Slowing Time in the Museum in a Period of Rapid Extinction

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Introduction

The long, dimly-lit Threatened and Extinct Species Gallery extends before the visitor at the Muséum national d'Histoire naturelle, Paris. The majestic gallery stretches above the darkness with clerestory windows topped by an elegant arched ceiling. The natural history museum as 'Cathedral of Science' (Sheets-Pyenson 1988; Holmes 2019) takes a sombre tone in this room. The cases in the walls are clothed in black, punctuated by ghostly, illuminated animal and plant forms. These are remains of species which have already become extinct or are in imminent danger of becoming so. The darkness invites mourning, an appropriate response to the vulnerable and lost animals on display (van Dooren 2014; O'Key 2021).

Rising up in the middle of the room, so tall as to cover the upper windows, stands a magnificent clock. The royal clockmaker Robert Robin had constructed this monumental clock in 1785 for the French Queen Marie-Antoinette. She often stayed in the Petit Trianon palace in the grounds of Versailles and wanted to have a clock in the chapel to show 'Versailles time'. After the royal couple were deposed, the clock was seized by the Republic and placed in the Zoological Gallery of the Museum. The clock was originally situated within the Bird Gallery where it was positioned among the resplendent brightly coloured tropical birds (Cap 1854). When the museum was renovated in 1994, it took on a new role as timepiece for the Threatened and Extinct Species Gallery (Figure 1).

Figure 1. Threatened and Extinct Species Gallery*, Muséum national d'Histoire naturelle, Paris. Photograph: Dolly Jørgensen, 2018.*

Museum & Society, July 2022. 20(1) 1-12 ISSN 1479-8360

The placement of this monumental clock in this particular room is poignant. The clock behind glass is a physical reminder of the dramatic and violent end of a dynasty; the bodies behind glass are reminders of the dramatic and violent end of nonhuman bloodlines. Extinction interrupts the processes of time, death, and generations, as argued by Rose, van Dooren, and Chrulew (2017). Extinction is about death, both the death of a type and the death of specific individuals. Through death, generations and lineages produced over evolutionary time are extinguished. Thinking through extinction means recognizing that past, present, and future co-exist. Time is of the essence in this room. Philosopher Michelle Bastian has argued that

> in the current context of multiple ecological crises, time needs to be more clearly understood, not as a quantitative measurement, but as a powerful social tool for producing, managing, and/or undermining various understandings of who or what is in relation with other things or beings (Bastian 2012: 25).

Clocks are not objective measuring devices that give neutral information about the present. Rather, a clock, in Bastian's definition, 'signals change in order for its users to maintain an awareness of, and thus be able to coordinate themselves with, what is significant to them' (Bastian 2012: 31). A clock reminds us to pay attention to the important things. While this eighteenth century clock continues to chime the hour, in this room surrounded by species for whom time has stopped, it could signal an attentiveness to the Long Now (Robin 2020). The Long Now is about reorienting our time horizons away from the short-term thinking prevalent in a capital-driven society to multi-generational, even evolutionary or planetary scales of time.

Museums have always offered material representations of elusive, conceptual constructs such as culture and civilization, identity, nation, and historical progress. Now is the time to curate what Rob Nixon (2011) has termed 'slow violence'. Gradual large-scale phenomena such as a changing climate and environment, in which perpetrator and victim do not meet in time or space, are difficult to understand, difficult to convey, and difficult to address (Morten 2013). They are mostly too 'slow' to be covered by the news. We need new didactic approaches to aid thinking about protracted environmental disasters, and extinction in particular. We propose that museums have an opportunity to slow time for their visitors in a period of rapid extinction.

Extinction, as well as human-induced environmental change in general, is happening at a frighteningly fast pace. A recent global joint scientific assessment suggests that around a million animal and plant species are currently threatened with extinction because of human activity, including land change, direct exploitation, pollution, invasive species movement, and climate change (IPBES 2019). The rate of extinction is tens to hundreds of times higher than in the past ten million years and, for many species, irrevocable ecological damage has already doomed them to extinction on the geologically short-term (IPBES 2019).

Whole ecosystems are collapsing with the loss of biodiversity, with massive consequences for life and the physics of the planet. Biodiversity loss and its twin, climate change, often operate in intellectual silos far from the public eye. Yet people whose expertise is not in biology also care about extinction. For example, some take a professional interest in the effects of collapsing ecosystems on financial systems: one investment house calculated that one in five national economies are threatened by extinctions and biodiversity loss and that the value of biodiversity is more than half of global GDP[1]. This demonstrates the need for spaces for conversations that are open to all interpretations of major changes on society and individuals, as well as the way human behaviours affect natural systems. An emotional or passionate response to biodiversity loss, including sadness and grief, may motivate action more than a financial or scientific reason for some (Jørgensen 2019). Where systems are at a breaking point, acknowledgement of this is needed.

