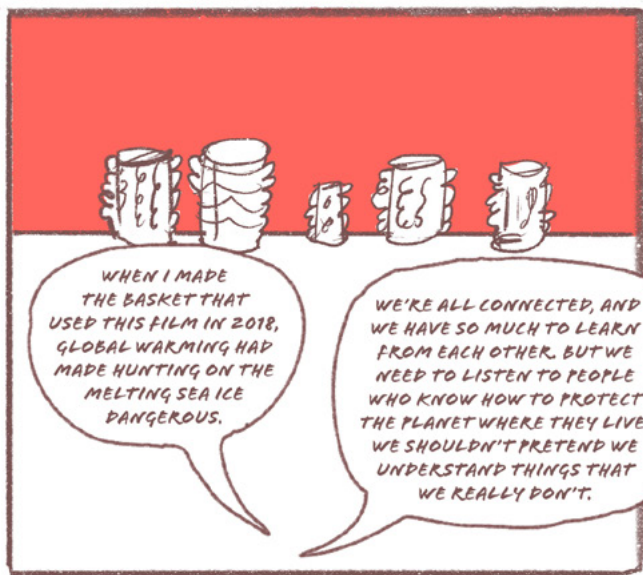
MOVING THAT MANY PEOPLE CREATED HUGE PROBLEMS WITH TRANSPORT. MANY STILL HAD TO TRAVEL BACK INTO THE AREA TO WORK, SO OUR RELIANCE ON CARS INCREASED ENORMOUSLY.

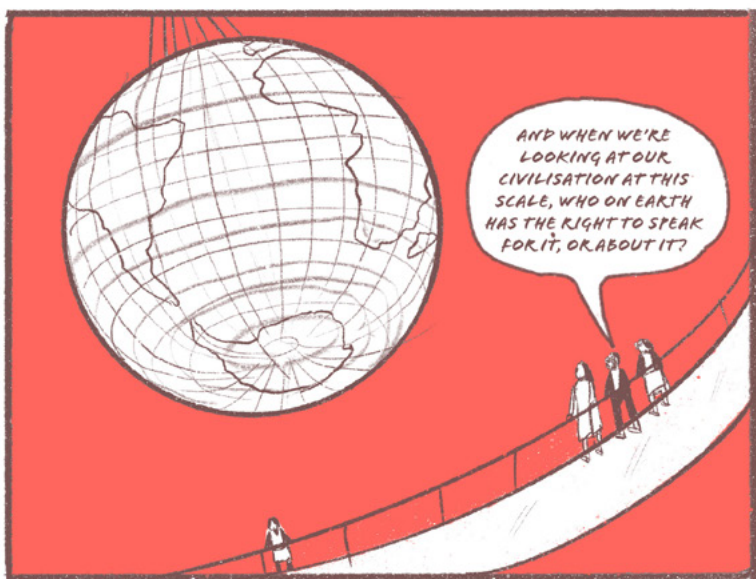
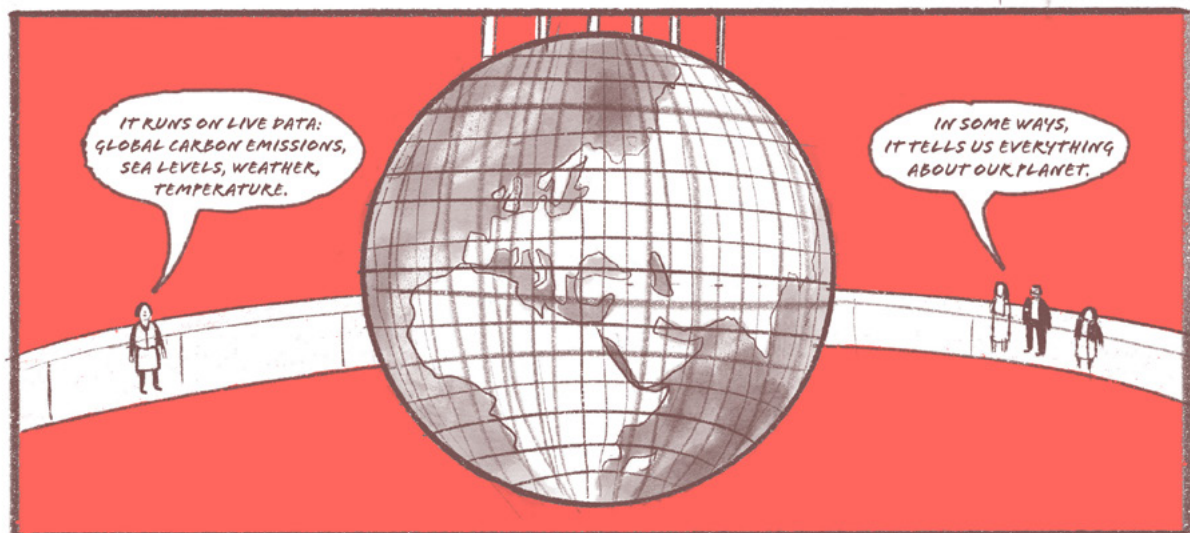


WE HAVE THESE HUGE ROADS NOW, BUT LITTLE OTHER INFRASTRUCTURE. OUR CARBON EMISSIONS IN THE CITY ARE HIGH. OUR AIR QUALITY IS POOR.









SOON AFTERWARDS

I HAVE TO SAY, WHEN I FELL THROUGH THAT WARDROBE, I THOUGHT I'D FIND MORE ANSWERS.

ANSWERS TO WHAT COLIN?

I MEAN... THESE STORIES ARE POWERFUL. BUT, THE STATE WE'RE IN... IS THAT ALL WE HAVE?

WHERE ARE WE ANYWAY...? WHO COMES TO THIS PLACE? WHO IS IT FOR?

YOU NEVER LEFT YOUR OFFICE, COLIN. THE TOUR WAS JUST A DRAMATIC CONCEIT. AND THE PEOPLE YOU MET TODAY, THEY'RE EVERYWHERE, SPREAD ALL AROUND THE WORLD, WITH THEIR AUDIENCES, WHERE THEY ARE NEEDED.

BUT YOU SHOULDN'T UNDERESTIMATE STORIES. WE LIVE BY THEM.

WE CONNECT THROUGH THEM, TO OTHER PEOPLE, TO NEW AND DIFFERENT IDEAS AND FORMS OF KNOWLEDGE. THEY SHAPE THE WAY WE SEE THE WORLD. THEY DEFINE WHAT IS POSSIBLE.

Audiences + Stories

OF COURSE. BUT FOR NOW, DESPITE EVERYTHING, WE HAVE TWO PRECIOUS RESOURCES: OUR AUDIENCES AND OUR STORIES. LET'S USE WHAT WE HAVE.

IT'S NOT SO EASY TO CHANGE THE WHOLE WORLD

THIS PUBLICATION FOLLOWS ON FROM A SERIES OF FILMS CURATED BY BARKER LANGHAM IN 2021. OUR TEAM WOULD LIKE TO THANK THE FOLLOWING INDIVIDUALS FOR THEIR TIME, SUPPORT AND ENTHUSIASM ON THIS PROJECT:

COLIN STERLING
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JC NIALA

GAIL TREMBLAY
AYUKO SAKURAI
KAITIP KAMI
LAYAL MASHHADI

existances

Brazil

2

Jairza Fernandes Rocha da Silva, Nayhara J. A. Pereira
Thiers Vieira, João Francisco Vitório Rodrigues, Natalino
Neves da Silva, Walter Francisco Figueiredo Lowande

What if museums were small places that supported communities in addressing local climate challenges and actions?

Museums traditionally bring together different objects, histories and narratives in a single location where they are then made available for research, preservation and display. The

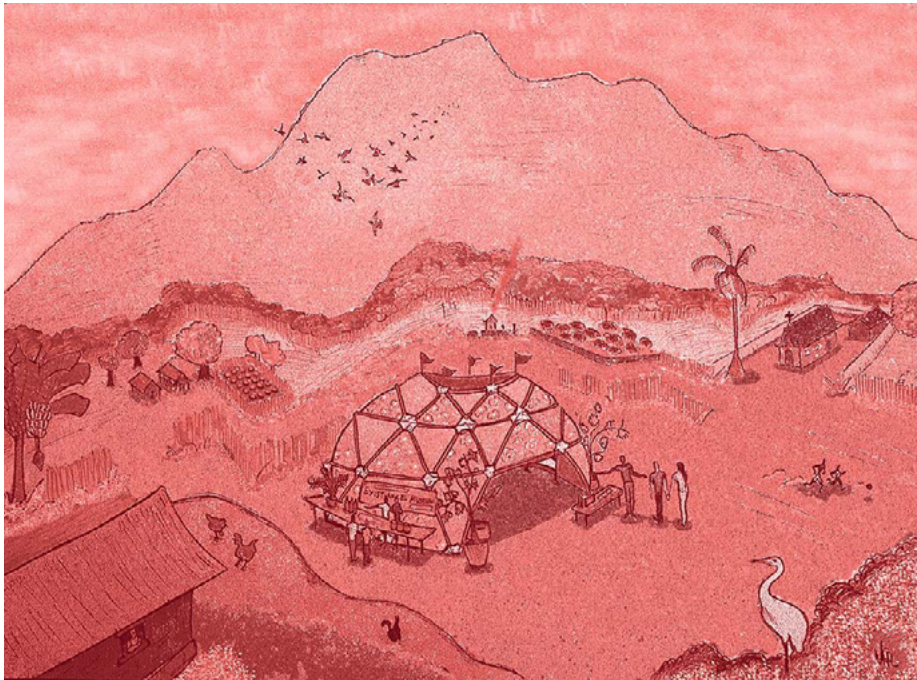
Existences project reverses this model by imagining a network of small, temporary structures spreading knowledge across a specific region – in this case the Brazilian state of Minas Gerais. Here, ecological knowledge developed by African and Amerindian communities has helped to prevent the destruction of ecosystems by large-scale agricultural businesses. Building on the work of Eduardo Viveiros de Castro, the term “existences” is inspired by the continued *existence* of this knowledge and the *resistance* shown by these communities in protecting their land and ways of life.

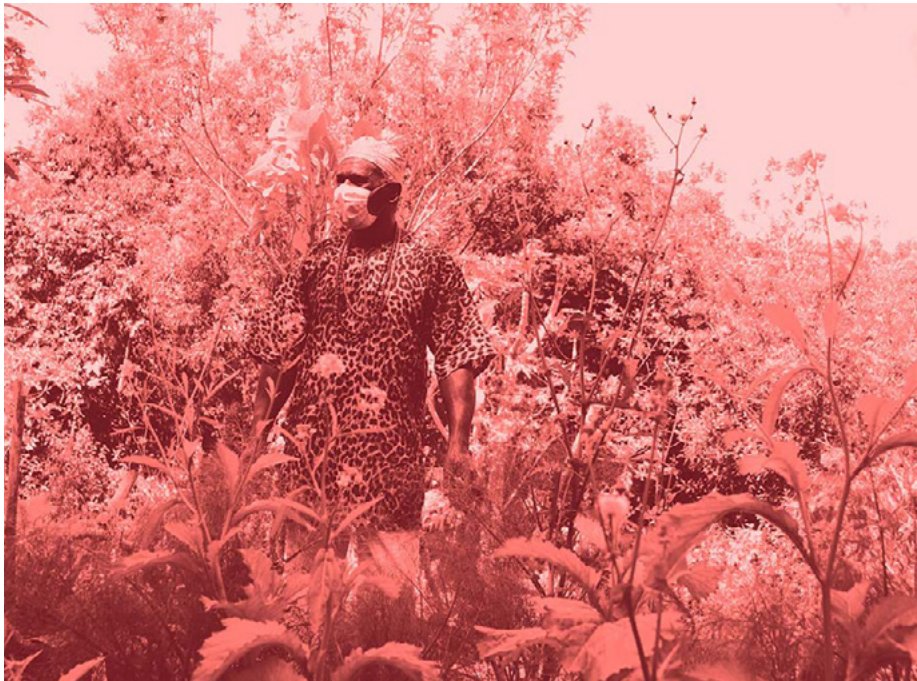
In recent years Minas Gerais has witnessed a significant increase in agroindustry, with coffee and soy plantations, livestock farming and sugar cane mills breaking the established connections between peasant people (*caipiras*) and their companion plants and animals. Large-scale agribusiness poisons soils with pesticides and releases carbon dioxide into the atmosphere through the clearing of forests to create pastures. In contrast, the traditional practices of African and Amerindian peoples are built around a symbiotic relationship with the environment. Such connections were already fractured by years of colonisation. Today, the cosmological heritage of traditional groups is seen as an urgent alternative to stop the harm caused by industrial agriculture in the region, which has such a profound effect on the planet as a whole.

The *Existences* project aims to collect and spread the knowledge and

experience of African and Amerindian communities across Minas Gerais and beyond. The museums would be itinerant, disseminating ecological wisdom in dialogue with different people and places, including those developing new agroecological, permacultural and bioconstructive technologies. A network of provisional structures would encourage collective, shared authorship of ideas and innovations responding to specific places and concerns. These small museums would come to life on their own, becoming spaces of constant exchange about how to live well in the Anthropocene and – if possible – even reverse it.

For the exhibition at Glasgow Science Centre the *Existences* team created scale-models to show what these small, constantly moving museums might look like. Made of biodegradable or recyclable materials, these would be gathering spaces of a different kind from the traditional museum. Rather than collecting historical objects, these spaces would allow people to come together and exchange knowledge – learning new skills and developing alternative practices to encourage a more harmonious relationship with nature. Instead of seeing African and Amerindian cosmologies as something from the past to be documented and preserved, the *Existences* project reminds us that such knowledge is vital for the future of the planet.





Jesus Francisco Rocha (Pai Jesus) among the herbs
grown in the *Tenda de Umbanda e Candomblé Maria
Baiana de Aguiné*, Alfenas, Minas Gerais, Brazil, 2021.
Photograph by Nayhara Vieira.

EXHIBIT

EXISTANCES MUSEUMS:

POSTPONING THE END OF THE WORLD

Jairza Fernandes Rocha da Silva, Natalino Neves da Silva, Nayhara
J. A. Pereira Thiers Vieira & Walter Francisco Figueiredo Lowande

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'I hope that these creative encounters we are still managing to keep animate our practice, our action, and give us the courage to move from an attitude of denial of life to a commitment to life anywhere, overcoming our incapacities to extend vision to places beyond those to which we are attached and where we live, as well as to the forms of sociability and organisation from which a large part of this human community is excluded, which ultimately expend all the strength of the Earth to supply their demand for goods, security and consumption'¹.

'Its existence [existir] is, inherently, a resistance [resistir], which I condense in the neologism existence [rexistir]'².

Modern museums and socio-environmental catastrophes: temporal, spatial and subjective alternatives

When we started to think about how museums could help to face global warming and build greener and fairer futures, two questions came to mind: "what can a museum be?" and "what kind of knowledge might really help us to confront the catastrophes to come?"

Modern museums are apparatuses that have contributed to the consolidation of a worldview directly responsible for the current socio-environmental catastrophe. The colonial dispossession of human and non-human bodies and the landscapes they inhabited lies at the origin of various museums, from the curiosity cabinets of the Renaissance to the anthropological museums of the 19th century, which expanded from European commercial and administrative centers during the colonisation of the Americas³, and whose colonial epistemologies remain alive to this day. The "great chain of being" materialised in these spaces and was adapted to modern requirements and represented the desire to subjugate the world to the domination of the white European man⁴. The real "wealth" displayed in these museums was the commercial potential of bodies and experiences objectified in an exemplary and pedagogical way in their showcases. Behind the curiosity directed at exotic bodies and objects, a grammar of "geontopower" was under construction. This is directly responsible for the eruption of the geosystemic disarray we are currently experiencing, with global warming just one of its facets⁵.

These museums have become monuments to the global barbarism produced by modern Western civilisation⁶. They were built to last forever, mirroring the eternity the modern worldview imagined for itself. The preservation at all costs that these monumental spaces demand is an ecological footprint we can no longer afford. However, there is, in addition to this physical footprint, a psychological one expressed in the trauma experienced by all people for whom traditional museums are

galleries that celebrate the dispossession and subordination of their own bodies⁷.

Decolonising museums is not enough if it does not also imply a substantial transformation of what constitutes them in their most elementary features⁸. The invitation to radically re-imagine the role of museums in times of global warming is an excellent opportunity for us to rethink their temporalities, spatialities and subjectivities. With this, we aim to enact justice for the different worldviews that have resisted and existed for centuries, despite continued attempts to destroy their worlds.

Regarding temporality, it is necessary to think of a museum as a place of connections capable of suspending the homogeneous and empty time that has led us towards the abyss of the Anthropocene. Such a museum might be inspired by terreiros, samba circles, jongo, maracatu and other manifestations related to Afro-Indigenous Brazilian cosmoperceptions⁹, which can help to imagine other relationship with time and things¹⁰. The cultivation of land oriented to sharing food and affections, as well as forms of anti-capitalist and counter-colonial resistance, can also teach us about the time of seasonality – a time composed of encounters with companion species that is needed to face climate change¹¹.

The very constructive materials of these “Existences museums” should incorporate an experience of time open to transience. Structures such as geodesic domes, made with local, renewable and recyclable materials, which are easy to build and transport, can offer spatially displaced experiences able to connect trajectories of resistance. The material disintegration of these spaces can also help to cope with the feeling of detachment that the world-to-come demands, teaching us about care, mourning, affection and meaning that can arise from entropic processes¹².

Finally, we need to think about who can build a museum. The discourse of technique, efficiency and profit carried out by specialists, professionals and entrepreneurs leads to the silencing of perspectives that might be capable of making us think otherwise in the face of a problem shared by many (if not all) the living beings on this planet¹³. Museums need, therefore, to transform themselves into spaces in which different cosmoperceptions can be enhanced, leading to encounters capable of connecting affections around the search for greener and fairer futures.

Communitarian cosmoperceptions and environmental racism

The Quilombo Campo Grande Camp, in Campo do Meio, the Tenda de Umbanda e Candomblé Maria Baiana de Aguiné, in Alfenas, and the maroleiros of Paraguaçu, all of them in the south of the state of Minas Gerais, Brazil, constitute their ecological knowledges through communitarian cosmoperceptions that can be leveraged in what we propose to

call “Existences museums.” There is nothing romantic or innocent about these communal attitudes of resisting. The adoption of this posture in the context of capitalism’s periphery often means putting one’s own life at risk, since Brazil is considered the fourth most violent country in the world for those who work with civil society to defend human rights¹⁴.

For centuries, Afrodiasporic and Indigenous peoples in Brazil have been the victim of all kinds of human rights violations. In the historical records of modernity, not even the humanity of these peoples has been guaranteed. Living at the edges of capitalism, these populations have faced not only socioeconomic and environmental inequalities, but racial ones as well. In this regard, sociologist Jessé de Souza indicates that the roots of Brazilian inequality can be found in the heritage of slavery. The national elite, described by him as an ‘elite of backwardness’¹⁵, perpetuates its power by producing an unequal, exclusionary and perverse society through the ‘narcissistic pact of whiteness’¹⁶.

We cannot disregard environmental racism when we reflect on global warming¹⁷. This kind of racism is materialised in the environmental injustice that directly affects peasant populations, quilombolas, Indigenous peoples and slum dwellers in urban centers, exposing them to the socio-environmental damage generated by economic processes. Environmental racism puts at risk the management of sustainable agroecological productions developed by these populations over centuries of struggles for land, in addition to the imminent danger of irreversible damage to health caused by the industrial products of capitalism, such as toxic waste, the contamination of springs and rivers, air pollution, and high levels of pesticides in food.

Below are some examples of the important cosmoperceptions that might resist such processes. All of them come from a region marked by racial, religious and agrarian conflicts, sometimes veiled and sometimes explicit, but always violent. By contacting these communities in search of ‘ideas to postpone the end of the world’, as taught by Indigenous leader and philosopher Ailton Krenak, we could learn more about the creative potency of their narratives, especially when entangled with each other through the Existences museums project.



Tenda de Umbanda e Candomblé Maria Baiana de Aguiné, Alfenas, MG, Brazil. Photograph by authors.

Tenda de Umbanda e Candomblé Mãe Baiana de Aguiné

The Tenda de Umbanda and Candomblé Maria Baiana de Aguiné, an African-based religious group led by “Mother” Cida, has been fighting for

22 years for its right to exist in the city of Alfenas. As it is a historically agrarian-slave Christian region, Umbanda practitioners have had to deal with prejudice, devaluation and, often, threats related to their cult, especially from neo-Pentecostal groups¹⁸. Nevertheless, this Afrodiasporic “cosmological heritage”¹⁹ keeps resisting and existing in Alfenas and other Brazilian regions²⁰.

It is worth noting the respect with which members of this religion relate to plants and non-human animals. This is because, within their cosmoperception, they are intrinsically related to the entities they worship. Such ancestral knowledge does not distinguish between life and the sacred in the same way as Western rationalist logic. Instead, there is an attitude of relationality and reciprocity, clearly elucidated by the statement: ‘I am of axé and I do not deny my faith!’²¹

The respect that people from traditional terreiro’s communities have for the environment is also directed towards food. Grains, legumes and vegetables are integral parts of the ritualistic signs and meanings of Afro-Brazilian religious matrices. It is through the relationship between nature and the sacred that the processes of humanisation, welcoming and axé are carried out. The communities of African-based religions preserve nature in a responsible manner, as food is taken not only to guarantee their livelihood, but also to support rituals of healing and offerings to the orixás. This responsible attitude contributes to the production of an emancipatory agroecological economy where the food and nutritional security of the population also helps to secure planetary futures.

Quilombo Campo Grande

In the city of Campo do Meio, a group of 11 camps of landless rural workers form the “Quilombo Campo Grande”. This name alludes to a quilombo²² that occupied part of the region in the 19th century, configuring itself as one of the biggest in the history of Brazil²³. Linked to the Landless Rural Workers Movement (MST)²⁴ since 1996, Quilombo Campo Grande has occupied the land of a sugar plant that, when it went bankrupt, left numerous labour debts and a devastated post-agro-industrial landscape.



“Todo corpo é natureza. Toda natureza é sagrada” [All body is nature. All nature is sacred]. Embroidery by Bárbara Mançaneres. Photograph by authors.



Quilombo Campo Grande, Campo do Meio, MG, Brazil. Photograph by authors.

While visiting this community and talking to the women who are also part of the Roots of the Earth Women's Collective, we were able to experience one of those creative encounters that Ailton Krenak mentions and that we sometimes imagine so far away²⁵. After occupying the land of the sugar plant, the collective struggle of the workers from the Quilombo starts from a complete resignification of the relationship between human beings, space and territoriality. The practice of "dreaming the land", in the words of another important Indigenous leader and thinker²⁶, is established through agroecology and agrarian reform. In a movement that starts from the recognition that the earth "has a heart and breathes", the families of campers understand the land as an ally in the resistance for the continuity of life; as a home, as food, as a cure and as a stage for the struggle for social justice.

The potency of what is seen here is precisely this resignification of the land and the countless possibilities that emerge from it. Knowing how people in this place compose their existence, counter to the exploitation and depletion of the land carried out by agribusiness, proves that it is possible to recognise ourselves as part of a network of living beings that assembles the spaces we inhabit, without aiming at goals that depend on parasitic exploitation of the environment. When discussing the plants they work with, the women of the Collective make a point in stating that 'every herb that is seen here is not bush. Everything here, for us, is medicine'. This perspective reflects very delicately the guidelines of the MST, whose objectives are 'the production of food, culture and knowledge. And more than that: the construction of a socially just, democratic country, with equality and harmony with nature'²⁷.

Even threatened by the surrounding agribusiness²⁸, these people offer paths towards green futures and climate justice. Many of the people who live in these camps have never visited a museum. It is their voices and their experiences, as a reflection and example for fair futures, that the Existences Museums intend to shelter, strengthen and defend.



"Cultivar a terra e os afetos para transformar o mundo" [Cultivating the land and affections to transform the world]. Embroidery by Bárbara Mançanares. Photograph by the authors.

The marolo and the maroleiros/as

Existences practices in the southern region of Minas Gerais also take shape in a community in which plants play a central role. In the small town of Paraguaçu, the marolo (or araticun) articulates around itself an

extensive and vibrant network of human and non-human actors, which results in a cosmopolitical attitude turned against environmental degradation.

The *Annona crassiflora* M. belongs to the Annonaceae family and is native to the Brazilian Cerrado, the second largest biome in Brazil and South America and one of the most threatened by the advance of agribusiness in the country²⁹. The fruit of this tree, the marolo, has a baciform structure (the fleshy pulp that surrounds its seeds is composed of berries), and is known for its characteristic flavour and aroma, very appreciated in the region's cuisine. For this reason, the extraction and sale of marolo became an economic alternative for the poor population of the region, especially from the 1940s when the dispute for land in the region intensified in response to the modernisation project imposed by Getúlio Vargas' government³⁰.

The marolo's aroma is not only appreciated by humans. The strong odor released by the maroleiro's fruit in the rapid process of deterioration after it has fallen from its tree and cracked allows it to communicate with other living beings, such as the guará wolf, bush dogs, several species of monkeys, birds and insects, all of whom collaborate in the dispersal of its seeds³¹. The corticate, cracked and thick bark of the maroleiro's twisting trunk also represents a form of adaptation to less fertile soils and fires, making it resilient to the various forms of environmental degradation imposed on the region's biome. This makes the maroleiro a fundamental partner for the restoration of ecologies damaged by anthropogenic action.

