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Walking through the Anthropocene

Encountering materialisations of the geological epoch in an exhibition space

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Abstract: *The Anthropocene has been mobilised as a conceptual framework for museums to engage with the global environmental crisis. This article examines the exhibition* Welcome to the Anthropocene: The Earth in our Hands *that was on display at the Deutsches Museum from 2014 to 2016. Proclaimed as the first large-scale exhibition on the concept, the museum attempted to translate its underlying arguments into three-dimensional space. Viewing exhibitions as an assemblage of display technologies, objects and texts, the intention is to examine how the concept materialises in the exhibition space. The findings outline three different versions of the Anthropocene: understanding the Anthropocene as a history, experiencing the Anthropocene through spatial exploration and the concept as a tool to catch slippages. Locating three versions in a single exhibition reveals the complexity of the Anthropocene as a framework for museums and also highlights the possibility of addressing it in different ways simultaneously.*

Keywords: Anthropocene, museum exhibitions, technologies of presentation, environmental issues, exhibition analysis.

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I am standing in a square on the Museuminsel in Munich, Germany. It is a sunny day in early September. Buildings surround this square, and facing me is the entrance to the main building of the Deutsches Museum. On either side, buildings run parallel to the back, where you find the museum's library and research facilities. I hold a map of the main building, inviting me to 'experience the fascination of science and technology'. It unfolds to an overview of the seven levels open for visitors, a map of the many different sections, permanent and temporary exhibitions, installations, labs, and observatories. It is partially under construction, with the latest changes the museum undergoes. Its history is full of transformation stories, from surviving the Second World War to the much less dramatic effects of a growing collection, new exhibitions, and construction of extensions to the museum. Some exhibitions trace back to the early twentieth century, while other parts are more recent and have a shorter lifespan.

I travelled here to see the temporary exhibition Welcome to the Anthropocene: The Earth in our Hands, which opened in late 2014, and here I am standing only a few days before the exhibit closes, excited to begin fieldwork for my doctoral research. I am exploring the museum and this exhibition in particular. The entrance is on the ground floor of a circular tower in the middle of the facade, with either side parallel to the other. It stretches six floors up, decorated with stylised columns, with windows and friezes in between. It has a familiar neo-classical effect with its reformulations of classical architectural forms, not a big surprise for the more-than-a-century-old museum. I enter and make my way through the many levels and sections of the history of science and technology until I finally enter the Anthropocene exhibition.

The Anthropocene is a geological concept proposing that Earth has entered a new geological epoch, a period driven by the impact of human activity on the planet. While the decisive influence humans have had on the state, dynamics and future of the planet are uncontested, the Anthropocene is highly debated. Currently, there is no consensus on the temporal scope of it, and deliberations have moved from a purely chronostratigraphic context to a more holistic approach to anthropogenic impact (Pálsson *et al.* 2013; Lewis & Maslin 2015; Waters *et al.* 2016).

In recent years, museums have mobilised the Anthropocene to frame their engagement with the global environmental crisis.[1] This article examines the exhibition *Welcome to the Anthropocene: The Earth in our Hands,* which was on display at the Deutsches Museum from 2014–2016. Proclaimed as the first large-scale museum exhibition on the Anthropocene, it is an important case to study how the concept materialises in an exhibition space. What kind of a framework is the Anthropocene for museums, and how does it enable museums to take on the challenging, and important, task of presenting the interconnectedness of culture and nature in times of rapid, human-induced planetary change?

The exhibition was made in collaboration between the museum and the Rachel Carson Center for Environment and Society to explore the broadly conceptualised framework and its potential to rethink the relations between nature and culture (Trischler 2013). The museum became an experimental platform where the collaborators attempted to grasp the significance of the framework and translate its underlying arguments into an exhibition space. In this article, I will examine how the concept appears in the exhibition. What kinds of methods, media and technologies does the Deutsches Museum enact to realise this framework in a three-dimensional space, and how do the underlying arguments materialise?