The term maroleiro designates both the plant and the people dedicated to the extraction of marolo within the Cerrado. While before there was a pejorative connotation to the term, which was associated with poor and ragged people from Paraguaçu who dedicated themselves to the extraction of the fruit, today the name is proudly assumed by an entire community that understands itself as the guardian of an identity moulded by the peculiar relationship established between humans and marolos. In times of heightened precariousness, the cultivation of the marolo and the manufacture of products derived from it present an important economic alternative for rural and urban workers in small towns like Paraguaçu. However, this multispecies relationship is perceived as dependent on the conditions offered by the Cerrado. This has provoked countless actions involving the government, universities in the region, schools, events such as gastronomic and music festivals and scientific research to promote the preservation of the plant and what remains of the Cerrado in the region.



Ana Lúcia, maroleira of Paraguaçu, MG, Brazil. Photograph by authors.

We know these three narratives through the very communities that built them. It was they themselves who affectionately introduced us to the multi-species worlds they created, with great pain, in resistance to the destructive forms imposed by agribusiness in our region. What we noticed was that these groups were taken by a clear joy when they got to know more closely the struggle of comrades that resist/exist in other places. This pilot initiative allowed us to glimpse the constitution of an expanded network of potential existences, capable of bringing into contact the struggles of communities that, although arising from different trajectories and traditions, converge in the defence of their respective worlds against a common threat.

All these groups showed surprise when faced with the idea of reinterpreting the word “museum”. If before this was perceived as a type of institution alien to their lives, the possibility of building, themselves, spaces in which their trajectories of struggle might be materialised and known by people from other places and even other countries was met with great interest. The *Existences Museums* project is primarily about constructing temporary spaces of encounter. The circulation of local knowledge from communities that have resisted the end of their worlds for more than five centuries is, without a doubt, one of the main ways of facing the threat posed by global warming and other planetary disturbances in our present.



“Compreender que tudo está conectado” [Understanding that everything is connected]. Embroidery by Bárbara Mançanares. Photograph by authors.

¹ Ailton Krenak, *Ideias para Adiar o Fim do Mundo* (São Paulo: Companhia das Letras, 2019), 50, free translation

² Eduardo Viveiros de Castro, *Brasil, País do Futuro Pretérito* (São Paulo: n-1 edições, 2019), 14, free translation

³ These problems are addressed, for example, in George W. Stocking Jr., ed., *Objects and Others: Essays on Museums and Material Culture* (Madison: The University of Wisconsin Press, 1985), and João Pacheco de Oliveira and Rita de Cássia M. Santos, eds., *De Acervos Coloniais aos Museus Indígenas: Formas de Protagonismo e de Ilusão Museal* (João Pessoa: Editora da UFPB, 2019)

⁴ On the relationship between the progressive epistemological separation between “Humanity” and “Nature” and museums, see Eric Dorfman, “Changing Epistemologies in the Museum: an Evolving Relationship with Nature,” *Museum International* 71, no. 1-2 (2019): 30-37

⁵ See Elizabeth A. Povinelli, *Geontologies: A Requiem to Late Liberalism* (Durham: Duke University Press, 2016)

⁶ Here we reference the work of Walter Benjamin, for whom “There has never been a document of culture, which is not simultaneously one of barbarism”, Walter Benjamin, *Illuminations: Essays and Reflections* (New York: Schocken Books, 1968), 256

⁷ This experience of not belonging was reported to us by the people from the communities who told us their stories for the *Existences* Museum exhibition. UNESCO's own actions, in the 1970s, trying to prevent the illegal trafficking of artifacts to museums (Stocking Jr., *Object and Others*) attest to this perception, in addition to the experiences reported in academic works such as Dipesh Chakrabarty, "Museums between Globalisation and the Anthropocene," *Museum International* 71, no. 1-2 (2019): 12-19

⁸ A synthesis of the discussions on the need for a decolonial critique of modern museums can be found in Bruno Brulon, "Descolonizar o Pensamento Museológico: Reintegrando a Matéria para Re-Pensar os Museus," *Anais do Museu Paulista* 28 (2020): 1-30. Dipesh Chakrabarty draws attention, however, to the new challenges posed by the Anthropocene to museums in general, including those already touched by postcolonial criticism (Dipesh Chakrabarty, "Museums between Globalization," *Museum International* 71, no. 1-2 (2019): 12-19

⁹ About the problems with the concept of "worldview", see Oyèrónkẹ Oyèwùmí, "Visualizing the Body: Western Theories and African Subjects," in *The African Philosophy Reader*, eds. Peter H. Coetzee and Abraham P. J. Roux (New York: Routledge, 2002), 391-415

¹⁰ An example of this was pointed out in Walter F. F. Lowande and Camila S. Bueno, "O Maracatu de Baque Virado como Patrimônio Cosmológico," *Cadernos de Pesquisa CDHS* 33, no. 1 (2020): 91-119

¹¹ Antônio Bispo dos Santos opposes the colonial category "work" to the counter-colonial category "biointeraction," that is, the relationship with the land as a "generator of vital force," which provides us with its energy through "a process of festive cultivation filled with religiosity," as we can see in his *Colonização, Quilombos: Modos e Significados* (Brasília: INCTI, UnB, 2015), 58. Anna Lowenhaupt Tsing also notes this sustainable and symbiotic relationship between peasants and the forests when these relationships are not touched by modern agricultural technologies, as the introduction of chemical fertilizers – *Viver nas Ruínas: Paisagens Multiespécies no Antropoceno* (Brasília: IEB Mil Folhas, 2019), 100. These ways of life can also be associated with the concept of "Good Living" (*Buen Vivir*), which is based on the observation of Amerindian and other peoples' experiences that resist the modern and Western

worldview, according to Alberto Acosta, *O Bem Viver: Uma Oportunidade para Imaginar Outros Mundos* (São Paulo: Autonomia Literária, 2016)

¹² On the importance of the concepts of decay and entropy in heritage practice, see Caitlin DeSilvey, *Curated Decay: Heritage Beyond Saving* (Minneapolis: University of Minnesota Press, 2017)

¹³ Here we are inspired by the more generic ideas presented by Isabelle Stengers, *In Catastrophic Times: Resisting the Coming Barbarism* (Ann Arbor: Open Humanities Press, 2015)

¹⁴ Frontline Defenders, "Frontline Defenders Global Analysis 2019," accessed July 14, 2021 https://www.frontlinedefenders.org/sites/default/files/global_analysis_2019_web.pdf

¹⁵ Jessé de Souza, *A Elite do Atraso: Da Escravidão à Lava-Jato* (Rio de Janeiro: Leya, 2017)

¹⁶ Maria Aparecida da Silva Bento, "Notas sobre a Branquitude nas Instituições," in *Violência e Sociedade: O Racismo como Estruturante da Sociedade e da Subjetividade do Povo Brasileiro*, ed. Maria Lúcia da Silva et al. (São Paulo: Escuta, 2018)

¹⁷ This concept was developed by African-American civil rights activist Dr. Benjamin Franklin Chavis. For more information, see Neil A. Lewis, "Man in the News: Benjamin Franklin Chavis Jr.; Seasoned by Civil Rights Struggle," *The New York Times*, April 11, 1993

¹⁸ Isabel Soares Campos and Rosane Aparecida Rubert, "Religiões de Matriz Africana e a Intolerância Religiosa," *Cadernos do LEPARQ* XI, no. 22 (2014) <https://periodicos.ufpel.edu.br/ojs2/index.php/lepaarq/article/view/3390/3424>

¹⁹ Lowande and Bueno, "O Maracatu de Baque Virado," *Cadernos de pesquisa CDHS*

²⁰ A way of interpreting liberation and emancipatory knowledge arising from these struggles is developed by Natalino N. da Silva, "Black Popular Education: brief notes of a concept," *Education in Perspective* 11 (2020): 1-14

²¹ Free translation from the Portuguese sentence "Eu sou de axé e não nego a minha fé". The Yoruba term "axé", or "ashé", means power, energy or force present in each being or in each thing. In Afro-Brazilian religions, the term represents the sacred energy of the *orixás*

²² The word *quilombo* originates from the term *kilombo*, present in the language of the Bantu peoples, and means a place of landing or encampment. For a more in-depth discussion of this concept, see Maria Beatriz Nascimento, “Sistemas sociais alternativos organizados pelos negros: dos quilombos às favelas,” in Beatriz Nascimento, *Quilombola e Intelectual: Possibilidades nos Dias da Destruição*, (Díaspóra Africana: Editora filhos da África, 2018)

²³ Estevan L. F. Coca et al., “Agroecologia e Territorialidades Camponesas em Campo do Meio – MG,” *Campo-Território* 14, no. 35 (2019), 177, free translation

²⁴ The MST emerged in 1984, when rural workers who had been leading struggles for the democracy of land and society founded a national peasant movement with three main objectives: fight for land, for agrarian reform and for social changes in the country. For more information, see MST, “O MST: Nossa História,” accessed July 14, 2021 <https://mst.org.br/nossa-historia/84-86/>

²⁵ Krenak, *Ideias para Adiar o Fim do Mundo*

²⁶ David Kopenawa and Bruce Albert, *A Queda do Céu: Palavras de um Xamã Yanomami* (São Paulo: Companhia das Letras, 2015), 468

²⁷ <https://mst.org.br/nossa-historia/84-86/> free translation

²⁸ See Peoples Dispatch, “MST Quilombo Campo Grande Camp Resists Eviction in the Midst of the Pandemic,” August 12, 2020, accessed July 14, 2021 <https://peoplesdispatch.org/2020/08/12/mst-quilombo-campo-grande-camp-resists-eviction-in-the-midst-of-the-pandemic/>

²⁹ Marcelo Polo, “O Cerrado,” in *Marolo: Um Fruto, Várias Ideias*, ed. Gilmar A. de Carvalho, Luciana M. de Carvalho, and Sandro A. Palhão (Machado, MG: Gráfica e Editora Gilcav, 2017). On the threats faced by this biome in the present, see WWF, “Ameaças ao Cerrado,” accessed July 14, 2021 https://www.wwf.org.br/natureza_brasileira/questoes_ambientais/biomas/bioma_cerrado/bioma_cerrado_ameacas/

³⁰ See Gilberto Bercovici, “A Questão Agrária na Era Vargas (1930-1964),” *História do Direito* 1, no. 1 (2020): 183-226

³¹ João Afonso de Carvalho, “A Família das Anonáceas,” in Carvalho, Carvalho, and Palhão, *Marolo*.

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This essay is dedicated to Mrs. Ana Lúcia, who welcomed us with her sympathy and affection and starred in our video about the Paraguaçu's maroleiros, but recently became another victim of the COVID-19 pandemic in Brazil.

TAKING THE LOGOS DOWN:
FROM OIL SPONSORSHIP TO A FOSSIL-FREE CULTURE
Chris Garrard

Chris Garrard is co-Director of Culture Unstained, a campaigns and research organisation which aims to end fossil fuel sponsorship of culture and promote ethical funding of the arts. His investigations into oil sponsorship have been covered widely in the media, notably in the Guardian and on Channel 4 News, and he has been involved in several art activist groups, such as BP or not BP? and Shell Out Sounds, both as an organiser and performer. Chris is also a composer and has a doctorate in Music from the University of Oxford.

In the three years after the Paris Climate Agreement was signed, major oil and gas companies spent more than \$100 billion on fossil-fuel infrastructure. Today, no major oil and gas company has aligned its business with the target set out in that landmark agreement – to pursue efforts to limit global warming to 1.5°C above pre-industrial levels.

In the three years after the Paris Climate Agreement was signed, major oil and gas companies spent \$1 billion on lobbying and branding related to climate change. Today, they have developed new cynical strategies for “greening” their image, where they announce loophole-ridden ambitions of going “net zero” while continuing to invest billions in new fossil fuels. However, when BP’s CEO Bernard Looney announced the company’s own ambition of going “net zero”, he didn’t just talk about oil and gas. At the launch, Looney took the opportunity to confront the controversy surrounding the company’s sponsorship of cultural institutions, and admitted that, “Many question our motives in supporting the arts. I get that”.

Since the Paris Agreement was signed, a whole raft of oil sponsorship deals have been ended in countries from Norway to Canada, and from Australia to the UK, as museums, galleries and theatres have become focal points for climate action. With each additional oil company’s logo that has been taken down, the acceptability of fossil fuels has shifted. What Bernard Looney was conceding when he made his speech was that cultural sponsorship no longer offered a way to deflect attention away from oil spills and climate impacts. Museums had become sites of scrutiny.

At first, the opposition to oil sponsorship was led by a small group of artists and activists, but today this has flourished into a growing international movement of arts workers, actors, musicians, scientists, youth climate strikers, as well as those from communities impacted by climate change and extractivism. These grassroots groups oppose oil sponsorship deals because they offer companies like BP, Shell and Equinor a cheap way to sustain their “social license to operate”, a kind of social legitimacy that leads policy makers and the public to believe that these are responsible philanthropic companies, rather than the firms that were behind decades of climate delay and denial. However, this movement for “fossil free culture” has deepened that initial focus, and protests are now activating museums and galleries as vital platforms for addressing the intersections between race, colonialism and climate breakdown.

Creativity, as well as climate justice, is at the core of this movement, a belief that art – and art-making – can create change. In 2016, it was announced that BP’s highly prized sponsorship of Tate in London, which had been in place for 26 years, would be brought to an end. Over the previous six years, the performance collective Liberate Tate had opposed

the deal with a powerful series of live art interventions, from an overnight artwork written in charcoal across Tate Modern's Turbine Hall to the group's now iconic image of a nude performer being covered in oil.

Liberate Tate's techniques have inspired many others. With their powerful creative protests, such as oil spilling from shells down the white dresses of activists inside the Van Gogh Museum, the group Fossil Free Culture NL ramped up pressure on Shell's sponsorship of the arts. In 2018–20, they brought about the end of the oil firm's partnerships with the Van Gogh Museum, Mauritshuis, Het Concertgebouw, Museon and NEMO Science Museum, and have now declared Amsterdam's Museumplein fossil free. Meanwhile, in Paris, the group Libérons le Louvre created striking performances inside the Total-sponsored Musée du Louvre, and even created an "oil spill" in the water that surrounds its iconic glass pyramid.

As the movement has grown, so has the range of different voices within it. In London, arts workers and musicians brought about the end of Shell's corporate partnerships with the National Theatre, National Gallery, British Film Institute and Southbank Centre. In Perth, Australia, artists forced the name of fossil fuel sponsor Woodside to be removed from view at the city's fringe festival. In the US, scientists and activists spoke out and forced billionaires David H. Koch, due to his fossil fuel interests, and Rebekah Mercer, over her links to climate disinformation, to step down from the Board of the American Museum of Natural History.

Back in the UK, the "actor-vist" theatre group BP or not BP? began its life by "invading the stage" with short, Shakespearean protests taking place before BP-sponsored plays at the Royal Shakespeare Company (RSC) were about to begin. In 2020, some eight years and sixty creative interventions later, the group mounted *BP Must Fall*, a three-day occupation of the BP-sponsored British Museum. The takeover included a 13-foot Trojan Horse that was installed in the courtyard, an overnight artwork created in the Great Court, and a day of workshops on climate and its connections with colonialism, race and restitution taking place across the galleries. The museum had been reclaimed as a public space for debate and dissent.

While the British Museum continued to stand by its sponsor, the RSC ended its BP sponsorship deal just a few months prior after youth climate strikers and leading actors such as Mark Rylance lent their support to BP or not BP?'s campaign. The RSC said at the time, 'Amidst the climate emergency, which we recognise, young people are now saying clearly to us that the BP sponsorship is putting a barrier between them and their wish to engage with the RSC. We cannot ignore that message.' It was a watershed moment, an acknowledgment that sponsorship deals do not take place in an ethical vacuum.

But as we approach COP26, some are *still* ignoring that message. Opposition to Shell's sponsorship of the Science Museum in London, led by youth climate strikers and scientists, has been growing but their legitimate concerns have been brusquely dismissed by the museum's Director. In particular, the museum's decision to sign up to a "gagging clause", intended to prevent any comment that could damage "the goodwill or reputation" of its sponsor, has attracted particular controversy. When news of the controversial clause emerged, Greta Thunberg wryly tweeted, 'The Science Museum just killed irony (and their own reputation)'.

However, the tide continues to turn. In the past, some would ask, "Why not target these oil companies directly rather than their sponsorship deals?". Today, the movement for fossil free culture has powerfully demonstrated how cultural organisations play an important role in informing our responses to climate change, the acceptability of fossil fuels and our perception of those companies that continue to extract more oil and gas.

Museums are not neutral – they embody their values and social purpose not just in the programmes and exhibitions they produce, but also in how they do business. And when red lines are drawn and oil sponsorship deals are ended, the impacts of those decisions flow out into the wider world. As the artist Raoul Martinez expressed powerfully in his essay *Picture This*:

'Valuable creative expression is not limited to the traditional artistic formats. Every choice is inherently creative. If our cultural institutions took a principled stand on this urgent issue it would, in and of itself, be a beautiful creative act, certainly as valuable as any painting or performance they might showcase'¹.

¹ Martinez, Raoul. 'Picturing the Future', in Platform, eds., *Picture This – A Portrait of 25 Years of BP Sponsorship* (London: Platform/Art Not Oil, 2014), p. 27.



A



B

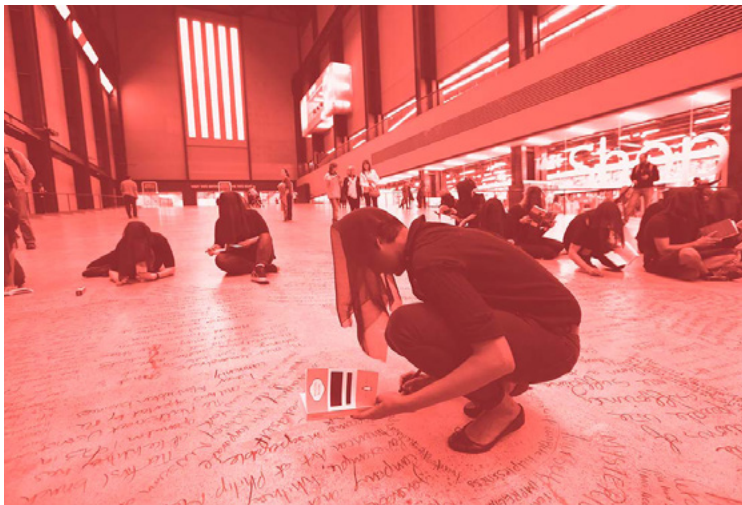


C



D

- A 1500 people protest inside the British Museum's Great Court as part of 'BP Must Fall', a three-day creative protest led by BP or not BP? in February 2020. Photograph by Ron Fassbender.
- B A 'BP Kraken' is smuggled into the British Museum by actor-vists from BP or not BP? during the museum's BP-sponsored *Sunken Cities* exhibition in 2016. Photograph by Kristian Buus.
- C Liberate Tate's now iconic 'Human Cost' performance took place in Tate Britain on the first anniversary of BP's Deepwater Horizon spill in 2011. It lasted 87 minutes, one for each day of BP's spill in the Gulf of Mexico. Photograph by Amy Scaife.
- D To coincide with the museum's 'BP exhibition' on Troy, BP or not BP? install a BP-branded Trojan horse inside the British Museum's courtyard – without permission – as part of their three-day 'BP Must Fall' protest in February 2020. Photograph by Hugh Warwick.
- E Art collective Liberate Tate occupy Tate Modern's Turbine Hall for 25 hours, as part of their performance 'Time Piece' in 2015. Throughout the night, they transcribe texts on climate change and art onto the floor with charcoal. Photograph by Liberate Tate.



E



F



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H

- F In 2018, art activists from Libérons le Louvre collapsed at the foot of “Raft of the Medusa” inside the Musée du Louvre, calling attention to museum sponsor Total and its role in the climate crisis. Photograph by Libérons le Louvre.
- G As part of the global ‘Rise for Climate’ mobilisation in 2018, Libérons le Louvre led a protest outside the Louvre with 100 performers opposing its partnership with the oil company Total. Photograph by Romain Nicolas.
- H Seven female performers from Fossil Free Culture NL line the steps of the Shell-sponsored Van Gogh Museum for their performance ‘Drop the Shell’ in May 2017. Police were then called and the performers detained overnight. Photograph by Laura Ponchel.
- I In June 2018, 40 performers from the group Fossil Free Culture NL took the monumental staircase of the Van Gogh Museum’s main building and unfurled a 12-metre long banner with the words ‘End the fossil fuel age now’. Photograph by Alejandro Ramirez.
- J Youth climate activists from UKSCN London protest outside the Science Museum after their overnight action against Shell sponsorship was halted, when the museum called in 30 police officers to threaten the group with arrest. Photograph by Ron Fassbender.



J

genealogies of the emergency

A Conversation on Race, Climate and Museums with Subhadra Das & Ashish Ghadiali facilitated by **Rodney Harrison (RH)** & **Henry McGhie**

Subhadra Das (SD) is a historian, writer, broadcaster and comedian. For nine years, she was Curator of the Science Collections at University College London (UCL) where she worked with the Eugenics and Pathology Collections, and the auto-icon of Jeremy Bentham. In 2021, she was a Researcher in Critical Eugenics at UCL's Sarah Parker Remond Centre for the Study of Racism and Racialisation. She regularly talks to diverse audiences in classes, seminars, lectures, public talks and stand-up comedy about all aspects of her work from the history of eugenics and scientific racism to working with human remains. She uses historical archives and museum objects to tell decolonial stories in engaging and affirming ways.

Ashish Ghadiali (AG) is a filmmaker and activist who organises with the climate justice collective Wretched of the Earth. He is a member of the co-ordinating committee of the COP26 Civil Society Coalition and a commissioning editor at Lawrence and Wishart Books where he is developing a new Soundings imprint, to be launched with a slate of books on Race and Ecology in 2022. He was formerly Race Editor, then Co-Editor of *Red Pepper* magazine (2017–2020) and part of the team that set up the Freedom Theatre in Jenin Refugee Camp (in 2006). Ashish's 2016 feature documentary, *The Confession*, explored the geopolitical arcs of the War on Terror through the testimony of former Guantanamo detainee Moazzam Begg. Ashish is currently developing new projects for film and TV with BBC Studios and BBC Films and is a regular contributor to *The Observer New Review*.

Henry McGhie (HM) has a background as an ecologist, museum curator and senior manager. He established Curating Tomorrow in 2019 to support museums and their partners to accelerate and enhance their contribution to sustainable development agendas, including the SDGs, climate action, biodiversity conservation and human rights. He is a member of the International Council of Museums Sustainability Working Group and IUCN Commission on Education and Communication. He is a member of the *Reimagining Museums for Climate Action* research project team and a co-curator, with Rodney Harrison and Colin Sterling, of the *Reimagining Museums for Climate Action* exhibition.

HM Ashish, could you tell us about the origins of Wretched of the Earth?

AG Wretched of the Earth emerged around 2015 in response to the Global Climate March. It was really about people of colour self-organising within the climate movement to draw attention to the frames of global justice, the intersection of race and climate, and the crucial fact that the people on the frontlines of climate breakdown are the people who are least responsible for causing it, who are largely Black and brown people of the global south. So that was the point of origin.

And then in the spring of 2019, as the climate movement shifted and became more present in public consciousness, through Extinction Rebellion and the youth strikes and the emergence of new actors like Greta Thunberg, the group felt the need to intervene within the discussion which was emerging at that time. We presented an open letter to Extinction Rebellion that attempted to take the line of a critical friend, sharing many common aims and objectives, and not wholly critical about the kind of tactics around mass arrests that were being used, but trying to draw attention to the omission of race within that schema, as well as the centrality of race within the problem of climate more generally. The aim was to encourage them to look at the tactics that were being used and who they included and who they excluded, at the intersection of policing Black communities, at the politics of the border, and the relationship of those issues to the ongoing climate emergency. It was really with that open letter that Wretched of the Earth caught a global public imagination and rose to a new degree of prominence.

In 2019, it was agreed that the overarching strategy of Wretched of the Earth would focus on reparations, on reparatory justice and on building an awareness within the climate movement about the necessity of reparation. But then 2020 and the pandemic knocked us off course in different ways. Individuals within the collective were caught up with financial issues, issues of community care and other pragmatic concerns which the pandemic raised for many people. That ethos of care is very much the underlying motivation for what we do, and so it assumed centre-stage. For me the year somehow led towards the COP26 mobilisation. I've ended up, through Wretched, getting involved in the COP26 Civil Society Coalition's political strategy, and working to organise diverse grassroots organisations, including with activists from Extinction Rebellion, school strikers, Green New Deal UK etc, to start to address climate justice as a key part of the international climate conversation. Now we're looking at how to bring that back together in the run-up to COP26 and beyond, to renew that focus on reparations and reparatory justice.

RH How does this relate to the work that you're now doing for the Sarah Parker Remond Centre for the Study of Race and

Racialisation at UCL? And can you tell us about what it means to be an activist-in-residence at a university?

AG The initiative that I'm currently working to develop with the UCL Climate Hub is called A 1.5°C Charter for COP26 and Beyond, and it is a direct reflection of the situation across the different groups and organisations I've been interfacing with through the COP26 Civil Society Coalition.

The background to this is that around February or March in 2019 I was asked to speak about climate justice on Keir Starmer's campaign for the UK Labour Party leadership. He was holding a "listening event" and pitching himself as a champion of climate justice in the hunt for climate votes and race votes. What was coming from his campaign team was pretty flimsy, and that was pretty much what I said on the platform. We invited them, if they wanted to take climate justice seriously, to work with people like us to school them, which they initially made positive noises about. Obviously, once he had won the election, he started to backtrack. By that point though a certain momentum had already been created in which members of Wretched of the Earth, in collaboration with others, were trying to bring people around the table to start to address questions that in a way haven't really been addressed at the level of mainstream policy – about the fundamental limitations of the idea of a green new deal, of green growth, of the green industrial revolution – and the reality that unless we engage with the discontents of extractivism, then we are simply rolling into a new era of exploitation and ecological catastrophe.

It became apparent that while Wretched of the Earth had been operating as a protest group, or grassroots activist group, there were suddenly a lot of people coming to us within the movement and within the policy space, saying "Okay, your critique is really compelling, where does that lead in terms of policy? How can we facilitate the emergence of a climate justice policy agenda?"

We started working towards that, as I say, initially in dialogue with the Labour Party frontbench. In the meantime, we found there was actually more genuine interest in engaging from the COP26 unit of the government in the Cabinet Office, who were very keen in the run-up to the COP to demonstrate inclusion of the kind of groups that we were bringing together. They invited us to brief them early in the new year, and that invitation led to a significant reflective discussion amongst ourselves on what the climate justice asks of COP26 really are, which in turn led to a strong response very much led by people of experience – including Farhana Yamin, the climate lawyer and former negotiator of the Paris Agreement and Asad Rehman, Executive Director of War on Want and co-founder of Wretched of the Earth – that what was important, for us as UK civil society, was to underline the importance, above all for the world's most vulnerable communities, of limiting global

warming to 1.5°C. We feared that this target – a demand from the governments of the global south since Copenhagen in 2009 – was something that the UK Presidency was hoping to consign to the dustbin of history at COP26. On this issue of 1.5°C, what we were seeing, across the climate movement, was a number of key organisations afraid to engage with the language of what they feared might prove an impossible target to achieve. They feared that failure might demoralise the general public, and so sought a more “optimistic” message. But this approach, to many of us, seemed to point towards a crucial moral predicament that we face in 2021 – that we’ve come to a point where we could be so scared to talk about the possible negative impacts of what’s coming down the line, that we would rather ignore them completely than actually engage with the reality of what those impacts are. A lot of that was being packaged under the banner of optimism, or the banner of positive accelerationism, which was emerging around COP26. It seemed to me to be a paradigm in ascendancy that really needed to be challenged and replaced.

The 1.5°C Charter has developed as a response to this, in dialogue with key climate scientists like Tim Lenton, whose work on tipping points is very much central to the positive accelerationist philosophy, but who himself completely recognizes that unless there are values underpinning that, it doesn’t actually get us on track towards ecological equilibrium. So, Tim Lenton has been a key coarchitect of that vision, as have Simon Lewis and Mark Maslin at UCL. The 1.5°C Charter aims to set out a new paradigm for climate finance for the 2020s. Rather than averting our eyes from the horror in front of us, the aim is to start to develop a language and a culture of looking the crisis in the eye and speaking about it in pragmatic terms.

The denialism that still runs our country, and many others, makes it still viable for the UK’s Prime Minister to stand up in Parliament and say that net zero 2050 is as fast as we can afford to decarbonise without breaking the back of the economy. That’s obviously a fiction, it’s a small ‘c’ conservative fiction that is about maintaining the status quo for fear of actually doing what’s needed, built on the complete failure to look at the actual impacts, the actual cost benefit of breaching 1.5°C.

The costs of breaching 1.5°C in any way you look at it, are going to far outweigh the costs of limiting global warming to 1.5°C. Those costs will be globally distributed, they will be most felt by the people with the least resources to mitigate against those impacts. Crucially, they’ll be intergenerational – we don’t incur those costs the day that we breach 1.5°C – our children do and our grandchildren do. Those costs will spiral on for at least 70 years, but without the right culture of leadership they continue to spiral. So, in terms of the paradigm that we are looking to lay out, this is the one that gets us back on track. It’s the one that allows us to say this is the nature of the crisis that we face, and any mechanisms that are going to be effective, need to be commensurate with that problem.

RH To segue from one form of denialism to another form of denialism, I want to turn to Subhadra, who up until recently, has been a colleague of yours in the Sarah Parker Remond Centre for the Study of Race and Racialisation, working on a project on the history of eugenics at UCL.

And in some ways they seem like unconnected issues at first glance, but I think both you and Ash have variously pointed to the ways in which the inequalities which mean that climate change differentially affects indigenous, Black and Minority Ethnic people, as well as people in the global south more extensively, relates to the history of scientific racism, and the endless progress narratives which were established and have been supported by the discourses developed in 19th century museums through until today. This has been something that we've been really keen to emphasise and try to unpack in the *Reimagining Museums for Climate Action* project. I wondered if you could talk to us a little bit more about your work on eugenics and how you see it as relating to these entangled issues of museums, climate and global inequalities?

SD Thank you for the invitation. There is so much in what Ash has been talking about that I sympathise with and understand, and I feel like these are similar problems that we're addressing. Particularly as you say, there is a form of denialism about eugenics and systemic racism in the context of the University and in the context of our society more widely which I have been trying to address and which connects directly with the differential impacts of climate on Indigenous, Black and Minority Ethnic people throughout the world.

Despite the fact that the "science" of eugenics had been arguably disproven by people working in the UCL Genetics Department in the 1960s and 1970s, when I started working for UCL a series of very prominent scientists associated with the eugenics movement were still celebrated and commemorated with their names on buildings, and this was still not a part of the overall conversation at the University in ways that I thought were important. When I started curating the thing that is called the Galton Collection at UCL, by rights really it should be called the Eugenics Collection, it was clear to me that these conversations were starting to bubble up, but they were not necessarily part of the mainstream, and I felt like as curator of that collection it was my role to bring that into the mainstream more. In doing this, a couple of the people who were influential in my thinking and approach to these issues were Dr. Nathaniel Adam Tobias Coleman, who was Research Associate in the Philosophy of 'Race' at UCL at the time, and Dr Debbie Challis, who was at the Petrie Museum of Egyptian Archaeology.

They collaborated on an event called UCL Faces Race, which was I think probably the first time the conversation around the history of UCL, the history of eugenics and how race fits into that question, was really discussed openly. Debbie went on, as part of the

research that she had been doing into the Golden Centenary in 2011, to publish a number of papers and a monograph about her research into the history of eugenics at UCL.

So I turned one of those papers – which was to do with the famous archaeologist Flinders Petrie and his research relating skull size to the environment and all of those other hideous cultural materialist approaches to understanding ancient past – into an exhibition focusing on the buildings that were named after famous geneticists. Because as I said, to me this was a history that as a UCL student I had never heard, as a UCL member of staff, despite being curator of the Galton Collection, it was a story that I had not heard until I started working with the collection.

I felt like until we were all *au fait* with the history, and *au fait* with the language of it, we weren't going to be in a position to start to talk about things in meaningful equitable ways. Ash has very eloquently made the point that the climate crisis is a racist crisis, and I can appreciate that my saying that sounds almost like a cliché, but I don't think it's part of the mainstream discourse in the way that it should be.

So yes, to me addressing the history, speaking openly about the history and then acknowledging the crossovers is important. In the history of the environmentalist movement in the United States in the early twentieth century for example, there are significant connections with the eugenicist movement at the same time. People like Theodore Roosevelt, Madison Grant and Henry Fairfield Osborn, who are all considered to be key figures in the history of environmental conservation in the United States, all participated in the second International Eugenics Congress at the American Museum of Natural History in 1921. Madison Grant is the author of a book called *The Passing of the Great Race*, which is one of the most influential scientific racist works ever published. Without wanting to descend into a history lesson, all of these histories are combined and feed into systemic inequality today.

RH Yes, it's interesting that you mention Theodore Roosevelt, because he is part of the back-story to the magical realist film *Elephant in the Room* which is part of the *Reimagining Museums for Climate Action* exhibition. The film begins with the diorama call "The Alarm", which is a series of taxidermied and staged elephants in the Akeley Hall of African Mammals at the American Museum of Natural History, at least one of which was amongst the thousands of animals and birds which were shot on an expedition that Roosevelt made to Africa at the start of the twentieth century.

The other point that you've made before is the way in which the eugenics story that begins at UCL, then makes its way out into the world and has significant and long lasting global policy impacts, resulting in the forced sterilisation of hundreds of thousands of Black, Indigenous and Minority Ethnic women, and also women that are perceived to be disabled or mentally ill or members of the "lower classes" throughout the world.

SD Entirely. If I take this opportunity to encourage your readers to look up the sixth episode of my most recent podcast, which is called “What Does Eugenics Mean to Us?”, where I’m in conversation with Paige Patchin from the Sarah Parker Remond Centre, and also Kate Law and Kalpana Wilson, all of whom do research into this area. We talk in a lot of detail about this idea of the population question – which can take us through straight back to Madison Grant in the early twentieth century – the idea that the population of the planet is stretching, that there are huge numbers of people and that somehow it is the responsibility of those Black and brown people whose populations are growing exponentially and in other ways which are put forward in rather fearful language. It belies really a lot of this history of eugenics, of racism and of course the general, extractivist, capitalist imbalance in the way that Ash was talking about. So yes, eugenics is a fundamental part of this history which is still going on in the policing of women’s bodies in terms of reproductive injustice. Those two things come together very firmly in the context of this conversation.

HM I wanted to ask you to talk a little bit, Subhadra, about another activist group, which is Museum Detox. Could you tell us a little bit about the group and the work they’ve been doing?

SD I am a founder member of Museum Detox, which I think is just a fancy way of saying I was there at the first meeting, which is quite a while ago now. Museum Detox is a network for museum and heritage professionals from Black, Asian and Minority Ethnic backgrounds and together we provide each other solidarity and support, and activism in the field more widely. A lot of the work that we do is for each other in terms of being a space of mutual support and holding each other up.

While we are a substantial group now – I think there’s more than 200 members – it’s definitely the case that a lot of people who are members of the network are very much going to be the only Black and Minority Ethnic people working in their organisations. To give an example of the organisation that I’ve just left, UCL Culture is an organisation of about 60 people, and depending on how you counted, two of us were people of colour.

While there is greater diversity across gender and across sexuality within the museums and heritage sector, I think it is very telling that representation in the heritage and the museum workforce is so particularly biased in favour of white people. Obviously, that is part of a bigger set of issues to do with representation and the pay gap. But again, the fact that we are not in the room and that our voices are not being heard when it comes to telling these histories, but also when it comes to addressing the systemic inequalities, is a problem.

So, a lot of the work that Museum Detox is doing is internally within the group to support its own members, but also externally in terms of say, Twitter campaigns and various other social media activity. Detox does the work of holding large organisations, particularly the national museums, to account in terms of addressing how diverse their workforce is. But also, how diverse and how critical is the work that they're doing within the sector, including when it comes to addressing things like the climate crisis.

RH I wondered whether it might be relevant for us to talk about Black Lives Matter and the impact that it's had on the public discussion around histories of race and racialisation and the ways in which they are related to ongoing, systemic forms of racism. And I wondered how you've both seen these discussions impacting on discussions of history and its relationship, in Ash's case to the discourse around climate justice, and in Subhadra's case to the discourses around museums.

SD So much of the discourse around statues, particularly statues coming down – fallism – what to do with statues, etc. in the UK has been framed as a question to do with heritage rather than a question to do with political equality and social injustice. So much of the argument is nonsense co-opted about what to do with these things, when the answer is very clearly obviously pull them down and put them in the sea and leave them there.

As poignant as the current redisplay of Colston in Bristol is, to me there was an argument for leaving him in Bristol Harbour for quite a longer period of time than he actually was. Because essentially what you've had there is the state retrieving its property and then reappropriating it in the context of a heritage organisation, which is still blanket covering the wider issues to do with systemic injustice. The reason for pulling down that statue was not to create a new museum piece, the reason for pulling down that statue was to highlight histories of and continuing social injustice.

RH Ashish, what has been the impact of Black Lives Matter on your work with Wretched of the Earth? Was there any sense of last summer's events taking focus away from the climate conversation?

AG We felt that, as a result of the open letter, people started talking about the intersection of race and climate in a different way. People also started appropriating the phrase "climate justice". We broke through some kind of barrier because people that meant something very different from what we meant by climate justice felt that there was political capital to be accrued in using the same words, which is always an indication that you've ruffled feathers. One of the things that we did in the open letter, that I think was

kind of stunning for readers in different contexts around the world, was that we were speaking about 500 years. We were saying that in order to understand the nature of this climate event right now, you have to understand the 500-year history of globalisation, of slavery, of colonialism, of neoliberal structural adjustment, as part of one continuous narrative. And only once we've understood the seeds of that oppression, can we actually start to create a community of care around the world.

In terms of impact, we certainly saw a massive uptake in people wanting us to come into their spaces and talk to them about that. And we've done a lot of work with very different audiences in very different contexts from museums and art galleries to schools and activists' collectives, to government departments and policy makers, where we're really trying to take people with us into these intersectional frames of climate and colonialism. But at the level of the COP26, the mainstream intergovernmental private conversation, I'd say that hasn't yet moved at all. I don't think that language or that understanding is yet there. We're at the beginning of a very long process.

Key members of Wretched of the Earth are also key members of Black Lives Matter, and we're absolutely unequivocal in our solidarity for that organisation and for Black lives around the world. So yes, there's absolutely no way in which the events sparked by George Floyd's murder were felt to be taking away from the climate conversation. It was the opposite; it was kind of extraordinary to see the historical timeframes that we'd been talking about becoming the targets of global actions in a way that led to conversations being had around the world in the most unlikely of contexts around the meaning of Leopold the Second and Christopher Columbus and Edward Colston.

I think that the events of last summer need to be understood as a precursor of the consciousness and the awareness that is to come. There is a generation of young people whose consciousness will have been raised by that event. And the impacts of that event will be felt over exactly the same timeframe in which the transition towards global justice, towards ecological equilibrium has to unfold.

At the same time, the act of pulling down statues can only really be understood as the beginning of a process of reimagining our civic centres and our public spaces. For now, the statues have come down and where they used to be there is a void. The void creates all kinds of feelings of discomfort and anxiety. But the real task ahead of us now is not what you put in the place of that statue, but actually how do you work from the basis of that void to cultivate a new sense of public imagination. That is a process that I feel has not yet even started.

natural future museums

Brazil & UK

3

Takumã Kuikuro & Thiago Jesus

What if Indigenous lands were thought of as a kind of museum for climate action?

Museums have historically played a significant role in the colonisation of Indigenous territories, the removal of cultural treasures, and

the destruction of vital links between people, cultures and landscapes. Might these same institutions have a crucial role to play in raising international awareness about Indigenous peoples as essential protagonists in the fight against climate change and in resisting the destruction of their traditional ways of living?

Natural Future Museums is a video installation created by People's Palace Projects senior project manager Thiago Jesus and Indigenous filmmaker Takumã Kuikuro, which aims to inspire museum professionals and institutions to reimagine their methods of engagement with Indigenous people beyond the current practices of acquisition, handling, repatriation and display of their heritage, and to actively engage with the fight of local communities for their rights and the rights of nature.

At a time when the international museum sector struggles to come together around a definition of what museums are and how they should engage with urgent concerns of today to meet the demands of the climate emergency and racial inequality, *Natural Future Museums* asks what would it mean if we were to confer museum status on Indigenous territories? The installation speculatively proposes giving museum status to Indigenous territories in the Amazon rainforest, where native communities are fighting to safeguard the environment for future generations. *Natural Future Museums* also provocatively rewrites the recent International Council of Museums (ICOM)'s proposed new museum definition, drawing parallels between the role that museums and Indigenous territories

might play in confronting the inevitable environmental transformations climate change will bring.

The exhibit features a 13min film, drawing on Takumã Kuikuro's decade-long attempts to document the culture and lifeways of his own community, which invites viewers to meet the Kuikuro, a group of 650 Indigenous people living in the Xingu Indigenous Territory in the Brazilian Amazon. The film also depicts an animation of *O Sopro do Maliri* by Indigenous artist Denilson Baniwa.

At its core, *Natural Future Museums* is a call for museums and cultural institutions everywhere to radically rethink their engagement with Indigenous communities in the Amazon as a critical part of the fight to protect our future from the climate crisis.

INDIGENOUS TERRITORIES	Museums are democratising, inclusive and polyphonic spaces for critical dialogue about the pasts and the futures.
INDIGENOUS TERRITORIES	Acknowledging and addressing the conflicts and challenges of the present, museums hold artefacts and specimens in trust for society, safeguard diverse memories for future generations and guarantee equal rights and equal access to heritage for all people.
INDIGENOUS TERRITORIES	Museums are not for profit.
INDIGENOUS TERRITORIES	Museums are participatory and transparent, and work in active partnership with and for diverse communities to collect, preserve, research, interpret, exhibit, and enhance understandings of the world, aiming to contribute to human dignity and social justice, global equality and planetary wellbeing.
NATURAL FUTURE MUSEUMS	ICOM proposed new museum definition, 139th session in Paris on 21-22 July 2019
26th UN Climate Change Conference of the Parties (COP26) in Glasgow 1-12 November 2021	

This new definition is based on part of Redefining Museums for Climate Action.
AUTHORS: FUTURE MUSEUMS, Future Museum & Design House, People's Future Projects / Queen Mary University of London

ICOM proposed new museum definition, 139th session in Paris on 21-22 July 2019 / *Natural Future Museums* proposed new museum definition for COP26 in Glasgow 2021.



NATURAL FUTURE MUSEUMS:
INDIGENOUS TERRITORIES AS MUSEUMS FOR CLIMATE ACTION

Thiago Jesus

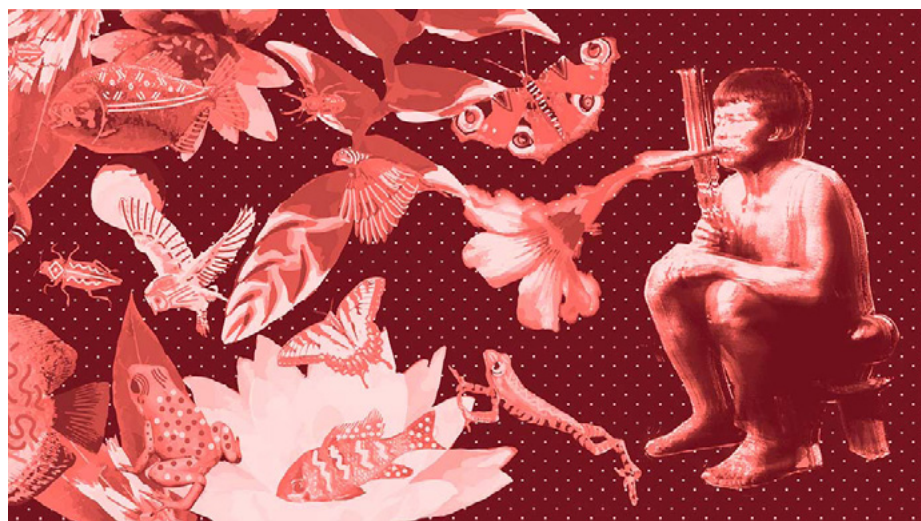
Thiago Jesus is a London-based Brazilian creative producer, researcher, and curator with extensive experience on knowledge exchange, cultural diplomacy, social and climate justice. Thiago holds an MA in Visual Culture and is Senior Project Manager at People's Palace Projects, an arts research centre based at Queen Mary University of London. Since 2015, Thiago and collaborator Takumã Kuikuro – an internationally recognised indigenous filmmaker living in the Ipatse village of the Kuikuro people in the Xingu Indigenous Territory in Mato Grosso state, central Brazil – have led a cultural exchange programme exploring ways in which arts and digital technologies can support the preservation of fragile communities in the Amazon region.

The relationship between museums and Indigenous people¹ is complex and often problematic. Museums have historically been heavily implicated in colonising Indigenous cultures and removing vital links between people, traditional knowledge and the land on which they have lived for generations, sometimes for thousands of years. By controlling their cultural heritage and representing its value and meaning, museums have helped to perpetuate a long and violent history of displacing, expropriating and exterminating native populations across the world, conveying ideologies and narratives about Indigenous people's role in society that still shape the public perception about these communities and their territories. Museums have been challenged to reform their colonial practices, particularly over the past thirty years. In response to these challenges, some institutions have started to develop a more collaborative relationship with Indigenous peoples in the management and presentation of their material and intangible cultural heritage, working together with native communities as partners rather than subjects.

At a time when museums and cultural institutions are rethinking their purpose to respond to the urgency of the climate and ecological crisis, *Natural Future Museums* speculatively proposes a redefinition of what constitutes a "museum" as a form of radical climate action. Drawing parallels between the role museums and Indigenous territories might play in mitigating climate change and safeguarding cultures and natural resources, the installation proposes giving museum status to Indigenous territories in the Amazon.

Natural Future Museums draws from filmmaker Takumã Kuikuro's intimate archive of over ten years documenting the Kuikuro, his community of 650 people who live in the upper reaches of the Xingu River in the Amazon basin. The Xingu is a protected Indigenous territory of over 2.6 million hectares and home to 16 Indigenous peoples, including the Kuikuro. In 1961, the Brazilian government designated this region as a national park to protect the lives and culture of its Indigenous villages and preserve the surrounding environment. As the largest area of tropical forest in the "arc of deforestation" of the southern Brazilian Amazon, the collapse of forest resilience in the Xingu is no longer a projection. Over the past decade, droughts, fires and intense farming on the territory's borders have led to aridification, soil erosion, water pollution, elevated fires and forest die-off inside the Xingu². Takumã Kuikuro started making films to document and preserve the stories, songs, dances and rituals that characterise the Kuikuro culture, guarding against the erasure of his people's history and knowledge of living as part of nature, and raising international awareness about Indigenous people's existence and significance in the fight against climate change.





The Brazilian *Amazônia* is home to around 250,000 Indigenous people, living in over 420 territories. Their livelihoods are intrinsically linked to the preservation of the forest and the conservation of its biodiversity. Rather than “the first Eden”, “a pristine natural kingdom”, as widely described in history books, the Amazon has been home to millions of Indigenous people for centuries. Recent archaeological studies show that much of today’s forest is anthropogenic – this means that native populations have modified it extensively, domesticating fruit trees and medicinal plants for at least 8,000 years³. These numerous populations were responsible for increasing the biodiversity and quality of the soil in the many regions they inhabited. Settlement patterns document regional-scale planning and semi-intensive land use, including large-scale agroforestry and mechanisms to enhance forest resilience, e.g., fire control, soil enrichment, zoned forest land use and wetland management⁴.

Today, the Amazon – the world’s largest and most biodiverse remaining tropical forest, which spans over two million square miles and plays an essential role in the planet’s climate and water cycles – is on the frontline of global deforestation. An area of forest the size of three football fields is lost every minute, and 20% of its total forest cover has already been razed as a consequence of decades of cattle ranching, illegal logging, mining, land grabbing and fires. Scientists warn that a further 5% rise in deforestation levels will trigger an irreversible transition to a drier, savanna-like ecosystem⁵. The forest represents the extreme ecological and political conflict that Brazil is currently confronting. The pace and scale of deforestation have been aggravated since Jair Bolsonaro took over the presidency in 2019 and reflects a sense of impunity among land grabbers, fuelled by his anti-Indigenous and anti-environmental rhetoric. The current government has actively introduced legislation that has accelerated unprecedented environmental damage and persecution of Indigenous communities, approving bills to downsize or degazette dozens of protected areas, to open Indigenous lands to the implantation of dams, mining, oil exploitation and industrial farming, and to allow for the construction of roads, dams and railways in well-conserved areas of forest. As a result, deforestation surged to a 12-year high in 2020, a 9.5% increase from the previous year⁶. The Indigenous activists that stand up to protect their land face violence and the shrinking of space in which to protest peacefully. The country recorded 24 murders of land and environment defenders in 2019, and almost 90% of these deaths were in



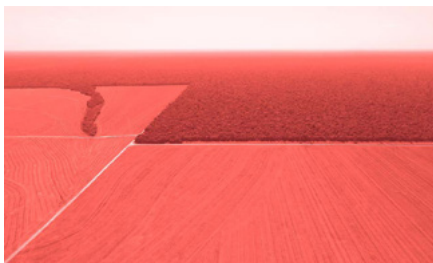
Still from
Natural Future
Museums, 2021.
Takumā Kuikuro.

the Amazon region⁷. Worldwide, around 40% of environmental activists killed every year are Indigenous people.

Takumã and the Xingu communities' fight to resist the destruction of their traditional ways of living is unique but universal. Worldwide, nearly 70 million Indigenous women and men depend on threatened forest ecosystems for their livelihoods. Their forestlands store at least one-quarter of all above-ground tropical forest carbon, and at least one tenth of the total carbon found in tropical forests is located in collective forestlands lacking formal recognition⁸. 100 days before the 26th UN Climate Change Conference of the Parties (COP26) was scheduled to take place in Glasgow, it was reported that the Amazon is now emitting more carbon dioxide than it is able to absorb for the first time⁹. The forest was once a vital carbon sink that slowed down the pace of global warming, but it is now contributing massive amounts of carbon to the atmosphere. Most of the emissions, about 1.5bn tonnes of CO₂ a year, are caused by fires, many deliberately set to clear land for beef and soy production, with forest growth removing 0.5bn tonnes. The 1.0bn tonnes carbon balance the forest is now releasing is equivalent to the annual emissions of Japan, the world's fifth-largest emitter of greenhouse gases.

Brazil's first Indigenous art curator, Sandra Benites, says that what unites Indigenous people 'is our vision of the world and how it relates to our territory'¹⁰. Indigenous people's lands are integral to their identities, and where they have stewardship of their lands, forests are preserved and nature flourishes¹¹. Lands held by Indigenous people are better protected from environmental destruction than other areas of the forest. Native communities collectively share a long-established and non-exploitative connection to their territories and view themselves and nature as one extended family that shares ancestry and origins. Their land has a fundamental importance for their collective physical and cultural survival as peoples¹². Granting Indigenous peoples full property rights is proven to curb deforestation drastically, and the results are of significant orders of magnitude¹³. Deforestation is two-thirds lower within Indigenous territories compared to those right outside the border. In Brazil, 237 Indigenous territories, about 2 million hectares of Indigenous lands, do not have homologation, an official decree granting the land to Indigenous people¹⁴.