Exhibitions are spaces where complex interplays of displays, texts and objects are assembled by the museum and performed by the visitor encountering the exhibition. What kind of an Anthropocene emerges through that encounter? In this article, I will reveal three different versions, or materialisations, of the Anthropocene at the Deutsches Museum. The three versions are described through impressions, combining the aims and conceptualisation of the museum and its curators, my own exploration of the exhibition and the literature on the Anthropocene.

The Anthropocene as an innovative framework

Museums are increasingly committing their resources to raising awareness and fostering greater knowledge and understanding about the state of the planet and the vast impact

human activity has had on the environment. It has been argued that there is a need to go beyond scientific and economic concerns as the dominant emphasis in climate change governance and look to community engagements and the social and cultural contexts of human-induced planetary changes (Cameron & Neilson 2015). Museums have begun to experiment more with affective responses to the issue, opening up to creative approaches and reflection on the cultural implications of climate change (Newell *et al.* 2017). Furthermore, the Anthropocene has been mobilised as a framework to engage with cultural and natural entanglements. While climate change is one of the most prominent aspects of human impact, the Anthropocene has been enacted in order to think and act cohesively regarding the multifarious impact of human activity on the planet (Koster 2016; Dorfman *et al.* 2018).

Helmuth Trischler, one of the Rachel Carson Center's directors, argued that for the environmental humanities, the Anthropocene is "an innovative and broadly conceptualised framework to rethink the relation between nature and culture, environment and society" (Trischler 2013:6). The centre had already joined forces with Haus der Kulturen der Welt in Berlin, which ran a two-year *Anthropocene Project* from 2013 to 2014. It was a cross-disciplinary platform for developing new models for culture, asserting that traditional notions of nature are out of date (Haus der Kulturen der Welt 2018). The two collaborating institutions behind the Deutsches Museum exhibition already had a shared history, as the museum had worked with Munich's Ludwig-Maximilians-Universität to establish the Rachel Carson Center in 2009. Since then, the research centre has assumed a leading role in research and education in the field of environmental humanities (Rachel Carson Center 2017).

Welcome to the Anthropocene: The Earth in our Hands was initiated by the centre as a form of public outreach of its agenda to advance research on the interconnectedness of humans and nature (Trischler 2013; Heckl 2015). As a result, the curatorial team have written extensively about the making of the exhibition, its conception, goals and practicalities in particular. This has appeared in a number of articles and chapters in publications about museums' futures and environmental issues (Möllers 2013; Robin et al. 2014; Keogh & Möllers 2015; Robin et al. 2017). In addition, the museum created an extensive catalogue for the exhibition along with a digital companion, a virtual exhibition accessible on the Environment and Society portal, which is a website run by the Rachel Carson Center (Möllers 2014; Möllers et al. 2015). Another version of the exhibition can be found at the Google Arts & Culture webpage (Google Arts & Culture 2019). This amount of material about a single exhibition is unique, making this specific exhibition highly visible in the literature on museums and environmental issues, and reiterating the importance of this first large-scale attempt to tackle the Anthropocene as a museum topic.

Already in 2013, the year before the opening, Nina Möllers, who led the curatorial team, wrote about the challenges and possibilities of "translating a theoretical concept and its underlying arguments into an exhibition space". While the concept of the Anthropocene challenges linear histories of progress and traditional categorisation, she argued that the exhibition space provides an interesting platform to mix categories and narratives by creating spatial relations (Möllers 2013:58–59).

An important part of conceptualising the

exhibition was to inform visitors about the Anthropocene, introducing an integrative framework for nature, culture, technology and society (Keogh & Möllers 2015). This posed challenges for the curatorial team. How to present the holistic and reflective concept in "an open-ended format" highlighting the connections and processes of a range of environmental problems across temporal and spatial scales? The "openness of the Anthropocene" posed another challenge. The ongoing debate on the concept's significance and temporal scope makes it difficult to provide an "assurance of certainty". Therefore, the concept challenges the foundational character of museums as communicators of knowledge. Dealing with these challenges, the aim was to provide "a unique opportunity" to experience the Anthropocene (Robin *et al.* 2014:212), creating a space for "free thinking, discussion and the visualisation of the Anthropocene" (Keogh & Möllers 2015).