The discussions of museums' historic reparation should not be detached from the ecological restoration of Indigenous lands if we are



The Xingu Border.
Takumã Kuikuro.

to conceive meaningful alternatives for climate justice. Museum professionals and institutions should actively engage with the fight of local communities for their rights and the rights of nature. The Indigenous fight is as much political as aesthetic, fought on the ground and through narratives¹⁵, and museums can help to effectively bring their environmental protagonism to the realm of the sensible and provide arenas for dialogues about pasts and futures. Museums can establish a powerful precedent by recognising Indigenous peoples as the world's best conservationists and their role in preserving, documenting and interpreting the ecosystems, revealing ways in which humans can live together with nature. The wealth of resources and institutional power embodied by museums can support Indigenous communities to exercise stewardship of their lands, to uncover and contextualise climate justice histories, to mobilise traditional knowledge to preserve biodiversity, and to connect territorial struggles with wider global movements to help enact climate justice action. Global strategies and support for these communities' fight to resist the erasure of their ancestral ways of living are urgently needed.



Still from
*Natural Future
Museums*, 2021.
Takumã Kuikuro.

¹ The word “Indigenous” refers to the original inhabitants of countries that have been colonised. They are defined partly by descent, partly by the particular features that indicate their distinctiveness from those who arrived later, and partly by self-identification. No categorisations of Indigenous people are absolute, except perhaps when it comes to the issue of control. For the most part, the term “Indigenous peoples” is used today to describe a group that has had the ultimate control of their lands taken by later arrivals; they are subject to the domination of others. Used in this sense, descent is less important than political perception. See “Terminology”, *Survival International*, accessed July 15, 2021 <https://www.survivalinternational.org/info/terminology>

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⁹ “Amazon rainforest now emitting more CO2 than it absorbs,” *The Guardian*, July 14, 2021, accessed July 15, 2021 <https://www.theguardian.com/environment/2021/jul/14/amazon-rainforest-now-emitting-more-co2-than-it-absorbs>

¹⁰ Jill Langlois, “Brazil’s First Indigenous Curator: ‘We’re Not Afraid Anymore,’” *NYTimes.com*, May 22, 2020, accessed July 15, 2021 <https://www.nytimes.com/2020/05/22/arts/design/sandra-benites-brazil-museum-curator.html>

¹¹ Gleb Raygorodetsky, “Indigenous peoples defend Earth’s biodiversity-but they’re in danger,” *National Geographic*, November 16, 2018, accessed July 15, 2021 <https://www.nationalgeographic.com/environment/article/can-indigenous-land-stewardship-protect-biodiversity->

¹² “Who are Indigenous Peoples?,” *United Nations Department of Economic and Social Affairs Indigenous Peoples*, accessed July 15, 2021 https://www.un.org/esa/socdev/unpfii/documents/5session_factsheet1.pdf

¹³ Kathryn Baragwanath and Ella Bayi, “Collective property rights reduce deforestation in the Brazilian Amazon,” *Proceedings of the National Academy of Sciences* 117, no. 34 (August 2020), 20495-20502

¹⁴ “Terras Indígenas,” *Funai*, accessed July 15, 2021 <http://www.funai.gov.br/index.php/indios-no-brasil/terras-indigenas>

¹⁵ Paulo Tavares, “In the Frontiers of Amazonia,” *The Routledge Companion to Contemporary Art, Visual Culture and Climate Change*, T. J. Demos, Emily Eliza Scott, and Subhankar Banerjee, eds., (Abingdon and New York: Routledge, 2021), 26-34

Further concepts

Reimagining Museums for Climate Action began life as a design and ideas competition, launched on International Museum Day 2020.

The competition invited designers, architects, academics, artists, poets, philosophers, Indigenous groups, museum professionals and the public at large to radically reimagine and redesign the museum as a radical form of climate action.

Over 250 submissions were received from 48 countries around the world. The images shown here offer a small glimpse of the remarkable ideas put forward in response to the call. Ranging from the deeply practical to the playfully subversive, this compendium of possible futures demonstrates the creative and (re)generative potential that still clings to the museum concept.

You can view the full range of longlisted concepts on the *Reimagining Museums for Climate Action* website – www.museumsforclimateaction.org



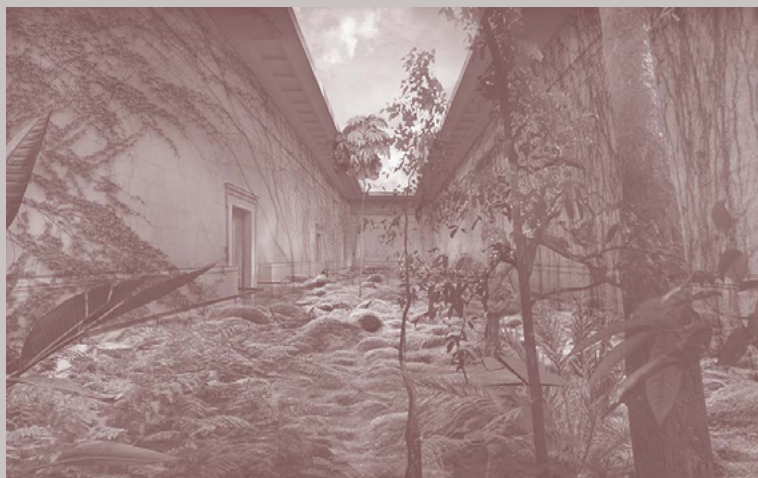
A



B



C



D



E



F



G



H

- A *Disappearing Museums* by Random Institute, a radical experiment in ephemeral museum architecture using a biodegradable material that naturally dissolves when exposed to rain. Architectural Sketch by Atelier Jäggi-Leclair, Los Angeles. Image by Raul Taciú.
- B *Aquify* by Abigail Portus and Rosamund Portus, which imagines a new sustainable building concept combining the functions of a museum and a working water-treatment centre. Sectional scale model of the Aquify building, visualisation by Abigail Portus.
- C *Muserialism* by Fadó Fadó, which asks how thinking like a museum might help to challenge the disposable cultures of contemporary consumerism. Fadó Fadó. www.fadofado.com
- D *The British Museum of Decolonized Nature* by John Zhang at Studio JZ, which imagines a 'rewilded' British Museum emptied of its colonial artefacts and left to fall into ruin. John Zhang at Studio JZ
- E *Refugium* by J. D. Scott, a museum for native ecosystems in the form of an enclosed arboretum. J.D. Scott
- F *Little Earths* by Manifest Data Lab, a distributed museum of 3D printed models representing the fragility of the Earth. Manifest Data Lab
- G *Weather the Weather* by Inés Cámara Leret and George Adamson is a sensorial installation that recreates weather conditions of the same day but of past and future years. Weather the Weather, 2021. Photograph by Max Leighton for In Our Nature. www.weathertheweather.info
- H *Root Domain* by Lara Lesmes, Fredrik Hellberg and Owen Hopkins, which questions the environmental impact of digital museum experiences. Lara Lesmes and Fredrik Hellberg

PLAYING WITH THE IMPOSSIBLE AT E-WERK LUCKENWALDE

Helen Turner

Helen Turner is the co-Artistic Director and Curator of E-WERK Luckenwalde, Germany. Turner was previously the Chief Curator at Cass Sculpture Foundation and has worked for Artangel, Kinman Ltd and her own curatorial platform AGENCY AGENCY. Turner holds an MA in Psycho-social studies from Birkbeck, University of London under Slavoj Žižek and a BA in Fine Art from Chelsea College of Art, London.

In Luckenwalde, a small post-industrial city south of Berlin, a concrete utopia is being built by artist collective come energy provider Performance Electrics.

E-WERK Luckenwalde is housed in a power station of the same name built in 1913. After the Berlin Wall fell in 1989, this East German power plant – one of the first to produce and supply coal-based energy to the region of Brandenburg – was forced to close. Performance Electrics acquired the building in 2017 with the dream of reanimating the site as a sustainable, art-driven power station. In 2019, E-WERK Luckenwalde was reborn as a ‘Kunststrom Kraftwerk’ (Art Electricity Power Plant). The station now feeds art-powered electricity back into the national grid, bridging the worlds of contemporary art, industrial heritage and sustainable technology. It does this through a repurposing of the station’s historic infrastructure, and pyrolysis, a carbon neutral method of generating energy from waste locally sourced spruce wood-chips. Artist Pablo Wendel worked closely with former employees of the power station and engineers to make this possible, and the building now plays a vital role in the local community, acting as a space of autonomy and experimentation.

Wendel founded Performance Electrics gGmbH in 2012 as a non-profit electricity provider for the generation and transmission of Kunststrom in Stuttgart. Kunststrom is produced through interventions, installations and performances in public spaces. Performance Electrics creates unique art projects that create Kunststrom and feed it back into the German power grid. This makes the power grid itself, which is capable of releasing energy anywhere, the transmitter of art. Working collaboratively with artists, designers, architects, art historians, engineers, economists and other interdisciplinary experts, Wendel’s Performance Electrics is a synthesis of art, technology and business.

This combination is fitting, as the idea of Kunststrom was born out of financial desperation. As a conceptual performance-based artist, Wendel was repeatedly invited to participate in exhibitions around the world for little or no remuneration. This false economy of exchanging a cultural “product” for some poorly defined “opportunity” was unsustainable, and so Wendel devised Kunststrom to pay the bills and gain some autonomy from the art world. Through a diverse catalogue of sculptures, performances and installations, Wendel now generates, rather than pays for, energy. This has fundamentally changed his relationship to the art market and individual cultural institutions. As the artist has argued, ‘Museums



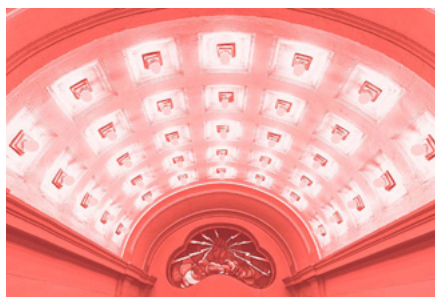
E-WERK
Luckenwalde,
2021. Photo
courtesy
of Tim Haber.

spend more money on their side costs than they spend supporting young artists. If they would change their energy provider to Performance Electrics, they would support art. All the side costs of the museum could be invested in culture as well. That would be a huge flip. It would be an amazing change’.

E-WERK Luckenwalde aims to make this utopian dream a possibility, with the history of the building itself symbolising this hope. In contrast to 21st century electricity, which is sold and distributed as a generic commodity, when the power station opened people were still sceptical and uncertain about the new technology. The building therefore needed to convince the public of the heroic benefits of electricity. To this end, the main entrance of E-WERK Luckenwalde boasts an imposing stained-glass window with a fist emanating lightning bolts, accompanied by a dramatic corridor of bare lightbulbs. In the late 19th and early 20th century, electricity occupied the terrain of the impossible, the mythic, even the occult – exactly the place good art and the avant-garde should occupy. That art has some sort of “power” is irrefutable, but its commodification means that the demand to push, challenge and embolden is too often neglected and forgotten. Today Kunststrom unites electricity with art in a powerful gesture to reclaim the terrain of the avant-garde and the unknown.

As a functional Kraftwerk (Power Plant) and Kunstzentrum (Art Centre) E-WERK Luckenwalde stands on the periphery of the city as a platform for dreaming and creative research. Here dreaming functions as the main catalyst for artistic production, which outside, in hypercapitalism, is constantly shelved in the pursuit of efficiency. That is not to say dreaming is not (superficially) also exploited in the capitalist machine, but only in relation to creative innovation and economic progress. But here, in the backwaters of Berlin, E-WERK Luckenwalde operates as a not-for-profit energy producer and cultural enterprise seeking to usurp the idea of capital and cultural production through subversion from within.

Rather than demolishing the building to create a new efficient Kunststrom power station, Performance Electrics decided to painstakingly reanimate the building’s pseudo-neolithic conveyor belts, coal bunkers and pistons dating back to 1913. The “Dinosaur” as Wendel lovingly calls the machine, creaks and groans as it slowly transports locally sourced spruce woodchips through the tunnels and shafts, which have all been carefully restored. Slow and steady, Kunststrom powers the building and



E-WERK
Luckenwalde Main
Entrance, 2019.
Photo courtesy
of Ben Westoby.

is distributed to clients throughout Germany. Although Kunststrom is only a homeopathic dose in the deep electric ocean, it is a start. This homeopathic dose is key to Performance Electrics, where the aesthetic experience (ästhetische erfahrung), rather than technological efficiency, is king.

Performance Electrics channels 100% consumer profit back into contemporary art at E-WERK Luckenwalde and the Kunststrom circuit to research and develop the production of new creative energy. This approach aims to challenge conventional economic models and serve the public, rather than shareholders. All Kunststrom customers, including museums and private households, permanently support Performance Electrics and contemporary art through their utility costs. As the only not-for-profit electricity provider in Europe, Performance Electrics challenges the conventions of the industry and asks how capitalist society could be different.

E-WERK Luckenwalde also acts as a functional sculpture, combining art and energy to produce a Gesamtkunstwerk (Total Work of Art). The station supplies art-powered energy to the national grid and presents a dynamic contemporary art programme of commissions, exhibitions, projects and events. All profit is directly reinvested into the research and development of Kunststrom technology and the free public art programme. As well as hosting ambitious exhibitions by international artists, and providing a space for international contemporary art, E-WERK Luckenwalde seeks to repeat electrical history by powering the city and several neighbouring buildings. These include the world-famous Hutfabrik, designed by Erich Mendelsohn in 1921, and Hans Hertlein's Bauhaus Stadtbad, built in 1928 to make use of the waste heat energy produced by the power station. In July 2021 Performance Electrics reimaged this moment with *Sun & Sea* by Lithuanian artists Rugilė Barzdžiukaitė, Vaiva Grainytė and Lina Lapelytė. E-WERK powered the performance with 100% CO₂ neutral Kunststrom energy generated through a wood gasification technology on site at E-WERK Luckenwalde. For the first time the performers were heated to a comfortable temperature with self-built and recycled underfloor heating in the sand. The waste heat from E-WERK warmed water which was transported to the Stadtbad through a heat resistant fireguards hose, resulting in a specially engineered underfloor heating system beneath the sand. No further heating system with fossil fuels was necessary.

E-WERK Luckenwalde offers a powerful example of the possibility for experimentation and play to be part of direct climate action. The contemporary art programme presents a diverse range of exhibitions, from new architectural commissions to historical presentations, performative events and interdisciplinary long-term research projects. The programme responds to the building's history and future with exhibition



spaces that range from white neutral galleries to a Turbine Hall and functioning engine room. Reaching beyond the limits of the contemporary art world, the station also feeds sustainable electricity into the grid, fusing function (power generation) and metaphor (Art Electricity). In a utopian stroke energy becomes art, and vice-versa.

This utopia is not some perfect dreamland, however, it is about the possibility of starting something and embracing failure in the pursuit of meaningful change. In this sense, E-WERK seeks to enact what might seem “impossible” within the context of existing social, political and economic “realities”. Failure and play have always been part of artistic creation, but as economic support for the arts wanes, it is often hard to maintain creative courage. There is an urgent need to resist this pressure and support those projects which might fail, for if we don’t, nothing will change. The resurrection of the power station is the result of an artist identifying and chasing the impossible. Change will not come if we cower in the face of rules and regulations or retreat from such impossibility. In the words of Angela Davis: ‘You have to act as if it were possible to radically transform the world. And you have to do it all the time!’

weathering with us

Singapore

4

Isabella Ong & Tan Wen Jun

What if
museum build-
ings themselves
contributed
to real climate
action, through
their material
fabric?

This speculative project by
Isabella Ong and Tan Wen
Jun imagines a new kind of
museum architecture that
might act as a beacon of
hope for the planet.

The museum functions
as a huge, rotating sand
“clock”, with a mechani-

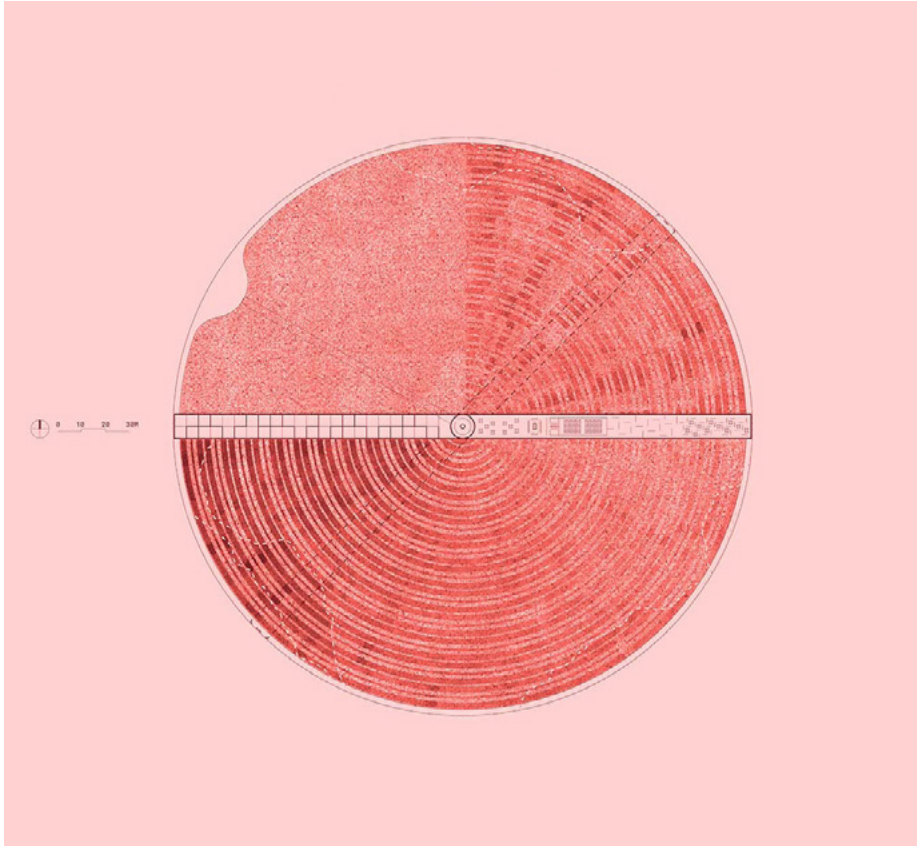
cal armature that etches patterns onto a
circular sandy landscape. The sand is
ground olivine, a green volcanic mineral
that is found abundantly in the Earth’s sub-
surface. When seawater meets olivine, a
chemical reaction occurs that pulls carbon
dioxide out of the air and the carbon finds
its way to the bottom of the sea as the
shells and backbones of molluscs and
corals, stored as carbon deposits. This
process, mineral weathering, constitutes
one of the Earth’s natural mechanisms to
regulate its carbon level and functions as
an important carbon sink.

The device rotates over a 24-hour
cycle, inscribing generative data pat-
terns onto the sand-scape. Climate data
from all over the world – carbon emis-
sions, pollution indexes, meteorological
data – feeds into the museum, through
a processor that procedurally translates
the information into data visualisations
that represent the collective fingerprint
of our actions: be it mistakes, triumphs
or attempts. The “hand” of the clock, the
armature, spans the diameter of the cir-
cular sand-scape. Half of the armature
houses the programmatic functions of the
museum: galleries, research centres and
a café. The other half contains the kinetic
mechanisms that engrave the sand: a
maze of walls that actuates up and down,
etching the ground when the walls inter-
face with the sand. The configuration of
the walls depends on the pattern being
plotted at that particular moment, deter-
mining the vertical positions of the walls.
As the armature sweeps across the land-

scape, sand flows in and out of the floor,
slowly. The experience of walking through
this perpetually shifting (albeit very
slowly) sand-filled maze would be a con-
templative one, as visitors weave around
the walls, watching as the sand trickles by
on the ground.

The proposed site of the museum is
where the Equator intersects the Prime
Meridian, at the coordinates 0,0 (longi-
tude and latitude of zero), a place referred
to as Null Island. An aerial camera records
the sand-scape from above and transmits
this image live to anyone with internet
access. The real time image of the sand
mandala can be displayed on the walls of
people’s homes as a digital artwork, a con-
stant reminder of our collective actions
which extends the reach of the institution
into our homes and the everyday, break-
ing down the boundaries of where the
museum starts and ends.

The exhibit features a scaled-down
model of the museum in the form of an
art installation – a kinetic sculpture – that
sits atop a bed of sand, inscribing in real-
time the pattern generated for the day.
Visitors are free to gather around and
watch the meditative motion of the device
slowly revolving, its grooves etching
the sand. Seen from above, the model
creates a mandala-like pattern in the
sand. The mandala is a spiritual symbol in
Eastern religions, used during meditation
to help with healing. In this way, the form
and material of the museum becomes a
symbol of recovery and restoration – an
important aspect of climate action that is
all-too-often overlooked.





Weathering With Us scale model.
Photograph by Isabella Ong and Tan Wen Jun.

EXHIBIT

HEALING AND INTIMACY IN CLIMATE NARRATIVES

Isabella Ong & Tan Wen Jun

Isabella Ong is an architectural designer, maker and creative coder, trained in Singapore and London. She is fascinated with the intimacy between body and space, and works with new media technology. Always tinkering, she builds interactive installations that engage the body and invite participation. She is also part of awe.curation, a platform that showcases artists and designers whose works are relevant to the intersection of art, new media and technology.

Tan Wen Jun is a practising architectural designer based in Singapore. His professional work involves mainly public buildings where he believes architecture can bring people, stories and environment together in endlessly emotive and meaningful ways.

‘We need to start peering under the hood of the ways in which we talk to ourselves about ecology. I think the main way – just dumping data on ourselves – is actually inhibiting a more genuine way of handling ecological knowledge. There are better ways of living all of this than we have now, and we don’t even know that we are living it right now’¹.

Data dump

There is a scene in Paul Schrader’s *First Reformed* (2017) cli-fi film, where Michael Mensana (played by Philip Ettinger) rattles off fact after despairing fact of a climate reality not too far in the future:

‘One-third of the natural world has been destroyed in your lifetime. The earth’s temperature will be three degrees centigrade higher. Four is the threshold... By 2050 sea levels two feet higher on the East Coast. Low lying areas underwater across the world. Bangladesh, twenty percent loss of land mass. Central Africa, fifty percent reduction in crops due to drought. The western reservoirs dried up. Climate change refugees. Epidemics. Extreme weather’².

This deluge of climate information must be familiar to us all. Our frame of understanding of the current climate situation is dominated by an onslaught of facts, statistics and bad news; a result of the widespread belief propagated by the information deficit model that attributes public scepticism of environmental issues to a public lack of information and knowledge.

In the media’s relentless “dumping” of climate information on us, what has been less prioritised is how the information relates to us. As we become computationally more equipped to gather and collect climate data – recording data in precise points, nodes and numbers – we inadvertently reduce climate change to an intangible and inaccessible concept, detached from natural reality. As Anne McClintock writes: ‘Scientists tell us that 344 billion tons of Arctic ice [have] melted. But 344 billion tons is magical counting. Our minds cannot contain such magnitude. The problem is not precision. The problem is perception’³. We struggle to associate the abstract data and distant images relating to climate change with our immediate realities and everyday actions. This brings to mind the analogy of our two bodies by Daisy Hildyard. The first body is the physical body you inhabit; the second is your global body, a diffused, networked representation of your actions and impacts⁴. Concepts such as climate change and images that we see on the news – wildfires, melting polar caps, rising sea levels – belong to what she deems as our second body, issues that we find hard to comprehend in our first, immediate body.

The two-body analogy is a useful metaphor that accurately describes the lack of personal connection in our consumption of climate information.

There exists a disconnect, a gap, due to the difference in scale: the monumentality of the problem and the seemingly minuscule impact of our actions and efforts. Scientists regularly publish reports on the state of climate change, yet this information stands apart from human experiences – our jobs, health and security. Timothy Morton terms this phenomenon a *hyperobject*, describing concepts that are real but exist on a scale too large for humans to comprehend. Climate change, according to him, is a prime example of a hyperobject. ‘That’s why you can’t see global warming’, Morton explains. ‘You would have to occupy some high-dimensional space to see it unfolding explicitly’⁵.

Central to this data dump is the pessimistic undertone characteristic of most conversations surrounding climate change: warnings about the imminent mass extinction, humanity ticking its way towards midnight on the Doomsday Clock, prediction models forecasting a grim future. Symbols of impending destruction and apocalypse are often employed to raise climate awareness. In a report on the communication of the climate crisis, Maria Virginia Olano points out that ‘we have gotten too lost in the data, the fear, and the need to tell people how bad things are’⁶. While some research suggests that climate change appeals with pessimistic endings could trigger higher engagement⁷, others reveal that fear might not be an effective motivator for genuine engagement. There is a growing acknowledgement that the fatalistic outlook resulting from the barrage of bad news over the last decade might be impeding authentic climate action.

Room for healing

Not to oppose the dominant doom-and-gloom rhetoric of climate change, there is an equal need for a positivity that might complement the urgency of climate’s clarion call. We can reorientate the conversation to allow room for narratives of recovery, healing and hope without downplaying the severity of the problems. Genuine climate action can be enacted through human emotions by fostering a real love for nature. There is hurt and suffering that inevitably comes with an authentic appreciation of nature and caring for a dying planet. These emotions compel us to seek ways to restore and repair what we truly care about. David Attenborough’s nature documentaries are exemplary for tapping into the emotions of beauty, loss and recovery to invoke climate action. Unlike the guilt-ridden tone of most climate documentaries, Attenborough often focuses on the beauty and grandeur of the natural world – from the flamboyant mating dance of birds-of-paradise to the majestic swarms of fish – showing us what we could potentially lose if we do not take stock of our destructive behaviour. His oft-employed segue from beauty to loss to healing is a compelling motivator for personal reevaluation and real

climate action. In this age of environmental fatalism, it is radical – and welcomed – to be cautiously optimistic.