According to the curators, the exhibition fits well with the emphasis and established interests of the Deutsches Museum, where the overlaps of sciences, technologies and cultural contexts are embraced (Möllers 2013). From the beginning, the museum's goal has been to communicate the importance of achievements in science and technology, to "foster greater acceptance for it among the general public" (Füssl 2010:XIV), and to elevate the status of technological inventions on par with "cultural and artistic masterworks" (Keogh & Möllers 2015:82). Western museums of science and technology have created stories of technological progress, signalling "the triumph of industrial development and innovation" (Priday *et al.* 2015:113). In the case of the Deutsches Museum, technological inventions have been presented in histories of linear development, with "masterpieces" considered as links in a chain of ever-improving achievements (Keogh & Möllers 2015). Today, the museum's mission still echoes the original role of displaying and experiencing technology, where it is supposed to ground its importance by exhibiting unique masterpieces and enabling history to inspire people to shape the future of science and technology (Deutsches Museum 2018).

In their review of the exhibition, Finn Arne Jørgensen and Dolly Jørgensen (2016) call attention to how the museum chose to display the Anthropocene as a history of technology. While it seems appropriate for a museum of science and technology to emphasise the role technology has played in the development of the concept, they argued that the exhibition overlooked critiques of capitalism and questions of environmental injustice in the geological epoch.

Drawing from the challenges of integrating nature, culture, technology and society where the aim was to enable visitors to experience the open-ended framework of the Anthropocene, I want to turn my attention to how the 'translation' of the concept is mediated in the exhibition space. What kind of methods, techniques, and display technologies does the museum employ in this spatial exploration? What versions of the Anthropocene appear when engaging with the materialities of the exhibition?

Encountering a museum exhibition

Anders Ekström (2019) has argued that exhibitions are spaces defined and practised by the "pervasive presence of media". He states that exhibitions are a form of "walk-in media" where visitors walk into an "ensemble of visual and participatory techniques", becoming part of the performance in the exhibition and creating the knowledge (Ekström 2019:17). While this

is in line with museological perspectives calling attention to the potential and actual impact of material things in museums (Hoskins 2006; Dudley 2010), Ekström's assertions highlight the numerous techniques and mediated impacts in the exhibition space. To understand how museums craft the knowledge they seek to represent, it is important to look at the "technologies of presentation", drawing attention to the importance of establishing how components work together, complementing and reinforcing each other in an exhibition (Moser 2010:23).

Brita Brenna (2014) has argued that museums craft particular versions of nature and/or culture with material-semiotic actors, invoking Donna Haraway's notions of the world as an active entity. According to Haraway "objects of knowledge" are "material-semiotic generative nodes" crafting meaning through interaction (Haraway 1988:595). Brenna examines the alleged self-evident work that glass cases perform in natural history museums, exposing them as "textualising technology". It is a form of technology that transforms museum objects from "unique specimens to illustrations" arranged behind glass and explained by writing labels (Brenna 2014:50). In this perspective, the museum objects are not the only material things that have potential and actual impacts; so do the crafted displays, labels, text and other technologies of presentation.

To examine the materialisation of the Anthropocene, there is a need to grasp the performance taking place in the exhibition. To do that, I want to position myself in the messy middle of things, as suggested by museologist Duncan Grewcock. Grewcock (2014) calls for using visiting as a method of museological research in a performative exploration that examines how representations are made and performed. Grewcock's deliberations enable me to engage with the materialities of the exhibition space, taking into account the examination of how representations are assembled and then performed by the visitor. To establish a better understanding of my own practice, thoughts and actions, I draw from Andrew Mathews' (2017) notion of walking, looking and wondering as practices which trace forms of human and non-human entanglements. In his research on the pine and chestnut forests of the Monti Pisani in Italy, he engaged in fieldwork methods from the spheres of natural history and historical ecology. These embodied practices pay attention to noticing and observing forms that emerge through enactments of multiple actors and their partial and historical relations. It is a method intended to multiply ways of thinking and acting by drawing attention to the "coemergence of material forms and linguistic terms", combining casual accounts of interactions and histories of the multiple actors involved (Mathews 2017:154). Each organism is an actor with its own agenda and behaviour in relation to the actions of other humans and non-humans, as well as living and non-living actors in the environment (Grove & Rackham 2003). What Mathews proposes is not about describing relations between pre-given entities but noticing the emergence of "textures of particular interactions" which could emerge in different ways at a different time or place (Mathews 2017:153).

In this text, the practice of tracing coemerging forms through noticing, walking and wondering is adapted to explore the exhibition. Museum exhibitions are not natural ecologies, but the numerous material-semiotic actors in the exhibition space have a potential impact and establish partial and historical relations to other actors. The exhibition is a complex interplay of materialities, and by

cultivating attention in the way Mathews suggests, it provides a method for noticing the emergence of particular interactions in the exhibition space. It is a method to engage with an assemblage of display technologies transforming objects into an "ensemble of visual and participatory techniques" (Ekström 2019). The aim is to describe how the exhibition materialises the Anthropocene through the particular interactions of material-semiotic actors, technologies and techniques, and me.

I walked through the museum and the exhibition, exploring and encountering different technologies of presentation while writing notes, taking photographs, and thinking about emerging relations at that specific time. I contemplated my observations by engaging with the literature on the Anthropocene, my notes and photographs, online versions of the exhibition, the exhibition catalogue, and numerous texts written on the exhibition. All of this material contributed to strengthening my impressions, which are still firmly grounded in my walk through the exhibition.

What follows are descriptions of three impressions from the exhibition that are intended to reveal three different versions of the Anthropocene. While the intention is not to present the exhibition as a whole, each description starts with a short introduction (in italics) to position myself in the exhibition, followed by a more detailed impression of a particular interaction enacted and afforded by the ensemble of visual and participatory techniques that materialise the Anthropocene.

Wall of Anthropocenic Objects

On my way to the Anthropocene exhibition, I walked through a number of sections in the museum. It was a long walk; I marked parts of the museum I was interested in viewing on my map. I walked through a constructed mine, tracing the development of extraction technologies, and the section on Power Machinery, among others. I had a feeling that I would somehow be able to connect that to the exhibition I explicitly came to see. There was a connection, with posters here and there on walls and stands that both advertised the temporary exhibition and tied the permanent sections to it and comic strips about some of the objects telling stories of environmental concerns, addressing what was not included in the permanent displays.

Finally, when I entered the Anthropocene exhibition, I walked into a bright space with large windows on two sides, letting in daylight. Entering this bright area, I faced a cube-shaped grid-like assemblage of monitors playing multiple videos about the Anthropocene all at once. Right next to it were benches, books and a long curved bank full of paper flowers, made by the visitors, sticking out on the top. The flowers were messages to the future, an interesting participatory action maybe more fitting to engage with after walking through the exhibition. Close to it there was a free-standing wall, filled with interesting and aesthetically pleasing objects. I was intrigued by the design of the wall and the objects enclosed in this wall of anthropocenic objects.

In writing, the curators have described the first part of the exhibition as a comprehensive introduction to the geological hypothesis and the new framework (Keogh & Möllers 2015; Robin *et al.* 2017). The Wall of Anthropocenic Objects was a part of the introduction, made out of brown cardboard, about a metre thick, three metres tall and 20 metres wide. The wall crossed most of the space, not entirely from end to end but enough to block the view of the rest of the exhibition. The presence of the wall almost served as a warning sign, urging me to stop and read before proceeding further.

Fig. 1. The Wall of Anthropocenic Objects with an AEG refrigerator and a manual gas pump to the right. Paper flowers made by visitors in the foreground. Photo: Bergsveinn Þórsson.