In the fields of design and architecture, there has been a shift towards embracing alternative, living materials that support sustainable practices. This growing library of materials includes olivine, mycelium, algae, dust, waste, shells and hair. In the biomaterial lexicon, it is not uncommon to see words like “growth”, “living”, “biodegradable”, or the prefix “re-” – as in, “reuse”, “renew”, “repurpose”, “recycle”. Words like these illustrate the ecological focus of the investigation into these biomaterials, prioritising the active and cyclical processes involved in their production, use, decay and afterlife. Working with these materials requires an understanding and appreciation of the passage of time. As Land Art practitioner Andy Goldsworthy poignant puts it:

‘I want to get under the surface. When I work with a leaf, rock, stick, it is not just that material in itself, it is an opening into the processes of life within and around it. When I leave it, these processes continue’⁸.

Healing, one of life’s processes, is a big part of why artists, and scientists, are drawn to these natural materials. Scientists are turning to nature as inspiration, studying the intrinsic healing abilities of naturally occurring materials to develop ways to save our ailing planet. From magnificent underwater kelp forests to misunderstood slimes of algae, scientists are often in awe of how the earth regulates, heals and rejuvenates itself.

In recent years, there is growing scientific interest in olivine to develop a carbon capture technology capable of alleviating our carbon problems. Olivine is a green volcanic mineral that is found abundantly in the Earth’s subsurface. It weathers quickly, pulling carbon dioxide out of the atmosphere as it does so. When it reacts with seawater, the sequestered carbon finds its way to the bottom of the ocean into the shells and backbones of molluscs and corals, stored as carbon reserves⁹. This magnesium-iron-silicate can absorb its weight in carbon dioxide and functions as an important carbon sink – one of the earth’s self-healing mechanisms to regulate its carbon levels.

Nature has always been closely associated with healing. The exploration – what Goldsworthy would describe as getting under the surface – of these natural materials not only offers us tools to navigate landscapes of environmental disaster but also inspires us towards recovery, an aspect of climate change that is all too often overlooked. We should take a leaf out of nature’s book and, in our climate narrative, find room for healing.

Intimacy of information

Despite a better understanding of the climate situation and increased technical capabilities in collecting environmental data, there is a struggle

to present this knowledge to the public, to get the point across. Climate information – in the form of hockey stick graphs, footage of melting glaciers and weather superlatives – has steadfastly remained removed from everyday experiences, ‘caught up in the two-dimensionality of the endless flatlands of paper and video screen’¹⁰. Environmental advocates are starting to realise that equally as important as the collection of climate data is how this information is best communicated to audiences of differing attitudes, political beliefs and values. In working towards the assimilation of climate information, it is necessary to address the asymmetry in the scale that exists between the “bigness” of climate change and “smallness” of our personal lives. There is a need to translate the data into tangible forms and meaningful experiences, and to explore the role of intimacy in presenting climate information so that we can start relating the actions of our immediate reality to their inclusion in the bigger picture of the planet.

In *Lines* (57° 59' N, 7° 16' W) by Pekka Niittyvirta and Timo Aho, lines of light mark the landscape of the Outer Hebrides, off the west coast of Scotland, across built structures and along the coast¹¹. The lines mark the inevitable rising sea level, providing a visual, *in-situ* reference to future sea levels – a visceral “everything below this line will be underwater” understanding to terms like “two feet sea level rise”. Another project, *Waterlicht* by Studio Roosegaarde, addresses the similar issue of materialising the vague concept of rising sea levels and giving it an experiential form. Unlike the eerie, desolate landscape of the Outer Hebrides, *Waterlicht* was installed in public spaces in cities from Amsterdam to Australia. Light projection floods public squares, forming a layer of ethereal, undulating blue light above the heads of people, showing how high water levels could reach¹². It is a haunting sight, where masses of bodies inhabit the space below the virtual flood. One can imagine the immediate impact of seeing familiar buildings and monuments submerged in this virtual water. Both works position the body – the “you” – in an experiential form of data, where we are confronted with the facts of climate consequences without the cover and buffer of abstract data.

These examples suggest alternate, provocative ways of presenting environmental data in ways that are visual and visceral, intuitive and intimate. The materialisation of climate data in physical, tangible formats adds contextual weight to scientific fact, giving meaning to abstract terms and numbers too large to comprehend. It situates the urgency of the issue into the immediacy of our everyday lives.

Multiple narratives

The expansion of technology and communication channels have given rise to the practice of ‘proactive data activism’¹³, a ground-up approach

where data is democratically collected and utilised to challenge existing power relations. This challenges the notion that data, and the meaning we make from it, is fixed and determinate. On the contrary, we are now empowered to obtain, generate and use data to question established social narratives that are handed down to us. This is especially pertinent now when it is becoming more apparent that governments and big corporations have vested interest to obfuscate and not divulge whole truths. Examples of data activism can be found in the investigations conducted by Forensic Architecture, a multi-disciplinary research group that utilises a wide range of technology to investigate environmental and geopolitical issues. A recent victory was their inquiry, in collaboration with Greenpeace International, into fires lit by Korindo, a palm oil agglomerate based in Indonesia. Through the use of images from the ground and remote sensing technology, their findings suggested that the fires were set illegally and in breach of local laws, resulting in the company's termination from the Forestry Stewardship Council (FSC) with effect in 2021¹⁴.

Having the ability to challenge how climate information is presented gives us ownership over how we frame our understanding of the situation. It allows us to weave our personal agency into the wider environmental narrative, localising the big and abstract concept of climate change into our immediate realities. Opening up the climate conversation to multiple actors enables the participation of individuals and communities and allows room for a myriad of narratives; not just of apocalypticism but also of positive action, grassroots efforts, community resistance and global healing.

Not the end

In *First Reformed*, Michael gave in to despair and took his own life. As a radical environmentalist, his despair was induced by a belief that no future short of a climate apocalypse is possible. His cynicism was passed on to his priest (played by Ethan Hawke) who, towards the end of the film, contemplated suicide and inflicted self-harm. For anyone watching the film, this feeling of despair and hopelessness, in the face of an inevitable environmental catastrophe, is palpable. It is now pertinent, and necessary, to seek alternative ways to talk about climate change. Facts are only part of the equation. There is an equal need for positivity, as with pessimism, to be part of the climate narrative to rouse meaningful action. In telling people how bad things are, we should not underestimate the sense of despair that often develops when personal resolutions and efforts pale in comparison to the certitude of a doomed future. Climate facts often convey a sense of a fixed and predetermined outcome, with little wiggle room to affect change. Yet, with any complex problems,

including climate change, there exists some degree of scientific uncertainty, an aspect which should not be overlooked. Uncertainty can be a source of hope and a motivator for positive climate action. While climate change is *certainly* happening, scientists are less certain as to when, where and how much it will impact us, and there is significant potential for humans to intervene and moderate these changes¹⁵. We should be careful not to let facts convey a sense of an irreversible end, but that there is still the possibility to affect meaningful change in shaping our future. In rethinking how we talk about climate change, it might be constructive to embrace aspects of the unknown, alongside healing, recovery, intimacy and hope.

¹ Timothy Morton, *Being Ecological* (UK: Penguin Random House, 2018), 12

² Paul Schrader, Screenplay of *First Reformed* (2018), accessed July 30, 2021 <https://www.janela.com.br/textos/oscar-2019-screenplays/first-reformed-screenplay-2018.pdf>

³ Anne McClintock, "Too Big to See with the Naked Eye," December 20, 2012 <https://www.guernicamag.com/anne-mcclintock-too-big-to-see-with-the-naked-eye>

⁴ Daisy Hildyard, *The Second Body*, (London: Fitzcarraldo Editions, 2018)

⁵ Timothy Morton, *Hyperobjects: Philosophy and Ecology after the End of the World* (Minneapolis: University of Minnesota Press, 2013), 70

⁶ Maria Virginia Olano, "Communicating the Climate Crisis," accessed July 30, 2021 <https://climate-xchange.org/communicating-the-climate-crisis>

⁷ Brandi S. Morris, Polymeros Chrysochou, Simon T. Karg and Panagiotis Mitkidis, "Optimistic vs. pessimistic endings in climate change appeals," *Humanit Soc Sci Commun* 7, 82 (2020)

⁸ Andy Goldsworthy, introduction to *Andy Goldsworthy: A Collaboration with Nature* (New York: Harry N. Abrams, 1990).

⁹ James Temple, "How green sand could capture billions of tons of carbon dioxide," June 22, 2020, accessed July 30, 2021 <https://www.technologyreview.com/2020/06/22/1004218/how-green-sand-could-capture-billions-of-tons-of-carbon-dioxide>

¹⁰ Edward R. Tufte, *Envisioning Information* (Connecticut: Graphic Press, 1990), 12

¹¹ "Lines (57° 59' N, 7° 16' W)," Pekka Niittyvirta, accessed July 30, 2021 <https://niittyvirta.com/lines-57-59-n-7-16w/>

¹² "Waterlicht," Studio Roosegaarde, accessed July 30, 2021 <https://www.studi Roosegaarde.net/project/waterlicht>

¹³ Miran Gutierrez, *Data Activism and Social Change* (Queensland, Palgrave Studies in Communication for Social Change, 2018), 49-63

¹⁴ "Intentional Fires in Papua," Forensic Architecture, accessed August 6, 2021 <https://forensic-architecture.org/investigation/intentional-fires-in-papua>

¹⁵ Climate Mitigation will form the topic of the Working Group III contribution to the IPCC's Sixth Assessment Report, due for release in 2022

dundee museum of transport

UK

5

Peter Webber, Alexander Goodger, Matthew Wong,
Wendy Maltman & Katherine Southern

How can museums support the move to climate-friendly technologies and lifestyles?

Tackling climate change has been officially declared a national emergency in Scotland, which has set out to reach net-zero emissions by 2045. Whilst museums traditionally focus on the past, Dundee

Museum of Transport actively seeks to show how it can evolve to address the contemporary challenge of sustainable travel in an inclusive way. To this end, the museum investigates how it can support the move to climate-friendly technology and lifestyles. Our future-oriented exhibit for the *Reimagining Museums* project touches on these themes. The challenge was to make the exhibition as carbon neutral as possible. An electric car interactive display was made using recycled components, a drum interactive used components upcycled from the British Motor Museum, and the panels were printed using solvent-free ink.

The exhibit consisted of three parts: re-imagining transport museums to become carbon-neutral, questioning how transport might play a vital role in a greener future, and examining the progress made by Dundee in pioneering sustainable transport infrastructure in the UK. Exploring these themes, Dundee Museum of Transport already showcases a variety of electric vehicles, and provides information on local and national efforts to make Scotland's transport services more sustainable, as well as recognising that public institutions should respond to the call for more climate action in practice. For instance, whilst showing commitment to construct the carbon-neutral space, the museum supports the city's shift to electric cars through education and awareness activities. The museum is also a partner organisation for the Tayside Climate Beacon – a collaborative which stimulates discussion surrounding the

environment through engagement activities in Dundee and Tayside, and forms part of seven Climate Beacons that will run events Scotland-wide between 2021 and 2022.

In 2024, the museum is expected to move from its temporary premises at Market Mews to a permanent site of Maryfield Tram Depot. The listed tram depot has been standing since 1901 and was acquired by the museum in 2015 after suffering years of dereliction. Subject to funding, refurbishment will take place to meet the museum's goal of becoming the first carbon-neutral transport museum in Europe, both in its content and displays, and in the building itself. There are various eco-friendly measures mapped out for the renovation, including installing sustainable energy facilities. After replacing the old roof with a modern structure, solar and water heating panels will be mounted to meet the environmental targets. Charging facilities will be available for the next generation of electric vehicles, and inclusion within the Dundee City Council electric bike scheme is planned.

These arrangements will help to achieve the museum's sustainability targets and support its long-term operation. The new museum at Maryfield Tram Depot will be a hub for community events, exhibitions, and education courses related to sustainable transport and Dundee. The exhibitions and events, focussed on sustainable transport and innovation, will be presented to the public in the hope of evoking discussion and raising awareness and community collaboration around the climate crisis, transport technology and lifestyle change.





Impression of the new museum
by Andrew Black Design.

EXHIBIT

**climate
commons**

A Conversation on Equity, Design and Imagination with Miranda Massie & Mark Chambers

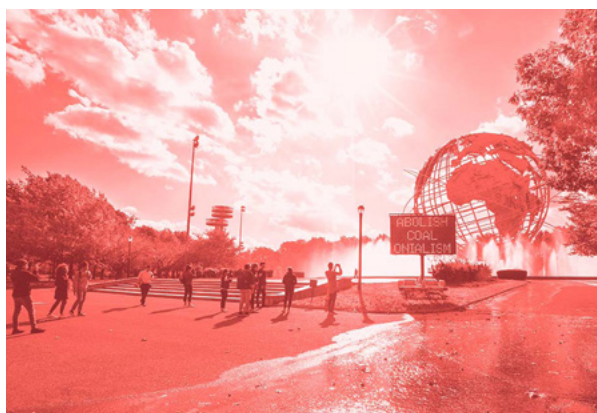
The following exchange is taken from a conversation between Miranda Massie and then Director of the New York City Mayor's Office of Sustainability, Mark Chambers. An initial exchange was recorded in September 2020 and served as the basis for a livecast presentation with additional discussion between Massie and Chambers and an audience Q&A on October 1, 2020. The programme was presented as a component of the *Reimagining Museums for Climate Action* design and ideas competition. It offers reflections on equity, design, imagination, and the reactivation of the commons within the context of mobilising cultural institutions to confront the climate crisis. The exchange has been edited for clarity and length.

Miranda Massie (MM) is the Director of New York City's Climate Museum, the first climate-dedicated museum in the US. The Museum has developed an activist cultural approach to community engagement with climate, recognising that most Americans are worried about the climate crisis but unsure how to take meaningful action. Its free, accessible exhibitions, art installations, events, youth programmes, and more have touched tens of thousands and received extensive recognition, broadening the climate movement with an emphasis on community, justice, equity, and inclusion. The Museum is currently scaling out to a permanent, year-round presence in New York City.

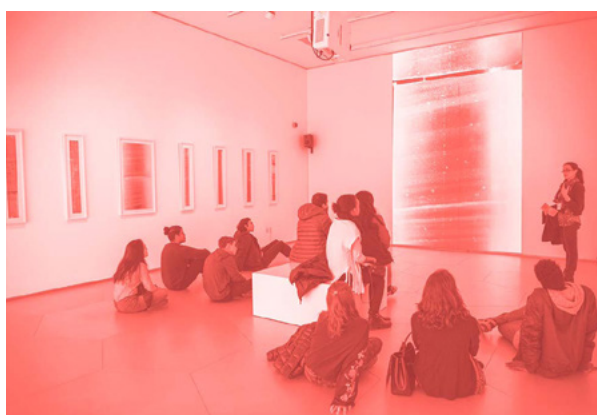
Mark Chambers (MC) served as the Director of the New York City Mayor's Office of Sustainability until his appointment by President Biden to the White House Council on Environmental Quality as Senior Director for Building Emissions and Community Resilience. As NYC Sustainability Director, Mark led efforts to align social and environmental policy across the built environment, waste, transportation, health and energy sectors in America's largest city. Mark previously served as Director of Sustainability and Energy for the Government of the District of Columbia. Chambers is a licensed architect and holds a Bachelor of Architecture and a Master of Science in Public Policy and Management, both from Carnegie Mellon University in Pittsburgh, PA.



Climate Signals by Justin Brice Guariglia.
Photo courtesy of Lisa Goulet and the Climate Museum.



Climate Speaks 2019. Photo courtesy of
Sari Goodfriend and the Climate Museum.



88 Cores by Peggy Weil. Photo courtesy of
Sari Goodfriend and the Climate Museum.

THE RESPONSIBILITY TO RECKON WITH THE CLIMATE CRISIS

MM Within the climate advocacy community, and increasingly within the public at large, we know that the climate crisis is an inequality multiplier, exacerbating basically all our public health inequities and more. We've got a society fundamentally structured by severe racial and class hierarchies and inequities, and climate is an everything problem that touches every aspect of it – so we need everyone on board, and the core of what we do as a species should be oriented toward addressing this crisis now. There is nothing more important than the climate crisis that will ever have happened to us.

To me, this design competition is exciting because it expresses a growing trend in the cultural sector of orientation toward the climate crisis, and presses that trend forward too. The cultural sector is one of the key places we need big changes. We also need them in city policy and planning – your line of work!

MC How we capture and move forward from this moment in collective action will define generations to come. In fact, it will define if there are generations to come. We are literally looking at a deep challenge to species survival.

I've been an architect for quite some time now, and I think a strength of the trade is a skill set around being able to envision what can be and then cultivate that into physical reality. There's both an opportunity and a profound responsibility to use design to reflect where we are right now and where we need to be. Designers have a responsibility to curate a thoughtful, inclusive future for generations to come, because the work that they do is lasting. If that work isn't reckoning with climate change and building a galvanised response to the crisis, then we're not doing what we need to be doing.

THE MUSEUM AND THE COMMONS IN OUR TIME

MM Mark, I want to ask for your thoughts on how the framework of the commons might relate to *Reimagining Museums*. This question comes out of reflections on comments you made in our first exchange on this, and was amplified by thoughts shared by Jacqui Patterson of the National Association for the Advancement of Colored People (NAACP) at an intervening Climate Museum event about the absolutely critical role of universal access to the commons. The very notion of the commons and the common good has been under concerted attack in the U.S. since at least the election of Ronald Reagan in 1980. The ideal was never as strong as it's been in other places, and the implementation was grounded in racist exclusion, so this isn't a nostalgic moment. But it's a way of thinking about the harm of deregulation and the undermining and defunding of public institutions, which have been proceeding in a really aggressive way.

It seems to me that the current quadruple crises or collapses around equity, public health, democracy and climate are a fairly logical expression of that destructive attack



2019 Climate Strike NYC. Photo courtesy of Sari Goodfriend and the Climate Museum.



Taking Action exhibition. Photo courtesy of Sari Goodfriend and the Climate Museum.



Taking Action exhibition. Photo courtesy of Sari Goodfriend and the Climate Museum.

on the commons reaching a turning point. And the organisers of the *Reimagining Museums* design competition clearly feel that museums have a role to play in addressing this and in moving us forward. What are your thoughts on these interconnections?

MC I think it's a very important question and also a very important observation. When I think about the commons, I think of recent events that we've witnessed and seen in real time, particularly the impact of and important notes from the youth climate movement and youth climate strikes. We've seen young people in the United States and around the globe taking to the streets and making sure that their demands are heard. For me, that's a note on the commons: what's being said is that there is a strict and clear desire for the commons to be returned to the people.

It follows that if museums and cultural institutions seek to acknowledge the need for democratisation of the commons, then they are going to have to earn that position. And part of that means making sure that they are creating opportunities and spaces for the people that are most impacted, the people that are on the front lines of climate change, to be able to tell their own stories. And in doing so, those cultural institutions will be doing their part to help make the commons a place that can be a source of clarity, unity, and momentum where we can embrace and champion the changes we clearly need, not just locally, but across the country and the globe.

MM On the youth movement, part of the business as usual that the youth movement is categorically refusing is the radical brutalist individualism that has been asserted across our culture. The youth climate movement is not having that. They're simply not having it. They reject the conventional wisdom that the "tragedy of the commons" – the overexploitation of shared resources – is inevitable. They're insisting on and fighting for a regeneration of community and social trust, which we know from Elinor Ostrom's Nobel Prize-winning work on the commons is what preserves it.

MC I think that hits the nail on the head.

We're now in a time of severe consequences – wildfires, heat waves, heavier storms, flooding, and more. It's no longer possible to ignore that the world is changing around us, and you can no longer ignore that the imbalances and inequity that a lot of us experience are directly related to the impacts we're seeing physically. The starkly uneven outcomes of the COVID-19 crisis, for example, map onto historically redlined districts in cities that now endure urban hot spots and increased flooding risk. The inequities are so systematic and permeating that they become something that we are not easily able to separate ourselves from.

But if we take cues from the youth movement we see incredibly courageous young people who, in addition to not suffering fools, have unburdened themselves from the constraints that limit a lot of other

people's vision around what's possible. That freed vision is going to be critical in compelling us to action. Their unapologetic critique can free us up from a lot of the mistakes we've made in the past, the optical allyship that consists of just saying things to make everyone feel good, as opposed to doing the hard work.

I'm here for it.

MUSEUMS AND DESIGN FOR JUST FUTURES

MC Museums have a history of being able to utilise both their physical space and their exhibitions to tell stories. Their power is deeply narrative. You walk into most museums, and there's a designed grand entrance that showcases that what you're about to see is incredibly important. But for a long time, museums have not generally done a good job of making that experience, that narrative, one that is inclusive. Instead they've pointed in a direction that reinforces the social hierarchies that make it difficult for everyone to participate in our society. Museums know how to shape an experience and an environment, and I think now more than ever, they can use those skills to tell complete and inclusive stories. These stories can inspire everyone to do more and to see their own necessary agency. Museums have the ability do that in a way that could set an example for how we all should be acting, no matter what sector you're in.

MM We have to provide spaces that are inclusive, candid, and emotionally supportive for all of these really difficult conversations, because there's pain ahead. We can choose a lot of things about that pain. But we can't choose whether or not there's going to be a lot of trauma and suffering caused by climate change that's already baked into what we've done. And finding the right way to be straightforward about that without causing people to shut down in anxiety is something I think we have to ask of museums. They're equipped to create transformative common space, as you point out, and we're in crisis, so with their capacity comes responsibility.

MC Right now in cities all across the country, in fact the world, there are people dealing with all of these climate-related issues while simultaneously going out every day to protest and show support for Black lives. That kind of confluence, and that need to address both social and environmental issues is part of the complex and messy dialogue that has to happen right now. And museums and cultural institutions are the perfect place to be able to bring all those things together and provide space for us to experience, to understand, and to process where we are right now in addition to where we need to be. We need creatives and the public to co-create clear visions of

possible futures that include and support those who've been excluded from traditional, official visions of who makes the future.

I'm reminded of day one in architecture school. The first thing we learn is that design is the first manifestation of intent. So what do we intend to do? What exactly is our intent now?

Our intent is to survive. And our intent is to do that in a way that acknowledges the value of Black and brown lives, that acknowledges the value of a full spectrum of contributors to our society, including frontline communities and those that have been privileged. Everyone is part of the future, but we have to define our intent clearly. Designers and creatives have the ability to provide that definition, to do so in a way that acknowledges the messy progress that we're making now and that we'll be making over time – and to do so in a way that is unapologetic. I'm very excited for that.

elephant in the room

USA

6

DESIGN EARTH: Rania Ghosn, El Hadi Jazairy,
Monica Hutton, Anhong Li

What if museums and society were forced to confront their role in climate change?

Elephant in the Room is an ecofeminist fable for the climate crisis. The graphic animation addresses the elephant in the room – the climate emergency – by telling the story of one elephant who takes

action to combat environmental injustice and climate change. The American Museum of Natural History in New York is home to one of the most famous displays of taxidermy dioramas in the world. The Akeley Hall of African Mammals includes a herd of eight elephants that were largely “made” by Carl Akeley, after whom the hall is named. One of these elephants was shot by President Theodore Roosevelt during the Smithsonian-Roosevelt African Expedition (1909–1910), in which thousands of animals were trapped and killed to become property of the museum. In her environmentalist rebellion, the herd’s African matriarch comes to life, charging out of the American Museum of Natural History to feed on the systemic legacies of the museum: ‘the commerce of power and knowledge in white and male supremacist monopoly capitalism,’ as outlined by Donna Haraway in her essay ‘Teddy Bear Patriarchy’¹. By taking her demands to the streets, the elephant underlines the role of museums in wider calls for climate justice. This necessarily involves a critical revision of the museum’s myriad entanglements with extractivist environmental histories, which have constructed worlds (and worldviews) that perpetuate division, dispossession and violence.

The story explores how rethinking the design, purpose and experience of natural history museums can foster new forms of public pedagogy, in which curatorial practices become a magnifying glass for climate campaigns. Figuration, which bestows personhood onto the elephant, is here a crucial aesthetic method for

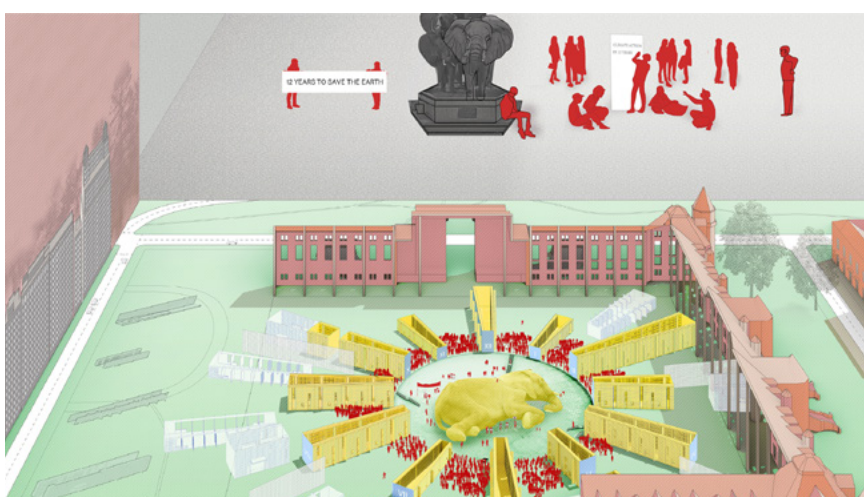
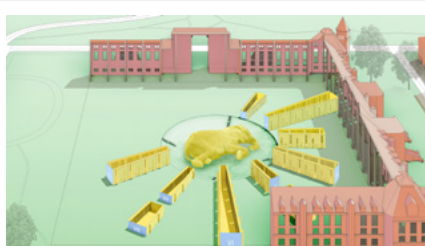
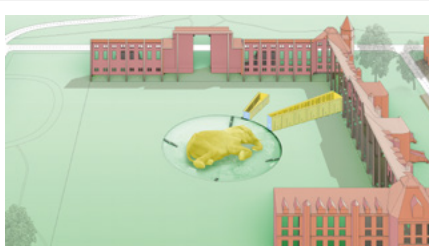
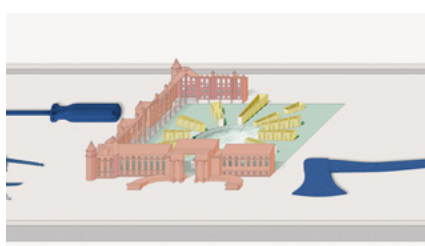
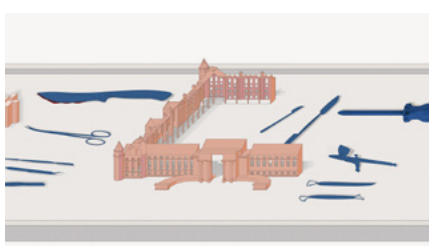
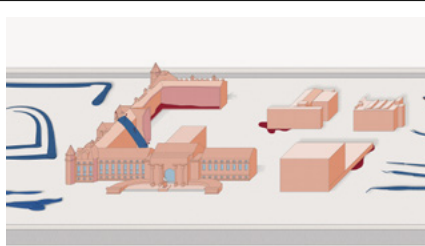
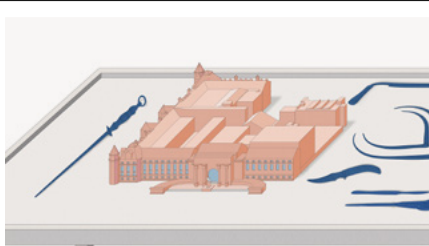
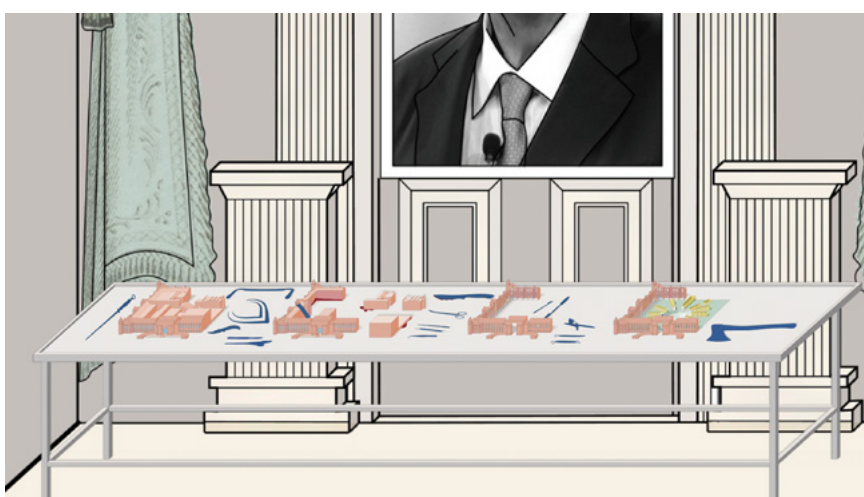
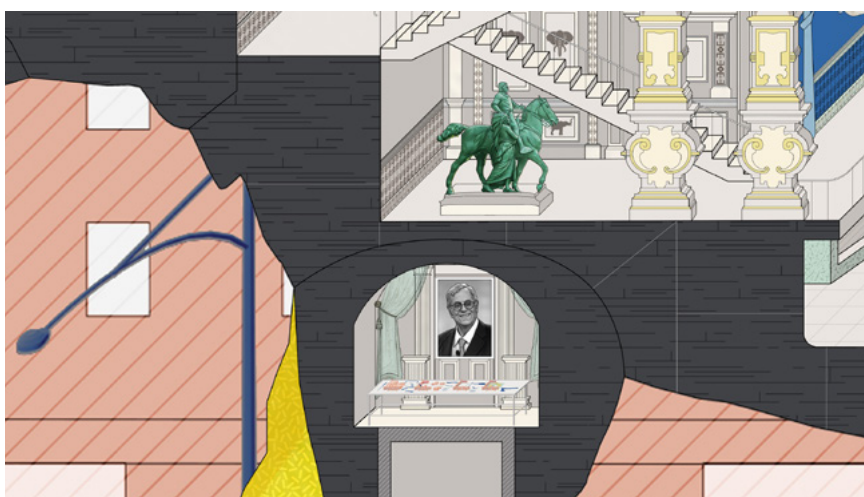
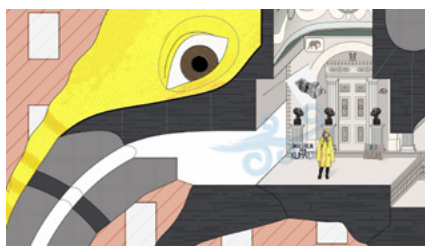
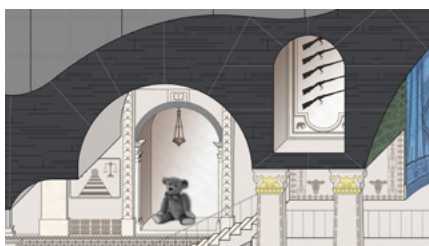
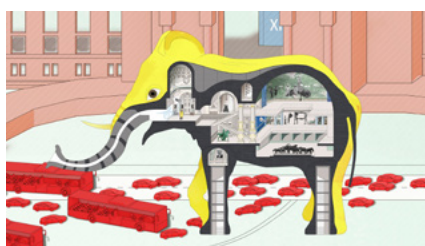
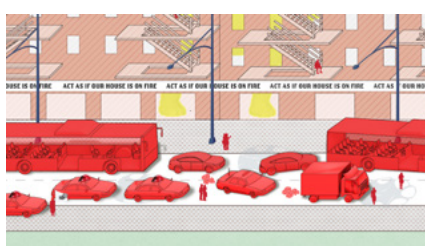
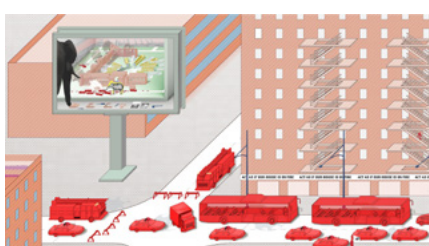
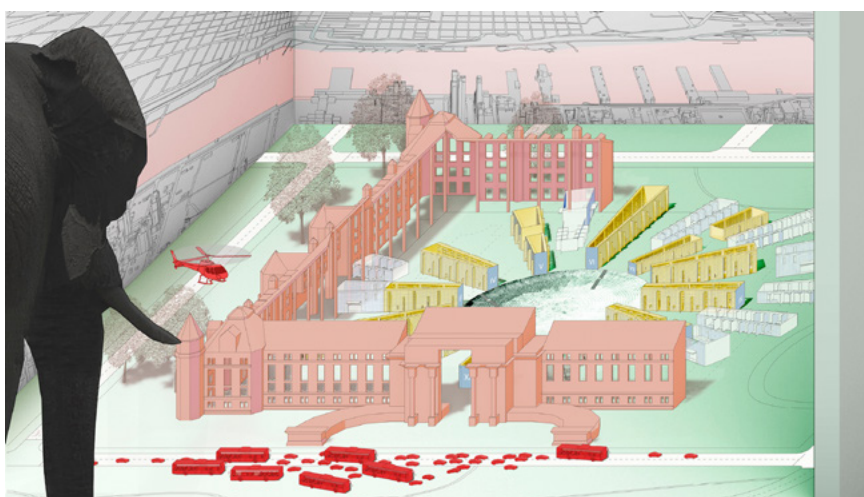
this moment of crisis. Figures are material-semiotic knots. They help us grapple inside the flesh of the world, making new entanglements in which diverse clusters of meaning (narratives, discourses, precedents, imaginaries) shape one another by ‘creating performative images that can be inhabited’².

The *Elephant in the Room* is one such animal fable, which seeks to delight and entertain, all while making a fuss about injustice, cruelty, and arrogance. In this sense, the elephant as museum is less a “curator” – one who manages, administers or organises a collection – and more a “caretaker”, in this case charged with taking care of the planet. The need to craft such a praxis of care and response, or *response-ability* to stay with the words of Haraway, implies both a desire to find out more about an issue and an ethical obligation to become concerned and to act.

¹ Donna Haraway, “Teddy Bear Patriarchy: Taxidermy in the Garden of Evil,” *Social Text* No. 11 (Winter, 1984–1985), 20–64

² Donna Haraway, *Modest_witness@second_millennium.FemaleMan[©]_meets_OncoMouseTM:feminismand technoscience* (Routledge: London, 1997)

Elephant in the Room is presented in the *Reimagining Museums for Climate Action* exhibition as a short film, created by Design Earth and narrated by the eminent feminist science and technology studies scholar Donna J. Haraway, Emeritus Professor in the History of Consciousness and Feminist Studies Departments at the University of California, Santa Cruz. This book reproduces a transcript from the film's narration, and includes a fold-out insert of the film's graphics.



A visitor to the museum notices small things,
Caught up in their own interests and the bias this brings.
What does this allow to go unaddressed?
The “elephant in the room” as you may have guessed.

There is no bigger problem often ignored,
Than the climate change we are marching toward.
Familiar with the feeling of being dismissed,
The elephant trumpets: a crisis does exist!

She lets out an alarm call to signal the herd,
To stampede into the streets, out from where they were stirred.
She broke out of the Museum of Natural History,
To protest human behaviour in all its misery.

Thick in the air, and all over the day,
Is a butane, propane, black carbon bouquet.
Climate issues have become more robust,
As diesel, paraffin and petrol combust.

The African elephant stomps down the street.
She is not detainable and not discreet;
Occupies Wall Street and protests in Times Square,
While sirens serenade and flies buzz in the air.

She raises her trunk to sound a deafening drum,
“Enough is enough! Surely you aren’t all just dumb.”
This matriarch elephant and seven more died,
Just so the museum could become more alive.

The Hall of African Mammals is where they were taken,
Waiting over a century for a time to awaken.
“The Alarm” is the centerpiece where their bodies were staged,
Frozen in a nightmare as if they were caged.

Around the room, other captive subjects stand by
Within dioramas that are stacked two tiers high:
The Rhinoceros, Gorilla, Ostrich, and Lion
Silently protest in a perpetual die-in.

The elephant never forgets the source of its scar.
"Speak softly and carry a big stick; you will go far."
A celebrated "conservationist" with a liking for hunting,
Is the American president the Elephant was confronting.

"The Big Stick" is the rifle President Roosevelt had in hand,
As he stalked the elephant's footprints across open land.
His son Kermit joined in on the Africa expedition,
And shot her small calf taking after the politician.

The elephant twitches to life in the Africa Hall,
As if no time has passed, she remembers it all.
Her reddish-brown eyes with German glass in their place,
Open to look museumgoers in the face.

She devours a book that a companion had written,
On structures of power and knowledge she did not fit in.
The "Teddy Bear Patriarchy" is a violent tale,
Of capitalism, supremacy, and the white human male.

With eyes no longer blind she sees what her body can make,
The world on her mind that no one can take.
She looks around the room and says "The one thing I know,
Is that the teddy bear patriarchy will have to go!"

The creature denounces the stuffed Teddy and its monsters.
She has had quite enough of environmental imposters;
The equestrian statue, the plaque honouring David Koch,
Were swallowed using her trunk shortly after she woke.

The mammal's belly rumbles with resonant demands,
To decolonise, divest, and dismantle, she firmly stands.
Like a calving iceberg, earthquake, or volcanic eruption,
Her trumpeting call thunders a long-distance disruption.

Her revival starts an autopsy fit for the ages,
Where tools are used to dissect the museum in stages.
Natural History becomes an architectural taxidermy,
In a plan to make the most avid climate deniers squirmy.

Only the museum's facade remains in place,
To repair the damage to the very last trace.
It frames a graveyard where the elephant can finally rest,
With the enormous weight she has lifted right off of her chest.

In the garden of a damaged planet no collection is held,
Only the demand for action – that's why the elephant rebelled!
A Climate Countdown 2 Degrees Clock will keep time and enforce
The twelve years that remain for us to panic and change course.

Each year, one bar of actions counters the change that's been caused.
The clock ticks, the bars tighten, and it cannot be paused.
Around the elephant's graveyard, the margins grow thin
Until the final alarm sounds, and the endings begin.

So down the street we go with the elephant inside,
Always mustering her grit as our climate action guide.
And if somehow you happened to miss her,
Just take a step back and look at the bigger picture.

shot

/

**reverse
shot**

A Conversation on Architecture, Design and the Climate Emergency
with Rania Ghosn, El Hadi Jazairy & Peg Rawes facilitated by Rodney
Harrison (RH)

Rania Ghosn (RG) is partner of Design Earth and Associate Professor of Architecture and Urbanism at the Massachusetts Institute of Technology. Her practice engages design as a speculative medium for making visible and public the geographies of the climate crisis. She is founding editor of the journal *New Geographies*, editor of *Landscapes of Energy* (2009), and co-author of *Geographies of Trash* (2015), *Geostories: Another Architecture for the Environment* (2nd ed. 2020), and *The Planet After Geoengineering* (2021).

El Hadi Jazairy (EJ) is partner of Design Earth and Associate Professor of Architecture at University of Michigan Taubman College. He is founding editor of the journal *New Geographies*, editor of *Scales of the Earth* (2011), and co-author of *Geographies of Trash* (Actar, 2015); *Geostories: Another Architecture for the Environment* (2018; 2020); and *The Planet After Geoengineering* (2021).

Peg Rawes (PR) is Professor of Architecture and Philosophy at the Bartlett School of Architecture, UCL. Her teaching and research examine political, technological and ecological architecture and art. Recent publications include: 'Interview: Architectures & practices of care', *The Architectural Review*, 2021; 'Visualising uncertainty and vulnerability', *Life in Time of Coronavirus*, IAS UCL, 2020; editor of *Architectural Relational Ecologies*, 2013, and co-editor, *Poetic Biopolitics: Practices of Relation in Architecture and the Arts*, 2016, which publish architects alongside practitioners in the arts, environmental, human rights, social and medical research.

RH Could you start by telling us about the history and philosophies that underpin your work in Design Earth?

RG The work of Design Earth is built, or engages with, the idea that geographic imagination is key in architecture to address some of the broader systemic questions that are now enclosed by the climate crisis and environmental destruction more broadly. And the way we come at this complex issue is that we put forth the architectural project, as it materialises through drawings, artefacts and texts, to trigger a shift in terms of public communication on the issue of climate change.

So, we begin by making visible what exists, rendering it spatial through drawings, and then beginning to anticipate it through other possible worlds. Worlds that might be reminiscent of the traces of unevenness that has produced this moment to start with, or this condition. And then maybe more transformative moments through which we can begin to imagine otherwise.

EJ We started Design Earth in relation to our conversation with Bruno Latour for the inaugural issue of the journal *New Geographies*, of which we were the founding editors. With colleagues at Harvard GSD Doctor of Design program, we founded the journal to address design questions through the framework of geography. And in our conversation with him, he said, “You architects have to think about two things when we talk about the planet. One is representation and the other is scale. Basically, you have to redesign the earth”. We thought, “That’s an interesting thing to do!” Basically, this was the premise of the work.

RG *Geographies of Trash*, our first design research publication, was produced at the University of Michigan and made possible through a Research on the City grant. The premise was that urban questions needed to be researched beyond the morphological boundaries of the city to trace ecological systems of operation, maintenance, inputs and outputs in their broader territorial dimension. The initial pitch was if one were to put together all of the landfills in Michigan, that they would together occupy an area roughly the size of Ann Arbor, the city where the University of Michigan is based. So, if you want a city issue, that’s a city sized issue.

EJ We were proposing that we had to look at urbanisation within a much bigger framework – at the regional scale of Michigan, at the transcontinental movements and the relationships between Canada and the US and larger planetary dynamics.

RG In the context of such broad flows, the landfill is one accumulation point in waste landscapes, and one that is inevitably bound with frictions, which became another anchor of the conversation. Also, the continued relevance of the work today is that it articulated a methodology that became almost iterative in many of the future

Design Earth projects. So, the book *Geographies of Trash* is organised around a similar logic to the methodology, which is in four parts: construct, represent, project and then assemble.

Construct identifies a key question that might be peripheral to contemporary design concern, but core to the organisation of space – be it trash, energy, etc. It is a process of building a vocabulary of alliances with adjacent spatial fields, environmental history, critical geography, history of science and technology, architecture and art, places where responses to these questions have already articulated a spatial vocabulary. *Represent* is the development of the visualisations, diagrams, facts of matter to begin to place dimensions, distances, relations, actors, in formats such as an actor-network diagram or spatial and temporal mappings. And because these systemic questions unfold in multiple sites and a series of nodes once you’ve explored the black box of technology, we begin to respond to each typological node as conditions that are very situated. So, the geographic embeddedness of each of the sites is of great importance. And each node issue becomes a speculative *project* that explicates the issue and concern in a way which allows us to begin to imagine how it can be otherwise. And once they multiply, you can’t really leave a project in many parts. The *assemble* section becomes this provisional “putting together” of these projects in a media format that makes public the research – be it an installation in an art gallery, a text, eventually a panorama, drawing, a film.

So, the architectural drawing is presented in formats that might be more public in nature. Our next book *Geostories: Another Architecture for the Environment*, was based around a series of 14 commissions from art institutions and events or competition entries, each of which was an opportunity for to us to experiment with how to tell the story of the environmental and climate crisis.

Climate, we observed, is inherently a category that is mediated, one that rests on statistics, satellite imagery, or data sets made possible through computation. How do we shift climate from a domain in which we comprehend it cognitively or intellectually, to one where we can begin to address it in more visceral, affective modes? How do you begin to intervene within a broader set of environmental stories?

EJ I think *Geographies of Trash* was an interesting moment, because the presentation of the work was first in an academic context for architects, for urban planners and designers, and was later exhibited in venues with a broader audience. So, the urban research of “Geographies of Trash” was presented as “Georama of Trash”. And, at that moment, the idea of reception, the presence of audience, of ways of seeing, ways of sharing, reassembling through the visual, and of making sense – communication became more important.

And it is the moment when the miniature – the aquarium, the terrarium, the planetarium – became important. It’s the moment where natural history museums and ways of engaging publics became pivotal in our practice.

RG The position of *Geostories* was that if we're addressing the contemporary moment of the climate crisis, that we shouldn't just be exclusively fixated on the photograph of the bear on the melting glacier. As Rob Nixon argues in *Slow Violence and the Environmentalism of the Poor*, we are witnessing a moment of the climate crisis which is part of a lineage of uneven distribution of the values and costs in the relationship to the environment.

So, when the *Reimagining Museums for Climate Action* competition was announced, we had a body of work, a method, which was representational drawing, which was expanding from a scholarly ambition and articulation on climate to involve more "on the street" action. At that moment, we were beginning to think about ways of bringing together these two bodies of work. Is there a way that we can still do with the drawing practice what we were doing in physical sites? Can there be a representational agency as part of a climate activism? So, this is when we discovered the competition, thinking of the museum in particular, as a site for intervention.

PR I find the museum really fascinating as a space where you can present narratives or propositions of practice, which may be artistic or scientific or historical, material worlds. And if you meet someone in front of a piece of work you've not met before, or who comes from a different place, the conversation can be so open-ended, and it can change the concept of what a practice or an artefact or a world can be very quickly.

There is much to be learned in this field about transversal representational aesthetics, social justice, political, scientific, governance, and actually, the cultural concept of a museum. So, I think the competition provided an important platform to open up the debate on whatever future form the museum might take.

RG There are two ways in which museums, particularly natural history museums, appeal to us as sites of engagement. One is the fact that they are magnets for publics who don't necessarily align along party lines or ideological positions in their views with respect to climate change – you're neither speaking to the people who already signed up to the Greenpeace mailing list nor to climate denialists. Typically, in natural history or history museums, you have a visit to what remains of a 19th century relic of nature. Often organised somehow chronologically, you end with the contemporary moment in which the museum is trying to address the Anthropocene and how to speak about climate change. The visit typically ends with a little chamber, often anti-climactic, and without the sense of curiosity and wonder that characterises the museum.

So, you often end with a series of very discrete testimonials by scientific experts. You just had your mind blown by the glass flowers and the collections and the colours and the scales. And you lead to that final moment where both the tone and the objects are a bit underwhelming. And so, you're probably hungry, the kids are loud, and you're just exiting at that point.

And so, how do you channel the energy and appeal of these institutions to address the question of climate change? Such museums are by far the most visited institutions

in the city and offer great possibilities of a public intervention on the climate change conversation. But then, how do you, while doing that, also acknowledge, discuss, intervene within the extractivist histories of these institutions themselves, which were also part of this construct? And so, invite, directly or indirectly, a reconsideration of the politics that govern these institutions, their boards, their funding mechanisms, their choice of exhibitions, without opening up the space of critique to the point where you are “cutting off the hand” that you were hoping would help you get the climate change communication going?

I feel somehow, and maybe that’s the point that I wanted to make, that inherently, at the core of what theorists are now telling us is that, in the words of Donna Haraway, you have to “learn to live with the trouble”. We have to learn to live with the brokenness of the system. It’s not by either idealising or dismissing, that’s going to happen.

So, the *RMCA* project allowed us to think of the questions of media and museum, first in the initial submission, which was two drawings and 12 sentences, and then into a six-minute animation.

EJ The question of format was very important to us. How can one say all of these things with just two drawings? Jean-Luc Godard had an answer. Godard talks about how to visualise a conversation in cinema. It is a shot and reverse shot. But it is not simply the same shot twice from different angles. That doesn’t work. It is a visual conversation. So, that was the two images with two elephants. In the first image, the back of an elephant is looking at another elephant. And the second is the dead elephant, looking at the statue of an elephant in the African Hall. The cinematic construct of how humans and non-humans enter into a conversation. And how can you use an elephant to converse with the museum?

In the drawings, the elephant basically becomes a kind of Trojan horse, a taxidermy. And the museum becomes a kind of taxidermy in the reverse, in a reverse action or boomerang effect on itself. So, the drawings deconstruct the Garden of Eden idea of nature in the museum, to capture a lot of the political challenges underway and ahead.

RG Both drawings use the trope of the diorama. The question this raised for us is how to rework a format that has been typically framed to place a viewer outside, to begin to introduce the viewer within the context of a diorama? The animation departs from these two drawings as the establishing shots, which is developed into a storyboard, along with a narrative that is written and visualised by us and was eventually narrated by Donna Haraway.

The animation narrates the adventures of the African elephant matriarch in her environmentalist rebellion, as she comes alive and departs from what is the centrepiece of the Akeley Hall, the African Hall in the American Museum of Natural History. That centrepiece is called “The Alarm”, appropriately. And so, how does narrating the history of The Alarm allow us to speak to another alarm, the climate

emergency that we're now dealing with? So, in that move out of the museum, and that reanimation and her new lease of life, the elephant speaks to Donna Haraway's framework of the "Teddy Bear Patriarchy", which explicitly narrates the histories of colonialism, sexism, and racism that have founded the collection of this museum.

The elephant becomes part of a climate movement and eventually only comes to rest in peace at the moment when she invites the museum no longer to think of death as the way to establish a collection, but to think of the collection as a series of environmental performances. Maybe art as the deployment of an environmental performance, is the core of the mission or the agenda of the climate museum. And maybe that eventually takes us back to the work of another member of the panel of judges for the competition, Lucia Pietroiusti, who has been thinking of that with the Back to Earth and the General Ecology initiatives at the Serpentine Galleries. Somehow, the animated figure of the elephant is inviting us to do that from within the space of representation. And in so doing, the animation also pays tribute to the current environmentalist actions that are taking place on streets and on the steps of the museum, where they are calling for the removal of the equestrian statue, addressing the intersection and attributes of speaking to climate within a longer history of both gender and racial bias and violence.

So, the diorama does a few things along the way. The establishing shot eventually became a way of working out how to move beyond a descriptive text and images, to allow the text to be more performative. And how, in doing that, does one establish an aesthetic that can begin to appeal to a wider audience, more age groups, maybe more akin to a fable. In this project, where somehow, if La Fontaine and Dr Seuss got married and had a child, and you add a third parent there, the architectural parlance, they give birth to this ecofeminist warrior, the matriarch figure of the elephant. Haraway says that figures are material nodes that congeal a density of references, which otherwise would be distributed and hard to reckon with. So, the density with the figure of the elephant gives the climate fable more mileage, more traction.

EJ I think the figure of the agent as the element that absorbs the subjectivity is important, but also the specificity of representation.

In terms of the drawing, two things were important to us. The first is the spatiality of the section cut and its multiple layers and narrative chambers. The second is the *mise en abyme*, which creates an ambiguity on whether you're inside the diorama or whether you're in public space. The elephant is both in the museum and in the city, it is both representation and physical space.

I think it's also quite important for the film. The animation is basically made with pans. There are four montage moments, but all of them are pans inside one drawing. So, there is an integrity of the space and an integrity of the drawing. So, there is the Jean-Luc Godard reference again and the film *Weekend* (1968). The movie is a long pan across the cars in the traffic jam and conversations happening inside each of the cars.

The capacity of the drawing to establish relationships through sections between multiple realities and create connections and intersections is, for us, quite key.