The objects enclosed in the wall were mostly machines, lit up from within the wall and combined with labels, lines and drawings connecting the objects. The objects were all visible from one side and tightly fitted into the wall, giving the feeling that they had just been unearthed as fossil fragments from the geological layer of the Anthropocene. However, the objects were not recently discovered; they were assembled together from the museum's collection and selected to be on display as "prominent technological milestones" from several individual technological fields, as described in the catalogue (Trischler 2015:130). The wall displayed 18 objects in total, from the period of c. 1850 to 1984. Most of the objects could very well belong in different sections across the museum, never to meet. The exhibition brought them together in the wall, temporarily connected using labels, lines and drawings.

There was a starting point, a specific beginning right in the middle of the wall: a steam engine from England, the oldest object in the wall. Despite being over 150 years old, the steam engine did not look worn at all, the black steel framework was without rust, and the pillars supporting the turning wheel joined together in a gothic style arch. The label right next to it described it as "the driving force behind the industrialisation". There is a connection, not mentioned in the exhibition but traced in a text by the curators, to Paul Crutzen's (2002) initial proposal for

Fig. 2. The steam engine in the middle of the Wall of Anthropocenic Objects. Photo: Bergsveinn Þórsson.

the starting point of the Anthropocene, noting James Watt's invention of the steam engine in 1784 as a significant point linked to the growing emission of greenhouse gases.

The popularisation of the Anthropocene is most commonly traced to Paul Crutzen and Eugene Stoermer's (2000) article proposing it as the current geological epoch, in which they trace it back to the industrial revolution. While the current favourable starting point for the official recognition of the geological epoch is the atomic bomb tests of the mid-twentieth century (International Commission on Stratigraphy 2019), the coal-powered steam engine still remains an emblem of the industrial revolution, signifying the technological advancements to come.

The connection between coal and steam engines was neatly spelt out in a text next to the engine describing how it "made coal mining more lucrative and increased coal usage". Quickly moving from that, the text emphasised the impetus of mechanisation in other fields, where the steam engine provided power for increased productivity. Strengthening that assertion, lines connected the engine and the other technological objects, emphasising relations focusing on mechanisation and acceleration.

Earlier on my walk through the museum, I came across another steam engine at the Power Machinery section, which looked very similar only much bigger. It was positioned in a dome-shaped space, almost halfway through the section that displayed the evolution of power machinery. The permanent exhibition has been a part of the museum since 1906. It is a display presenting a chronological order of technological inventions in a forward march from past to near present. For me, it was a familiar arrangement in which the steam engine was a link in a chain of evolution from muscle power to jet engines. The partial relations that emerged in the Power Machinery section between people, machines, texts and architecture reinforced the steam engine as a masterpiece, a symbol of human ingenuity.

The Wall of Anthropocenic Objects enacted different relations compared to the Power Machinery section. The wall presented a selection of "technological milestones" where the steam engine related to increased concentration of carbon dioxide in the atmosphere and rapid development in other fields, leading to mass production, resource

Fig. 3. The steam engine in the Power Machinery section of the Deutsches Museum. Photo: Bergsveinn Þórsson.

depletion and electronic waste. The relations to environmental issues challenge the story of progress, focusing on the heavy environmental price paid for technological progress. The wall enacts museum objects that have historical relations to collecting and display practices at the museum. The objects spark curiosity, look unique, are aesthetically pleasing, and do not immediately connect to the statements on mass-produced telecommunication devices or the problems concerning electronic waste. They simply do not look like mass-produced devices or waste. They bear with them histories of achievements instead of environmental concerns.

As part of the comprehensive introduction, the wall materialises the proposed geological epoch and assembles the history of the Anthropocene. While the concepts starting point is still up for debate, the wall creates particular interactions of texts, lines, drawings, and historical masterpieces. The particular interactions crafted by the wall are in tension with the historical relations of the steam engine. While the object is regarded an emblem of human ingenuity and a technological milestone in the industrialisation of Western society, it is presented as the starting point of an era of rapid planetary change, environmental issues and uncertainty.