RG It's like drawing itself has the capacity to draw things together. The chambers of the elephant somehow impart on the diorama the possibility to cast and recount an environmental history with an environmental future yet to happen.

EJ It's also about speculative narration, how do you advocate for a belief in an alternative future, one that is not doomed by climate collapse? How do you make that alternative world worth building? How do you give it a chance? It's by using figures, by using subjects that are able to carry or to pull together such alternative constructs.

RG It feels like a critical design lens merely projects very small windows for a future otherwise. The *Elephant in the Room* is the closest we have come to addressing how we might begin to imagine other possible worlds, which is at the core of the agency of speculation. It's not just about projecting a climate doomsday scenario or business as usual. At its core, it's a reformulation of environmental values and concerns.

RH I think what you were saying connects in a really interesting way with Amitav Ghosh's arguments in *The Great Derangement*, about the limits of the novel as a literary form, and its focus on the individual narrator, for telling the stories of climate change, and the need to develop new modes of storytelling and new modes of representation to address the climate emergency. This touches on questions of temporality, the relationship between aesthetics and politics, and the role of speculation.

PR The film is important because it literally puts time into the project. It moves away from the idea of representation and the notion of figures being these discrete devices. This is also important because of the way artists and practitioners have tended to be bought into climate science, that is, to provide visualisations of data. These raise key questions of communication: how do we get the public to come on board with us? Artists or architects, who have representational facilities are asked to do that work: which can lose or undo the aesthetic, political or critical understandings of what drawings do, and what films do.

For me, the film is a myth: a very different notion from story and of narration or of document. In myth, you can create historical realism, but you can also make that realism expand further, for example, your comments here about where you locate yourself to be in multiple positions at any one time.

The mythical female voice is very powerful: especially the voice of Haraway, as our contemporary maker of "Gaia". She is the person weaving these stories. Her ability

to work between scientific technology, historical critical analysis of colonialism and of terror, but also of potential for hope and of compassion, is really key.

EJ In many ways we see the elephant as an anthropomorphic architectural assemblage. Some of the buildings we had in mind were Charles Ribart's Elephant, Lucy the Elephant in Ventnor, NJ, and the mechanical elephant at Les Machines de l'île in Nantes.

Architecture has this ability to bring together so many dimensions that are historic, that are based on facts, on materials, on events, but that are also about animate life and the future, about what is possible and yet to come.

RG If we're thinking of representation in that expanded framework – maybe to go once more to Latour, as he invited in *Making Things Public* – then that project of representation is inherently both a political and an aesthetic project, because it carries that legacy of being both the space of assembly, the parliament, where people gather as well as the agency of making things visible. Like all things, it's not about what is visible or invisible. It's about how it comes to be seen and how it comes to be narrated. Political subjectivity is in how things come to be seen and shared and architecture has that capacity both in physical and representational space to make climate public.

story:web

UK

7

The Great North Museum: Hancock; Open Lab: Simon
Bowen, Tom Feltwell; The Tyndall Centre/CAST:
Sarah Mander; David de la Haye; Roots & Wings

How can people
curate their
own climate
information
to support
climate action?

Museum collections can be a powerful source of information and inspiration, but they are limited if they can only be experienced directly, in museums themselves. *Story:Web* reimagi-

nes museum collections as “big data” by connecting disparate resources, narratives and experiences to reveal unexpected patterns through space and time. The project aims to release museum objects into the world so that they can be used by anyone to tell the stories or support the issues relevant to them.

At its core, *Story:Web* challenges the idea that museums are little more than buildings for containing and displaying objects. They are places where stories are formed and reformed; places that can inspire, move, amaze and incite strong emotions through multisensory encounters with challenging topics and narratives.

Story:Web also takes museum objects and stories onto social media to connect with existing online conversations, thereby engaging non-typical audiences. The concept proposes using artificial intelligence (AI) to discover and share new objects and grow stories with the public as co-authors.

Since 2018, the *Story:Web* team has been investigating different ways to bring together cultural heritage, digital technology and creative media as a form of climate action. There is no single climate change story, and a strong social mandate for climate action is only possible when people are able to make sense of climate change in ways that are relevant to their own lives. *Story:Web* does this by unsettling the distinction between physical museum objects and their digital representations – evoking the sights, sounds and memories that objects relate to rather than just their material form. While institutions might tell one climate story based on the collec-

tions they hold, *Story:Web* looks to weave together multiple narratives and “snippets” of information to capture the complexity of climate change and climate action.

For the *Reimagining Museums* project, the team created a prototype to be tested and developed with audiences in Glasgow and beyond. The demo includes an image of a grey seal skull from the natural history collection of the Great North Museum: Hancock. This connects to a creative commons image of grey seals and a field recording of seals vocalising underwater shared on Bandcamp. Grey seals connect to the phenomena of “coastal squeeze”, where intertidal areas are shrinking due to sea level rise and the construction of sea defences preventing coastal erosion. The object prompted one audience member to submit a personal memory about seeing seals on holiday trips to the North East English coast, complemented by an archival photograph of a coastal resort (image available on Flickr) and a sound recording of families playing on a beach (recording on Freesound.org). In this way a single museum “object” can be connected to multiple narratives and resources, opening up new perspectives on the meaning of this artefact.

Story:Web represents the combined thinking of a cultural heritage organisation, a sound artist, and researchers in Human Computer Interaction, design and climate policy. By using *Story:Web*, people, museums and even AI systems can explore, create and share stories as co-authors and co-curators. Ultimately, the project aims to present these intertwined stories in large scale immersive experiences, connecting individuals and communities around the world emotionally and viscerally to inspire meaningful climate action.





Creative commons photo of grey seals shared by Flickr user davep-uk. NonCommercial 2.0 Generic (CC BY-NC 2.0).

EXHIBIT

**museums
in an
earth crisis**

A Conversation on Museums, Collecting and Radical Change with members of Climate Museum UK & staff & students of the Victoria and Albert Museum / Royal College of Art History of Design MA, facilitated by **Colin Sterling (CS)**

from V&A / RCA History of Design MA programme

Justine Boussard (JB) is an independent curator and creative producer, co-founder of There Project and History as Public Practice unit lead on the V&A/RCA History of Design MA. Justine is also an associate of CMUK.

Celine Nguyen (CN) is a designer and writer. Her MA research considers contemporary web aesthetics and their relationship to our ecological world.

Victoria Bennett (VB) is an archivist and designer, working with cultural heritage collections. Her MA research looks at traditional Japanese natural dyeing methods.

Margot Drayson (MD) is a writer and design researcher with an interest in fibres and raw materials. Her MA dissertation explores the revival of sericulture as a sustainable practice in Italy today.

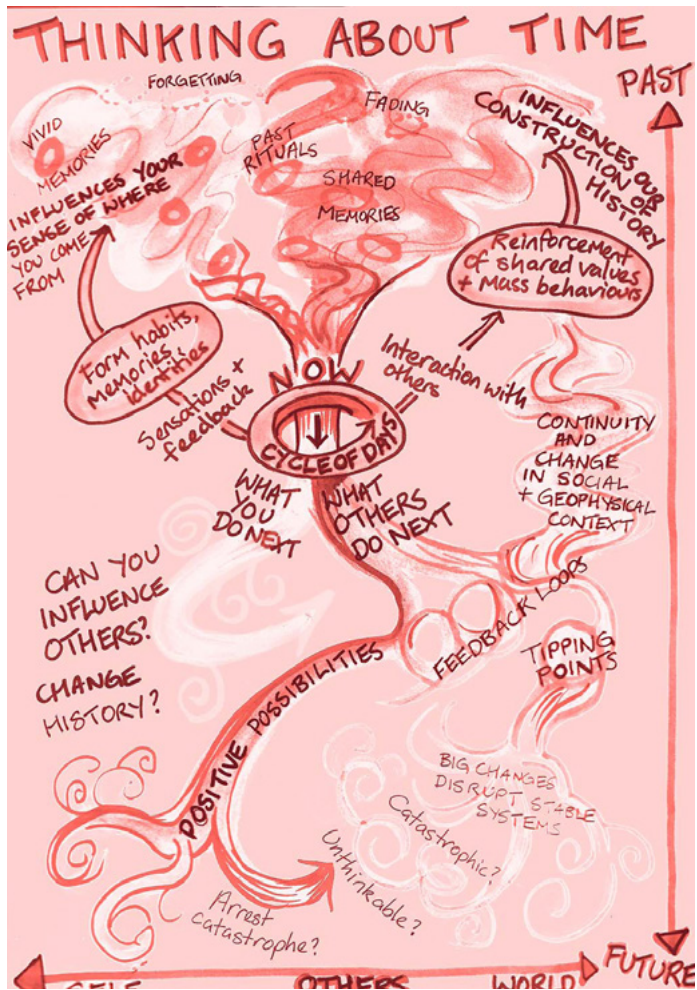
from Climate Museum UK

Bridget McKenzie (BM) is a cultural learning consultant, director of Flow Associates, co-founder of Culture Declares Emergency and founder of CMUK.

Genevieve Rudd (GR) is a Community Artist based in Great Yarmouth on the Norfolk coast. She leads participatory arts projects that explore environmental and heritage themes.

Anna Townhill (AT) is a recent graduate of the University of Exeter with a Masters in International Heritage Management and Consultancy. She currently works in grant-giving.

Jaime Jackson (JJ) is a moving image, digital, and relational artist, whose practice considers climate change, biomimicry, and biophilia. He is the artist-director of Salt Road.



'Thinking about time', graphic illustration by Bridget McKenzie.

Climate Museum UK (CMUK) aims to stir and collect responses to the climate and ecological emergency. As part of a collaboration with the V&A Museum/ RCA's History of Design MA programme, several students and museum associates met in late June 2021 for a digitally mediated conversation on what museums can do in a time of crisis, what it means to collect objects, and how museums can inspire people to act.

CN The first thing I'd like us to talk about is the role of collections and museums in an Earth crisis. What are your reflections on the idea of preserving things for the future and for posterity? Where are museum collecting practices today doing things right, and where are they limited when it comes to the Earth crisis?

BM I think we need to begin by looking at what the Earth crisis is and how it affects our understanding of posterity. Posterity is always afterwards, an imagined time beyond planning and prediction. But the Earth crisis means that we are now *in* posterity, a time where uncertainties are dominant. Any trend that we might imagine carrying on is totally upset. Collecting for posterity in that open-ended way for a point in time when you *might* be able to do something with an item, is now overwhelmed by the open-endedness of the Earth crisis itself.

JB As a child of the 90s, I was very much brought up with the idea that we had reached the end of history. Now of course I realise this is absolutely not the case. But visiting museums with that frame of mind made you think that you were discovering everything that had happened until then, and that everything would stay the same from that point onwards. What's interesting when thinking in terms of posterity is to realise that history is not only *not* finished, but it's also not linear. There's no real understanding of where we are exactly, but we're definitely not at the end. For me, it's all about realising that we are part of something that is very much in movement. That's one point. And the second point is that museums themselves are not that old. They are a concept that is, what, 200 years old? They are a tool developed to create a very specific vision of the world. Even the concept of "the museum", you need to be a bit circular about it and realise that this is just one framework that can be questioned as well.

BM I think this question of time is really important, and it's something I've been thinking about a lot recently. I've drawn this diagram (see left). It shows the complexity of time and the importance of the now. It breaks down time in relation to self, others and the world. That's one way of defining visions of the future. We want a stable notion of the future, but we depend on others. We depend on our community to have positive possibilities, but then the wider world and the big systems are churning and exploding. And our futures completely depend on that wider world.

Museums have created this safe sense of continuity and a narrative closure about our local or national histories. That closure is based on producing things to generate public good, which is an idea that just can't hold any more. The materialism that museums are based on celebrates the aesthetics of extraction and production, and uses that to attract visitors. That is the old model of museums. They have to shift from being narratively closed, to radically open.

JJ This also depends on whether museums are going along with an establishment narrative or working against it. Do museums take a stand against right-wing ideologies that celebrate a colonial past, or can they be part of the critique of that and build towards a more enlightened society? I think we can see that playing out a bit now. What's interesting also is the political framework museums operate in, and how they're influenced and controlled by politicians and civil servants. Are museums able to stand up against that and be part of the narrative of change that contemporary artists quite often inhabit? Or are they subjected to political controls which, if they don't adhere to, they'll lose their funding?

JB I think what's really interesting and what Jaime is pointing at here is that there are multiple forces and multiple people at the heart of museums. And, going back to my early museum experiences, I didn't think at all about who was doing what and whose agenda was being followed. As an audience member you rarely think of a museum in terms of the people working there because you encounter them through the artefacts and interpretation. Unless you're speaking with front of house staff or following a tour, the people are absent. There is probably work to be done to show the actual people building and working in museums. One of the most interesting things about CMUK is that the people are visible: there is credit given to who is delivering a certain workshop and who is bringing certain ideas to the table, in a way that big institutions don't necessarily do.

BM I agree with that. This speaks to the idea of decolonisation, which I see as a process and a whole set of practices. Going back to the question we started with, I think the Earth crisis sheds new light on what decolonisation means and why it's needed. Museums absolutely must and can be agents for decolonisation, because it means restoring relationships and having dialogue. It means recognising that heritage has been extracted, that there's been this combination of extracting human cultures and more-than-human natures from our living world and accumulating them as profit and in museums. That's a hugely simplified way of putting it. But decolonisation is about recognising that history. It's not giving everything back or knocking down the museum walls. It's not that radical. Maybe even activist museums like ours are not that radical. We're just working hard to create a safe space for these conversations.

JB Turning the question of collecting for posterity in an emergency on its head, it's worth wondering why are we still trying to do it at all? Why are we not all dropping tools and retraining in horticulture or solar energy? Why are we still sticking with museums, with culture? If I may answer first, it's because I still believe museums have got an aura about them. They are places people look up to and in which they seek meaning, or truth, or experience. And there's a value in communicating through a channel that is recognised, respected and in many cases loved.

I've been trying to learn more about permaculture and one of its key principles is to use and value diversity. So now I'm trying to diversify my practices – sticking to the practice of curating and of public engagement through museum-like activity, but also trying to do other things, including horticulture and seeing how those might feed into each other. I wonder why others are still sticking with their museum practice or artistic practice in this emergency?

GR I'm a community artist and I often lead engagement projects in partnership with museums and galleries here in East Anglia, but I am retraining as a Wild Beach Leader because the art sector sometimes feels futile and ridiculous. You feel like you're supporting a system that is very frustrating – particularly as an individual – you feel like you're always going uphill. And if I am going to go uphill, let's go uphill on the beach! This is not to minimise the role of creativity for expanding ideas about the Earth and imaginative possibilities, but I want to be more informed and more proactive about the place where I live on the coast.

AT I would agree with what Genevieve is saying about the system, and feeling like you must put a square peg in a round hole. We have these discrete sectors we work in. You either work in the environment sector or you work in the cultural sector. I struggled finding what I wanted to do in my career because all these ideas were so interwoven to me that studying a degree in "this thing" or entering a job sector in "that thing" felt quite alien.

VB Through working in museums and also learning about permaculture can you see any similarity in these different kinds of work, Justine? Is there anything that you think museums can learn from, or implement, in terms of ecology more generally?

JB This idea came from a conversation with Bridget last year, where we talked about the idea of a wild curator being someone who's able not just to curate, but who also knows about ecosystems and is involved in maintaining them and regenerating them. That's something that really stuck with me, and I'd like to try and put it into practice. Design and craft can bring a lot to ecological conversations as well. It's about cross-pollination.

JJ On a daily basis I'm amazed that any artist or museum would *not* want to work on this topic. I find it amazing that those working in what I consider

the outmoded model of a commodity-driven cultural sector which has serviced the dualistic ideologies that have created the crisis in the first place would not want to think, 'hang on, this isn't working, let's approach it from another way'. We are nature, but we are culture as well. It's in the interdependency of these things that we can find the power to create situations where change can happen. And it is most likely to happen in the area of culture. This involves being true to yourself and your own nature. If I do engagement projects, for instance, with young people, I ask them to be true to their own ideas and their own nature and their own creativity. If you don't do what's in your heart, then you're not going to succeed.

- BM** That's so helpful. I want to reflect particularly on what CMUK is and is doing. Rather than collecting to show off what we have, our main medium is *activations*. The idea is to activate people to explore material culture and enable thinking towards a non-materialistic way of living. We need to make meaning together to get a bigger understanding of atoms, as it were. Atoms being any item around them, which they might not be able to see in a systemic context. We need to enable that bigger understanding. I do find the object-centred approach of museums inspiring.

CS I've often wondered about initiatives, such as your own, that use the term museum without necessarily *being* a museum. What does the crux of the word mean to you? Is the central idea of the museum that there is an object-centred focus to activities?

- BM** Yes. We're not a science discovery centre, where you might find demonstrations or experiences to explain ideas. We are using objects in an open-ended way. It's about enabling people to see that every object at some point came from something else and will go back into something else. Objects are porous and have an impact. They connect in multiple ways with other things. It's more about seeing that mesh than the object. There isn't a thing that fixes us as an object-centred museum. But for me, it's an important part of how I work.

- AT** What Bridget has said about objects representing something larger and connecting to the wider world resonates with me. I often think in terms of tangibility and intangibility. Objects give you something to latch on to, to spark a wider conversation. The climate crisis is such a huge issue, but it's intangible (although becoming more tangible by the day). Having objects as a way in, as a touchpoint to then get into a more specific conversation, I think can be really useful.

- CN** One interesting thing about discussing climate change and climate crisis is that it all feels very dystopic and weighty. David Wallace-Wells' article 'The Uninhabitable Earth',

which was later turned into a book, opens with the words, 'it is, I promise, worse than you think. No matter how well-informed you are, you are surely not alarmed enough'. And I think that's really the message a lot of people get about the climate crisis. It's very easy for people to feel paralysed and to just stop engaging, because it feels so enormous. How can an activist museum encourage people to think that it's not too late to act, and that it is vital to have this sense of possibility?

JB That's something I've struggled with, because you do get really dark. What I latch onto to motivate myself is thinking about future generations in a tangible way, starting with my own nieces and nephew and all the people I love. Because you could just pull the shutters down and think, 'when I'm gone, it won't be my problem. Other people can suffer'. Making sure that people nurture this love for other people, including those who are not here yet is critical. And not just people, but nature and other beings. Nurture that love for the future so that we act for them now.

JJ Part of what we need to do is help equip people to be able to use their emotions rather than double down on them. It's okay to be angry. It's okay to be fearful. It's okay to feel frozen. And it's okay to find the wisdom in those feelings and to be able to express them and share them. In our culture, we aren't taught to find the wisdom in our emotions. A cultural response to the crisis should equip people to build on their emotional reactions and not punish themselves for feeling angry or frozen or fearful.

BM I just wanted to challenge what I said earlier about being object-focused. I think we are actually broader than that because we collect people's *responses*. A lot of what we do in encouraging conversation is to generate and collect people's stories or even just immediate emotional responses. That's always a part of our activations, and we collect the intangible. Expressing emotion is always important.

The idea however is to move them through interacting with objects with the concrete focus that Justine talked about, to the dialogue that Anna talked about, to then be able to take action. This ability means exploring solutions, to have a desire for a possitopian future. In a way, we're about collecting and then amplifying stories, objects and possible futures that are responsive to the now. Objects enable us to get clues to the past and the future and then work through those systemic solutions and pathways. That, in a way, is what we're collecting.

VB There must be exciting opportunities and potential challenges with this kind of collecting. What does it mean to be a distributed museum? And what does distributed collecting look like?

BM The team members of CMUK have an idea of what it means to be a distributed



CMUK's first pop-up, St Margaret's House, 2019. Photo courtesy of Bridget McKenzie.

museum. As more people joined, it became clear that we were a diverse bunch not located in one place. Each of us has our own practice and our own interests in terms of what and how we collect – or indeed whether collecting is paramount or interacting with people and places is more important.

We registered as a Community Interest Company in December 2019. But it was only in summer 2020 that we got this idea of distribution. It's inspired by mycorrhizal networks. We are taking mycorrhizae as a metaphor, which is a biophilic thing to do.

Mycorrhizal networks have four functions. First, to distribute nutrition to the plants most in need, which relates to a social justice aspect. By growing our network, we can support emerging or marginalised practitioners or partners. Second, mycorrhizae create strength for the plant by massing mycelium in the soil. As a museum we are structured in a way that is resistant to the impacts of the Earth crisis. For example, when big museums had to shut and lay off staff in the pandemic, we didn't have that problem because we are small and evolving. A third function is to extend the reach of the plant's roots to receive more resources and increase its symbiotic relationships. That relates to our members working in different locations and building their own nodes of partnership in their places. The fourth function is to anticipate threats and stimulate chemicals that resist pests and diseases, and to communicate those threats more widely. That relates to our role as an anticipatory museum. We have insights that we pass around the museum world and the cultural sector.

That sums up the idea of a distributed museum. It doesn't fully explain how it works in practice, as it is still evolving.

CS What do you see as the main differences between a distributed museum and, say, a networked museum?

BM I think distributed is much more radically decentred. Over time, it becomes more distributed, like a mother tree grows more trees in a forest. Our museum is like a forest. I think a network creates this sense that there's a spider in the middle, and that your network is for catching rather than feeding things.

JB CMUK is so welcoming, even in the skeleton of how it works, sharing the presentations in a very open manner, having the principles very visible and thoroughly explained. All of that you can access quickly, which enables you to adopt them into your own practice, even if you're not delivering under the CMUK umbrella. You still are sharing or exporting those principles. We're almost like loads of little fractals. And I think that's a brilliant way of doing things.

CS Can I ask a follow-up question here about scale? The distributed idea goes against a sense of being inherently



The Wild Museum at Timber Festival, July 2021. Photograph by Lucy Carruthers.

localised, and yet actions do happen in certain places and respond to certain contexts. How could you see it growing beyond the UK to Europe, the planet, the universe, however you want to see it?

BM I'm not really one for boundaries and limits. We happen to be located geographically in these British islands, but very much have an international mindset. Environmental action has to be both international and local, in the vein of "think global, act local". I'm trying to emphasise the "think global" aspect a bit more. Acting local is then what happens as a consequence of our structure. We don't have a vision or a business plan for us to grow to a certain size. It's really about growing capacities in people and disseminating ideas. And if members do projects under different umbrellas and names, that doesn't matter.

JJ Although it's a global problem, each area and each group of people have specific problems and specific ways of dealing with them. By creating a patchwork of local reactions that we can then learn from and work towards understanding, we get a much more powerful way of working. Having a centralised approach would squash that.

VB I'm thinking now about the differences between distributed museum collections and traditional museums, which are inherently tied to their physical space. CMUK's current approach is to not have a centralised physical space, and therefore not be bound to one. Do you think this allows CMUK to accomplish more?

BM I think we should be working towards physical manifestations, but my instinct is to focus on a pathway of developing partnerships with museums, such as through the Eco Lens On Things programme, which aims to put an ecological lens on objects already in museum collections. We can develop bespoke commissions, or work on funding bids together to enable museums to host a local associate, or to have a critical friendship with museums. That's our model for now, the most viable model for creating physical manifestations of CMUK. But at the same time, having a real, visitable place that is our own, that we put our brand above the door, it's very alluring. But it's also very challenging.

AT As a volunteer, as soon as you have to consider physicality, it limits things. You have to think about logistics. How do I get there? When do I volunteer my time? That's in addition to the myriad different kinds of access issues that are involved in volunteering or in becoming involved in the workplace. CMUK was very ahead of the game in terms of digital volunteering during the pandemic. And that was something that I was looking for as I was living

in a rural area at the time. I think we've seen in the last two years that, while we've all been stuck in one place, the number of potential people we can connect with has actually increased. I believe that's something that CMUK was really good at facilitating early on.

JB What's also very positive about working in a distributed way is that you always work in partnership and get to learn from people you're working with. This is something you might miss if you've got your own space, unless you keep making the effort of bringing other people in. There is definitely value in continuing to embrace this add-on, infiltrating approach. Also, we can't assume that museums are welcoming places for everybody. We know they're not. The idea of a pop-up or taking over an empty shop in a high street so people can stumble upon you – there's so much value in that. You can have very different conversations with very different people because there's not that barrier of having to enter the museum.

BM The name Climate Museum UK can be a barrier because it contains things that people don't always want. People don't want to engage with climate. We do actually engage a lot more with the wider ecological crisis as much as climate, but people don't know that from our name. Some people are put off by museums or think that a museum is something other than the vision we have for them. And maybe even the UK bit makes it seem like we're promoting the UK's wondrous climate innovations. Some of our activities de-emphasise the brand. The Wild Museum, for example, at Timber Festival, we didn't put our logo on any of our materials. We were "The Wild Museum" and we were animal curators.

MD It seems that nowadays, when people speak about the problems with museums, a lot of them tend to come with the architecture. Not being attached or confined to a specific space that holds a historical weight must be quite liberating.

JJ That's a really good point. When you have branding and you have the institution, the organisation takes on a persona and has a sense of authority which can take away from what you're actually trying to do. Sometimes what we try and do collectively is very sensitive and fragile, but strong. If you attempt something culturally weighty, it can squash it and take the life out of it. The subtleties of working on complex issues like the climate and ecological crisis requires a delicate approach that isn't about branding or being a monolithic organisation. It's about the context, practice and process.

VB Despite how urgent the situation is, working on CMUK seems like a fundamentally hopeful act. What do you believe is possible for museums? Why do you still feel hopeful about acting?