Six Tectonic Plates

On the other side of the wall, the remaining two-thirds of the exhibition space mostly consisted of six slightly elevated platforms on the floor. They were positioned with some distance between each other, allowing me to walk between and around them. Walking to and from the platforms, I saw many different historical objects, artworks, plants, stuffed animals, and readymade things that gave me an impression of the complex entanglements of technology, humans, non-humans and the environment. The displays gave me a sense of the current situation, or a sense of what is happening now in the world. I was standing in the Anthropocene, walking between tectonic plates and exploring the current geological epoch in which I belong.

The six platforms were described as "puzzle pieces" in the exhibition catalogue, symbolically representing Earth's tectonic plates (Möllers 2015:125). Each tectonic plate presented a specific theme: Evolution, Urbanisation, Mobility, Food, Nature and Man

Fig. 4. The plate of Urbanisation with Guernica by Victor Sonna to the left. Photo: Bergsveinn Þórsson.

and Machines. In the centre of each platform, there was an installation exemplifying the designated theme. On the sides were display cases and podiums in the shape of stylised mountain ranges, blue and white coloured, with sharp peaks popping up in various places around the space. The mountain ranges were decorated with stylised geological layers, enacting the feeling of standing in the midst of the geological epoch.

Engaging with the tectonic plates was quite different from facing the wall. The six plates covered much more of the exhibition space; there were no instructions on how to walk through it, and no designated starting point or specific order in which to approach the themes. The plates presented a wide range of objects, from historical objects, artworks, photographs, texts and labels to interactive media. The platforms were short enough not to block the view of the other platforms. I could see glimpses of all of them at the same time, so it felt like a landscape view of the Anthropocene, tempting me to visit whatever caught my attention and moving freely from one tectonic plate to the other. According to the catalogue, an important factor in the design of the plates was the possibility of moving between them, "allowing visitors to choose their own individual path" (Möllers 2015:125). This emphasis fitted well with the curatorial team's descriptions, providing the visitor with an opportunity to experience the Anthropocene.

In choosing my own individual path, numerous objects caught my attention, distinctive artworks like Victor Sonna's *Guernica,* a strange-looking bicycle made out

of scraps of metals and Margaret and Christine Wertheim's *Crochet Coral Reef*. There were also a few fragments of roofing tiles and tableware from Hiroshima, collected after the atomic bomb explosion in 1945, and plants growing in two shopping carts.

It was not the potential impact of these individual objects that governed the particular interaction of the Tectonic Plates. Rather, it was how the objects entangled in multiple temporal and spatial scales, together with other objects, stories, installations and displays. The particular interaction that emerged was afforded by the design and layout of the platforms and the diverse objects combined. The ensemble of visual and participatory techniques in this part of the exhibition crafted a version of the Anthropocene which highlighted spatial exploration. I moved between the plates, exploring the Anthropocene in a way similar to what anthropologist Anna Tsing (2015) has referred to as the "promising contradictions" of the geological epoch. She argues that engaging with the concept provides the opportunity to explore the multiplicity of temporalities and the ongoing becoming of human and nonhuman entanglements (Tsing 2015:19). More scholars have as well suggested that the practice of "noticing the world around us" enables exploration of the world's current situation of rapid changes and uncertain futures (Swanson et al. 2017).

The Tectonic Plates created a different version of the Anthropocene compared to the historical

Fig. 5. Fohr Satellite Reef, from the Crochet Coral Reef project by Christine and Margaret Wertheim and the Institute For Figuring. Photo: Deutches Museum.

emphasis of the Wall of Anthropocenic Objects. It was not about when the geological epoch began; the Tectonic Plates invited me to explore the vast impact human activity has had on the planet by walking between the plates and exploring the planet's current geological epoch. The plates created a sense of complexity and vastness that breaks up the confinement of the wall, providing a spatial platform to explore the complexities of the Anthropocene. The categories, diverse artworks and historical objects, installations, labels and displays allowed me to travel across various scales of time and space that might conflict or even contradict each other.