BM This is similar to Justine's question, isn't it, about why do we do it? Why don't we give up and work on a farm? I believe that everything is possible for museums, but also everything is under threat for museums. It's because we're now at an absolutely crucial moment when there is recognition of crisis. And the physical, financial threats to museum infrastructure are absolutely apparent. Twenty years ago, if you talked to museums about threats of flooding or desperate food insecurity, they wouldn't have thought there was anything to worry about. That sense that climate change is in the future is starting to erode for anyone who's thoughtful and looking at the media. I suppose the hope lies in that awakening recognition. And that's a bittersweet hope. That's really what 'possitopia' is about. It's realistic. It's acknowledging the bitterness of the situation. I would slightly push back on the phrase, "fundamentally a hopeful act", because we cannot be solely hopeful right now.

JB In many ways, I don't necessarily have hope that things are going to improve and solutions will be found and we are going to avoid a catastrophe. I don't necessarily have that feeling. But what I do know is that things are changing rapidly, and we need to change our practices just as fast. It's a really important moment to take your head out of the sand because the sand is moving. We just have to do it. We need to build a different way of being *now*. It's more of an urgent act than a hopeful act.

¹ Bridget McKenzie, "Explaining Possitopia," *Medium*, October 24, 2020, accessed August 11, 2021 <https://bridgetmck.medium.com/explaining-possitopia-96775ad78823>

a series of collective, non-statistical evidence

Indonesia

8

pppooolll: Kamil Muhammad, Haidar El Haq,
Amelia M Djaja, Gregorius Jasson, Ken Fernanda

What if people gathered their own collections and information to support dialogue and climate action?

pppoooll's collaborative and interdisciplinary work focuses on the critical pursuit of an architecture that is caring, rigorous and long-term. This approach is manifest in *A Series of Collective, Non-Statistical Evidence*, which challenges familiar representations of climate change and climate action. All-too-often climate change is presented to the public through statistics accompanied by images of destruction and mayhem. This ignores the fact that for much of the world climate change is deeply personal and local. It is personal because the body feels it: hunger from crop failure, submerged homes from worsening floods, and even the loss of soul. These experiences are direct evidence of the climate crisis. How can such knowledge be collected and understood in a way that might shape future climate policy?

A Series of Collective, Non-Statistical Evidence looks to the world of museums to address this question. Here however the idea of the museum does not focus on a specific building, but rather encompasses a set of practices through which the lived reality of climate change might be captured and communicated.

Museums have two main roles in this model. In the first instance, they would be centres for collecting, archiving and curating the heterogeneous evidence of climate change that exists beyond apocalyptic images: a hardened lump of soil due to drought, a makeshift apparatus to conserve water, or simply a written page of bookkeeping showing decline in income. These objects would be "curated" in neighbourhood centres, who would retain ownership of the evidence and make them available for display and research.

The second role would be organising dialogues and exchange. Building on existing community gatherings (harvest festivals, communal prayers, or even a game of ping pong), museums would foster dialogue sessions that explore the evidence collected by each community. Through this exchange of evidence, communities would learn practical ways to mitigate and adapt to climate change from each other; subverting the logic of artefacts being extracted and exhibited as "collections" elsewhere.

In one example collected by the team, communities in flood affected areas hand painted a scale on an electrical pole and house to measure flood levels. This communicated the severity of floods more accurately, where water level is often described anthropometrically (i.e. "water as high as my shoulder!"). In another, hanging scales present the diminishing daily catches of fishermen due to island reclamation – a pattern found in the busy fish market.

The presentation at Glasgow Science Centre invited audiences to investigate the evidence of climate change found in their own daily lives. Objects displayed on a ping pong table offered examples found *here* (Jakarta) that you may encounter *there* (Glasgow) and *elsewhere*.

This approach imagines a new kind of museum that is embedded in and responsive to diverse societies. By working with existing infrastructures that are close to the people they serve, meetings and meeting places can act as a distributed museum for climate justice, fostering dialogue and sharing concerns related to climate change. Through this act of collective solidarity, adaptation to climate change is given a network and a platform to assemble evidence to shape future climate action.



Communities in the city, in the rural areas, on the hill or by the sea, have their own social infrastructure to collect evidence and start a dialogue. pppooolll.



The Museum facilitates this exchange in social settings in varying scale: both large/formal and small/casual. Thus, museums must be an embedded practice in communities. pppooolll.

EXHIBIT

**murmurs
from
the future**

Anab Jain (AJ) is a designer, filmmaker, and co-founder of *Superflux*, a critically acclaimed foresight, design and technology company in London working for clients such as the V&A, Google, UNDP and BBC. Anab's work has won honours from Apple Computers Inc., UNESCO, Geneva Human Rights Festival, and TED, been featured on NPR Radio, BBC 4, CBC, *New York Times*, *Evening Standard*, and *The Guardian*, and been exhibited at MoMA New York, V&A Museum and National Museum of China amongst others. Anab is Professor and Programme Leader for Design Investigations at the University of Applied Arts, Vienna.

CS I'd like to start by asking quite a broad question, namely how you engage with worlds to come. The scenarios modelled through climate science often seem to imagine a very narrow range of possibilities for the future, mapped onto line charts that veer between the habitable, the tolerable and the downright apocalyptic. Your work at Superflux explicitly engages with the future as a concrete yet uncertain terrain, but how do you navigate between the probable, the possible and the preferred? Do you aim to bring a different reality into being, or do you want to help people adapt to what seems likely to occur?

AJ First, I have to say that we think of the futures cone (from where the ideas of possible, probable and preferable come) as a reference to consider multiple possibilities from any given point in the present where you are located, in your own context, which means that the future is a space of vast potential. We generally don't necessarily try and plot a linear arc onto what is preferable, plausible or probable, because really, whose idea of preferable are we really responding to? At the same time, quite often in our work we draw a lot of inspiration from data. We do extrapolations, we do a lot of interviews, we do a lot of research with experts and scientists and others – all sorts of people – to really make a rich landscape not just of extrapolations, but also of ethnographic and anthropological insights. And then we extrapolate those out while looking at spaces where a lot of interesting trends and weak signals might collide, and we zoom into that one possible future world and try and bring that to life.

Now, in that possible future world there might be things that are potentially likely to happen, but there might be completely impossible ideas as well. And that is because we do believe that whatever you've imagined the future to be, it's likely to be something different. Let's not be constrained by thinking of this as something that's likely to occur and therefore a prediction, but actually adjust our worldviews to embrace possibilities, sometimes concrete and tangible and experiential, at other times presented through other forms, like stories and films and all those sorts of murmurs of potential that come to us through different means. I think cultural institutions play a big role in some of these ideas that allow us to engage with the future in this speculative way.

CS Would you say that you are always addressing the speculative rather than the fantastical, because some of your work does veer into more science fiction realms?

AJ Interesting. We use the idea of speculation to explore a potential future and to really get into a question, but that's where it ends, I think, for us. We are really designing questions, actually, and these questions take the form of very tangible, visceral, experiential installations or archaeological objects from the future, or stories or films.

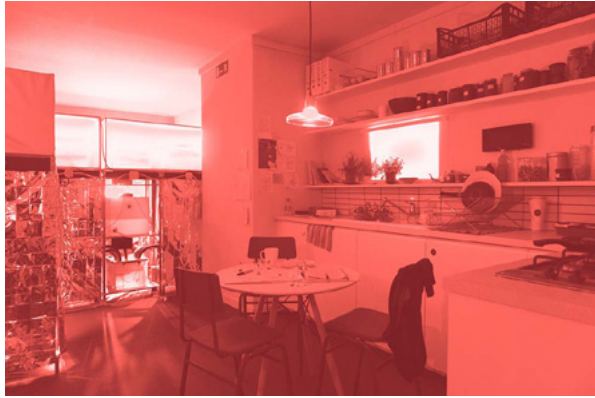
Quite often we have followed a trajectory which may come under the realm of what you might call speculative realism, where, if you're talking about *Mitigation of Shock*, which is an apartment in the future, the idea that it's an "apartment" with artefacts inside it that people can easily identify with, is a space of realism that allows them to then suspend disbelief and enter the speculation. So, we take them to that space where there's something that feels familiar, and then they confront the strange, and the weird, and the unsightly. As they turn around the corner, and suddenly the living space has been given up for food production or books like *Pets as Protein* populate the space.

Increasingly, and more recently in our current projects, for the two biennales, we have explored ideas around mythopoetics, or other forms of speculative fiction, and mythology and folklore, as explorations of what sort of stories enable us to really explore a radically uncertain future, but also allow us to navigate our current predicament with some form of hope, active hope, that acts as a beacon for us to go on. So, we are not bound by the genre or the mode as much as with the interest of trying to tell all sorts of stories. As Anna Tsing says, even telling terrible stories beautifully is a challenge.

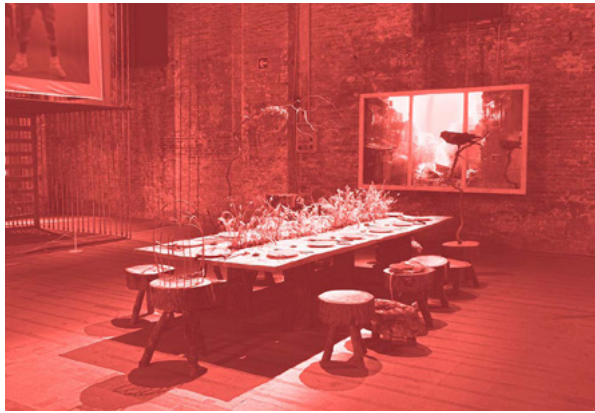
CS You mentioned so many terms and vocabularies there that have in some way been central to the *Reimagining Museums* project – mythopoetics, murmurs of potential, the need for hope – but I'd like to pick up first on the question of experience and participation, which plays such an important role in your work. This goes beyond simply showing and representing and instead provides visceral encounters with possible future worlds. Given the in-depth research and careful planning that goes into your projects, how do you leave space for chance and difference to emerge?

AJ That is such a difficult thing to answer in any form of measurable way. There is no real rule or framework to do that. It's a lot to do with feeling our way through it, really. It's the emotional connection we are making with our research and with our content and getting a feel for what is in front of us, and getting a feel for how the story's unfolding that we're trying to tell, and how is it being communicated, how is it being narrated, how is it being experienced, and then that's where there is, not just a desire for artistic licence at that point, but an imperative, I think.

As climate scientists tell me, every bit of data about the climate is set in the future. It is speculative by nature already, even the data sets and the models, and they're accurate to a point, but after a point, it's really difficult to know what's likely to happen. And so, I think we want to embrace that. In our work we do a lot of world building, we do a lot of storytelling, where we're bringing these ideas to life. As Ursula K. Le Guin would say, there's the department of things you will never know about, the department



Superflux, *Mitigation of Shock*. Superflux.



Superflux, *Refuge for Resurgence*. Photograph by Giorgia Lazzaro.



Superflux, *Invocation for Hope*. Photograph by Gregor Hofbauer.

behind the scenes where everything's been worked out, but then you only put in enough to just spark interest and thereby enable people to form their own ideas about it because, really, the work is about critical reflection. It's about asking questions. It's about considering our space, our place in our histories. It's about becoming more self-aware. It's about engaging with a possible future without considering that that is going to be the future. So, that idea of leaving space for chance and difference is so important. It's just that there is no rule for how we do it. We really follow our emotional intuition.

CS It's very interesting to hear that because, of course, you can't control how people respond to an installation; what exactly they take from it, and where that leads them in the future, as individuals and collectively. One of the texts I often return to in trying to work through these kinds of questions is Félix Guattari's *Three Ecologies*, where he writes about the need for strategic interventions to shape subjective experience. This is not just about individual responsibility, but about changing "worldviews", how people relate to the world. It's an obvious point to make but museums and cultural institutions have a vital role to play in this kind of work. Which leads me to wonder how the experiences you design aim to support the longer-term, systemic shifts required to address the challenges of a warming world?

AJ I think when we tend to think about the future, we often think of the long-term future. Well, at least that's what a lot of cognitive scientists and people who work in the space have said, that people think of somebody else, that the future's going to happen to somebody else, not to themselves, or not to the people they know and love and care for. There's this kind of temporal myopia with the future, and there are a lot of studies showing that if people were able to pre-experience the future, it would become a memory for them, an episodic memory that could be triggered as they go about their everyday life. This would help them to cognitively place an idea that felt far off or impossible or distant as part of their lived experience.

So, our way of thinking about long-termism and systemic shifts that are needed is to find ways in which we can bring, as I was saying, the murmurs of future potential into the present. The ways in which we can bring some of these ideas, knowing that none of them are likely to happen, but make them tangible enough for people to at least physically or emotionally engage with in some way.

So, that's only one way of doing it. It's something that we've been exploring for a while now. I think at the end of the day, what's critical is that if we are to navigate what feels like an impossible predicament, and the urgency of what lies ahead, we will need to equip ourselves with new tools and perspectives. And whatever they are, wherever they come

from, we need to be able to bring them on board because it is really urgent. And I think the call for action, unless people really believe in it, and see themselves in it, and feel that they are part of the change that is being asked, it's not going to happen.

CS Have you found that people are more receptive to these kinds of critical experiences now than when you started?

AJ I'm not so sure, actually. I think not necessarily. We've sensed discomfort and this resistance to things, but when they find themselves situated inside that space, they might react differently. So, if I were to tell people about a potential future and talk about the criticality of it, it's never going to go down well. And there's always resistance because it's unfamiliar and causes discomfort, but if you are able to present them with an object from that future, if you're able to take them there in some form, I think even though it can cause discomfort, it is very revealing in that palpable emotional experience, that is not all like, wow, amazing, I'm having this otherworldly experience.

But it is a fine space between that and just this dystopic, dark experience. It's somewhere in between. None of our projects are ever over the top in that sense of euphoria but tend to bridge this line between tension and hope. Nothing is presented as purely critical. It's presented with the idea that there is a lot to be hopeful for, which we genuinely believe there is, and it's about treading that fine line.

CS What are you hopeful around at the moment?

AJ Good question. I think I'm hopeful about the fact that there seems to be a real desire for starting to see our place as one amongst many within an ecologically complex planet. I think more and more people, because of the pandemic, have sought to spend more time with "nature", and I think all of that is great because that really puts them in a position where they start caring in a way that they might not have cared before, and that's always the first step towards wanting to do something. And I'm also starting to see at least a little bit more action from the biggest perpetrators who are making big commitments. I don't know how far this will go but I think at least there's some noise in that space.

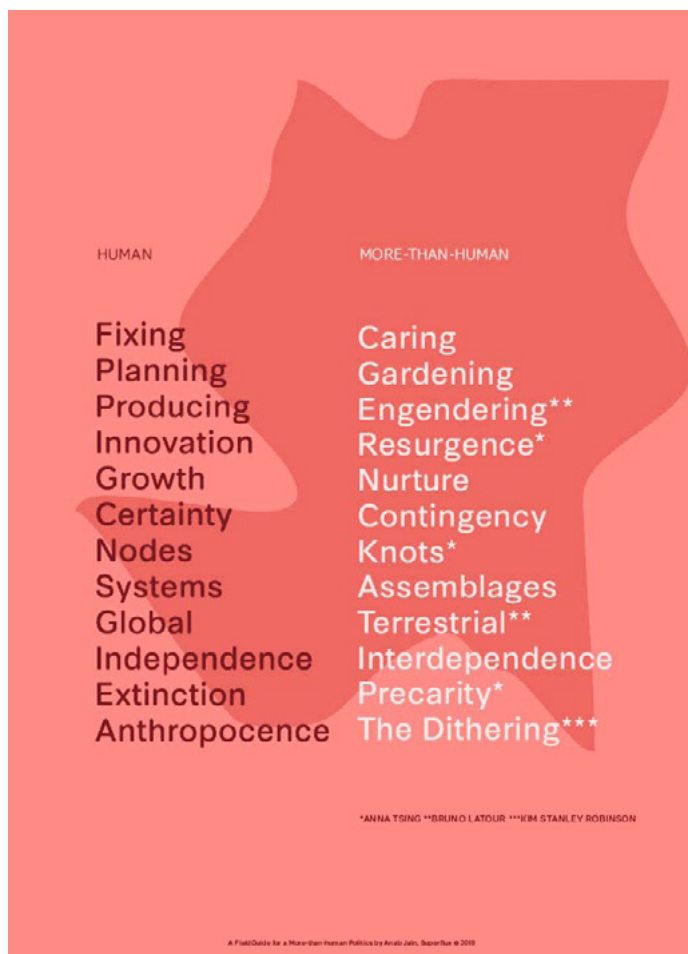
CS You've worked with many museums and cultural institutions over the years (ArtScience in Singapore, the Museum of Applied Arts in Vienna, the V&A, the CCCB in Barcelona) – what do you see as the main role for such institutions in the climate change era? From your perspective, what would it mean for museums to become catalysts for radical climate action?

AJ I have to say it's a bit outside of my expertise. We have worked with museums off and on, but very much in the role of exhibitors and through commissions. So, I'm unable to speak at length about what role museums can play, but I would say that I see them as public institutions that have the power to engage culturally with all sorts of people. And I think one of the key questions is, how do you make yourself accessible to people? Because there's always this dichotomy between people who go to the museums and people who don't, and we often get told, oh, but your work is only in museums so many people don't access it, which is true. So, I think these are big questions that museums need to ask themselves. Who are they for? What do they represent? How can they become, as you say, catalysts for radical climate action? I think they have a big role to play in shifting perspectives and mindsets, in telling all sorts of stories of positive action and imagination and finding ways to infiltrate public imagination and nurture it, become a kind of infrastructure, if you like, for this kind of public imagination.

CS I think that's a very nice way to frame what we've been trying to achieve with this project in fact, rethinking museums as an infrastructure for public imagination in the climate change era. And as part of this we need to recognise that museums historically have been built by humans for humans, but they're also entangled with a range of more-than-human forces and processes: the chemical decay of objects, the critters that haunt conservators' dreams. You've recently argued for a more-than-human design approach that would be attuned to these kinds of animacies. Can you imagine a future where museums embrace rather than resist these entanglements? What would a non-anthropocentric museum look like? How would it function? What kind of communities would it serve?

AJ You've got many questions in that one question! I don't know. I really don't know. I'd have to say, I suppose, in some ways I think it's really easy for a museum to start to become non-anthropocentric, from the basics of how you label stuff, to what kind of objects you emphasise, and what kind of perspectives, and what kinds of views. In some ways, it's actually really easy. The problem is, is there a political will and do the people in the museum feel like they want to make the shift? Because, apart from the critters and decaying objects that you talk about, really, a more-than-human perspective is also about AI and sentient beings and all of these. And I think if we are able to locate ourselves within the spectrum of other entities, then we should be able to locate our institutions within that same more-than-human spectrum.

I often ask, what does it mean to be human in a more-than-human world? But what does it mean to be a museum in a more-than-human world? It's an open question which I think at some level, like I said, is not difficult.



Superflux, *A Field Guide for a More-than-human Politics*. Anab Jain.

You could imagine, say, octopus day in the museum. What if the octopus were a curator? What would it mean to co-narrate our stories together? There are so many different ways in which museums can start to engage with this idea, and there's no dearth of ideas, definitely. I'm excited about your question. I'm excited to imagine what those possibilities could be.

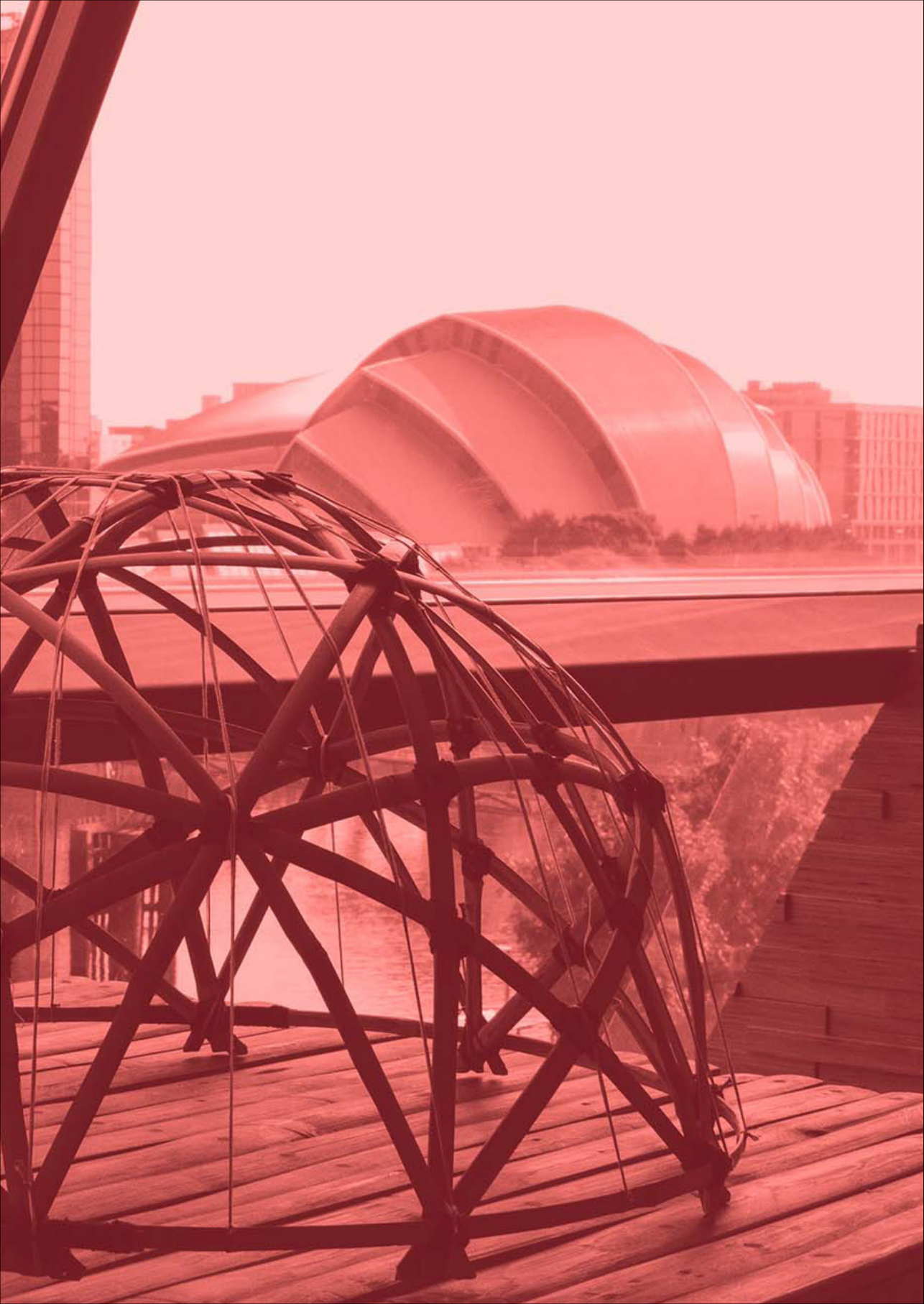
This is what the more-than-human politics piece was about; that politics is a space of tension, but it is also a politics that, I think, is motivating because it doesn't pit individuals against each other when we are talking about co-habitation alongside many other species. It gives a perspective to things in ways that we may not always have, but it's a work in progress.

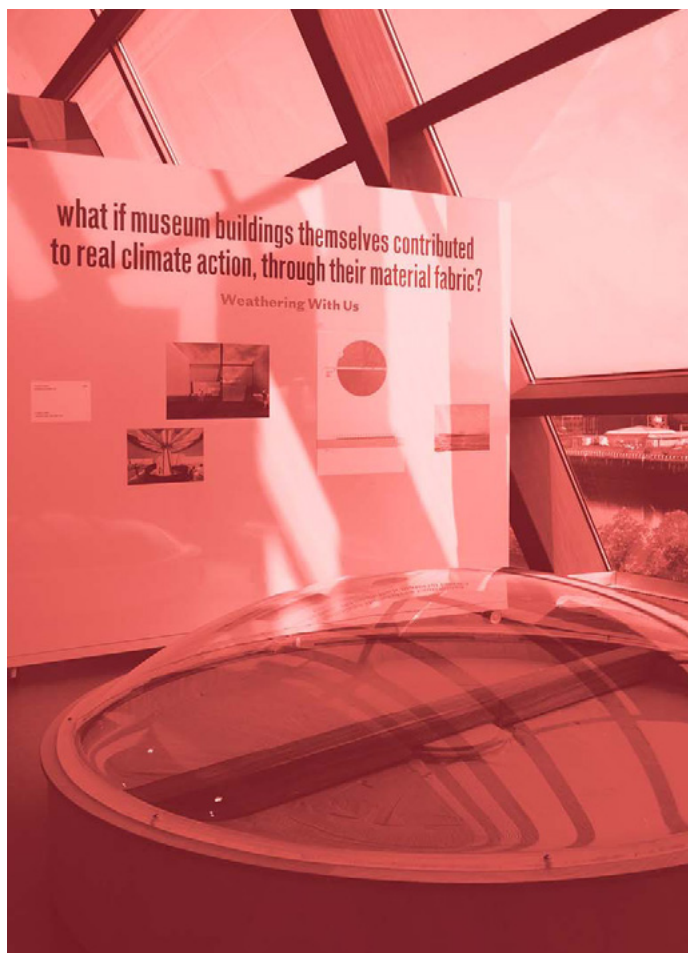
CS And it will remain so for a while at least I imagine.

AJ I think so.



Dome from the *Existences* exhibit with the main COP26 venue in the background. Photograph by Jonathan Gardner.





Part of the *Weathering With Us* exhibit at the *Reimagining Museums for Climate Action* exhibition in the Glasgow Science Centre. Photograph by Jonathan Gardner.

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Parts of the introductory essay reproduce passages from Harrison and Sterling (in prep) "The Speculative and the Profane: Reimagining Heritage and Museums for Climate Action," in Nick Shepherd (ed.) *Resilient Heritage: Rethinking Heritage in Precarious Times* (London, Routledge).

Further information and resources relating to RMCA are available on the project and exhibition website at www.museumsforclimateaction.org