A Monkey Wrench

Having spent a lot of time exploring the Tectonic Plates, I eventually noticed a few display cases at the other end of the exhibition. Not part of any of the six themes, these displays made up the Cabinet of Curiosities for the Anthropocene. Among the objects in the displays was a monkey wrench that hung on a dark grey wall. A small label was positioned below the object, explaining that it was "often in the hands of underpaid labourers" and "has helped build the modern world". Seeing this tool, I began to wonder who the people were that assembled the steam engine, or operated and repaired all the different machines, technologies and inventions presented in the exhibition. Who are the people that helped build the modern world? And where are they exactly?

I came across the Monkey Wrench in one corner of the exhibition, almost hidden away in the opposite end of the entrance. With the simple interactions between the object and the label, the following questions were posed: "To what end should we use our tools?" and "Who should do this work?" I asked myself if this might have been a tool that workers used to assemble the steam engine and keep it running. Who is doing the work, the machines or the labourers?

The Cabinet of Curiosities for the Anthropocene was not originally a part of the exhibition; it was added after the exhibition opened. It was not featured in the extensive catalogue or any of the written accounts made by the curatorial team. The display was developed from a project called Anthropocene Slam, which was later turned into the book *Future Remains: A Cabinet of Curiosities for the Anthropocene* (Robin *et al.* 2017; Mitman *et al.* 2018). The Anthropocene Slam invited scholars and artists to perform in "the responsive, creative spirit of the slam", encouraging "freestyle conversation, debate and reflection" on what kind of objects could make visible the uneven interplay of heterogeneous material-semiotic actors shaping the relationship among human and non-human beings. (Mitman *et al.* 2018:x). The result of the slam was 15 objects, dubbed remains, that each, in their own way, presented and challenged the limits of the conceptual framework, making the visitor (or the reader in the case of the book) wonder about what "human history is made of" (Mitman *et al.* 2018:xiii).

At the Deutsches Museum, the Monkey Wrench was boiled down to the object and about eighty words on a label. The remains of a slam performance by Daegan Miller (2018) are traceable through the display at the exhibition and further in the publication. The book includes a six-page exploration of possibilities, where Miller describes holding the monkey wrench in his hand, a clumsy and imprecise tool with limited adjustability, and thinking about how to "monkeywrench" the Anthropocene. Despite the tools' imprecision, Miller argues it manages to catch slippages

Fig. 6. The Monkey Wrench along with a fecal transplant and a concrete slab titled Liquid Rock. The objects are part of the Cabinet of Curiosities in the Anthropocene. Photo: Bergsveinn Þórsson.

of others, such as "how the Anthropocene calls attention to what humans have done to the world while ignoring what we've done to each other" (Miller 2018:144–147). Was the Monkey Wrench at the Deutsches Museum catching that slippage in the exhibition? This addition of the curiosity cabinet after the initial opening of the exhibition reminded me of the ongoing work on the conceptual framework. Presented as a tool for assembling and disassembling technology, it initiated in me an imaginative exploration that could have ended up destabilising the thematic approach, the exploratory experience, or the historical account presented at the exhibition. What happens if I start "monkeywrenching" the steam engine?

The Cabinet of Curiosities for the Anthropocene, with The Monkey Wrench in the forefront, enacted another version of the Anthropocene. Perhaps the proposed geological epoch is not about rearranging historical objects in an attempt to rewrite the history of technology, with the added environmental concerns, or even about noticing the world around me and exploring the vast and complex landscape of entangled temporal and spatial scales.

My encounter with the object sparked questions about slippages of other historical or exploratory versions. As the literature on the Anthropocene shows, the concept itself and its diverse meanings are full of slippages. The debate is one form of "monkeywrenching" as the proposal of Heather Davis and Zoe Todd (2017) shows. In an effort to decolonise the Anthropocene, they propose pushing the starting date back to the seventeenth century to implicate histories of colonialism, the unequal power relationship between European settlers and indigenous populations, and the impacts of globalised trade, as opposed to the more traditional perspectives of the technological advancements of the industrial revolution (Davis & Todd 2017). Furthermore, Christophe Bonneuil (2015) argues that there is a need to disseminate complex versions of histories behind the collective actions of the human species, revealing the "socio-environmental" struggles of the past and present (Bonneuil 2015:23).

Just as Finn Arne Jørgensen and Dolly Jørgensen (2016) pointed out in their review, the issue of environmental injustice was not well covered in the exhibition. The presence

and impact of The Monkey Wrench, along with open-ended questions about the people and usages of technology materialised the Anthropocene as a tool to catch slippages. In this single object, the coemergence of material form and linguistic terms briefly shifted the focus from the history of technology and nature towards what humans have done to each other.

Addressing multiple Anthropocenes simultaneously

One of the aims of the exhibition was to introduce an integrative framework for nature, culture, technology and society into a three-dimensional space. While it has been pointed out, and rightly criticised, that the exhibition drew mostly from the history of technology and the technological aspects of society to present the Anthropocene, my examination has focused on tracing the coemerging forms of different material-semiotic actors that enact different versions of the Anthropocene in the exhibition. The ongoing debate on the concepts' significance and temporal scope was seen as a challenge in which the lack of certainty resulted in experimental approaches, making the exhibition encounter no less about the experience than understanding.

Even now, four years after the exhibition ended, it does not seem appropriate to talk about a singular term but rather the Anthropocenes in multiple. With the three versions of the Anthropocene presented in this article, the underlying arguments that materialised in the exhibition were traced to different propositions of the concept's significance. Each of the impressions described the coemergence of material things and conceptual discourses. The wall integrated environmental concerns to a familiar presentation of the history of technology using objects from the museum's collection. The history of the Anthropocene presented in the Wall of Anthropocene Objects related to Paul Crutzen's postulations on the industrial revolution as the point of origin. The Tectonic Plates brought together a wide range of objects, artworks, texts and categories in a display design enacting spatialisation as a form of representational strategy. My impression associated that with the emphasis of Anna Tsing and other scholars drawing attention to exploring the contradictions of spatial and temporal entanglements embedded in the Anthropocene. The Cabinet of Curiosities for the Anthropocene presented new objects, in an attempt to reveal new patterns, or, in the case of the Monkey Wrench, to catch slippages. "Monkeywrenching" the Anthropocene has been a continuous work by many scholars in an attempt to criticise many assumptions about the proposed geological epoch. Heather Davis and Zoe Todd highlight histories of colonialism providing complex histories behind the assumption of a collective human impact.

The three versions accentuate different framings of the concept: as something to understand, experience or utilise. The multiple Anthropocenes were presented simultaneously but with varied magnitude. The Tectonic Plates corresponded well with the curators' intent to create a space to experience the open-endedness of the Anthropocene, and covered a large part of the exhibition space. The Wall of Anthropocenic Objects introduced the concept to the visitor and framed the Anthropocene as more restraint. Furthermore, the Monkey Wrench's potential to catch slippages did not feature substantially in other parts of the exhibition.

The performative exploration of the exhibition highlighted the impact of technologies

of presentation, and the role objects, displays, labels and texts play in materialising the conceptual framework in a three-dimensional space. Describing three impressions of particular interactions involving diverse material-semiotic actors reveals the complexity of the Anthropocene as a framework for museums. At the same time, it underlines the particularities of museum spaces as a medium to disseminate understanding and experience and the possibility of addressing the Anthropocene in different ways simultaneously.

Notes

1. The Anthropocene has appeared as a topic of temporary and permanent exhibitions in museums and cultural institutions: *The Anthropocene Project,* a two-year research project, 2013–2014, at the Haus der Kulturen Welz in Berlin, Germany; *Objektif Terre,* 2016, at the Musée de la Nature in Sion, Valais, Switzerland; The Anthropocene, a permanent display at the Museu do Amanhã, Rio de Janeiro, Brazil; *We are Nature: Living in the Anthropocene,* 2017, at the Carnegie Museum of Natural History, Pittsburgh USA; *Anthropocene,* 2018, at the Art Gallery of Ontario and National Gallery of Canada.

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