Museums can contribute to reducing extinction as a scientific phenomenon. Natural sciences highlight certain understandings, and they work with collections to provide knowledge of species essential to understanding their extinction. But museums can offer a second string to this bow. They can offer ways to make people think *about* and *with* extinction. Audra Mitchell has astutely observed that 'extinction does not only result in the loss of species and biodiversity; it also proliferates, produces and transforms them' (Mitchell 2016: 32). From the human perspective, extinction is not the end for the dinosaur, dodo, thylacine, or passenger

pigeon because we continue to reproduce them in our cultural discourses, from scientific papers to children's storybooks to museum exhibits. These concrete manifestations of the extinct can make extinction more relatable and acknowledgeable (Mitchell 2016: 38).

Emerging extinction stories are about losing things that were so small that we never knew we had them. Singer-songwriter Joni Mitchell croons in her elegiac song, *Big Yellow Taxi*, 'you don't know what you've got till it's gone'. She invokes the 'Tree Museum', where you pay a dollar-and-a-half 'just to see 'em', as a space for grief and encounter when development overwhelms the places and the species that we never counted or noticed until it was too late. The museum can be the place for making extinction stories come alive. Because they bring together public audiences and biologists, climate scientists, exhibition designers and curators, museums have a unique capacity to tell extinction tales at both microscopic and planetary levels, to consider the biological, the geological and the moral in a single gallery. Scaling up and down is something museums do well, and do already.

Museums have used their capacity to scale to engage with the concept of the Anthropocene (Oliveira *et al*. 2020; Þórsson 2020) and to grapple with the complex *predicament* of climate change (Cameron and Neilson 2015; Newell *et al*. 2017b; Thomas *et al*. 2020). Rather than portraying climate change as a problem to 'solve', they can help people understand how to cope with uncertainty (Muir *et al*. 2020). Indeed, there is an opportunity to develop ideas about how to make choices that can create a 'harsh but liveable Anthropocene' rather than an unmitigated disaster (Thomas *et al*. 2020: 172). For example, the first large-scale temporary exhibit devoted to the Anthropocene concept, *Welcome to the Anthropocene* at Deutsches Museum in Munich (2014-16), focused on creating a platform to think, reflect, and discuss the global nature of anthropogenic change as a condition that breaks down nature-culture divisions (Robin *et al*. 2014). The focus was on the merging of technological and planetary change as a condition we have to live with (Jørgensen and Jørgensen 2016). Another example is Museon's *One Planet* exhibition, which includes a piece of plastiglomerate, a hardened material from plastic waste fused with rock, as a sign of 'the huge impact human activity has had on the planet in an incredibly short time within a deep time context' (Þórsson 2018: 47). This assemblage of material connects deep past, present, and future as a geological marker. Curatorial choices can foreground extinction as a past, present, and future human-induced crisis, encouraging reflection, as well as call for future action to counter extinction trends.

Slowing time in exhibitions

Museums offer not just education and entertainment, but also galleries of active reflection. They are places that enrich the soul as well as the mind. They house amazing objects and also exhibit morally complex stories. Their 'slow media' delivery is ideal for translating global predicaments into personal experience through contemplation (Newell *et al*. 2017a: 5). Museum narratives are inexorably woven to time. As Paul Huebener (2020: 2) observed, 'Every narrative tries, in some sense to socialize us into a particular form of cultural time, to draw us into a set of assumptions about how we should understand or experience time'. Museum narratives can be vehicles for thinking through multiple timescales to gain 'critical temporary literacy', as Huebener (2020: 24) terms it. Museum galleries are natural places to grieve for what we have lost, and to rethink how these losses might be employed as starting points for rethinking better futures.

Marla Berns, director of the Fowler Museum at the University of California, has reflected about the exhibition *From the Verandah: Art, Buddhism, Presence*, which provided 'conditions for the cultivation of awareness and for heightened aesthetic contemplation' (Berns 2006: 303). A key element of this was 'leaving space for visitors to bring their own life experiences to what they encounter, so that visitors can acknowledge the validity of their feelings and thoughts' (Berns 2006: 302). Rather than designing the exhibition to focus on *learning about* Buddhism, it focused instead on *being with* Buddhism and the individual's own recognition of possibilities. In her reflections on the same project, Mary Jane Jacob argued that, in addition to making space, the exhibit needed to make time: viewers needed to be provided time for being with their own thoughts, which she labelled 'the space of time' (Jacob 2006: 285). Creating the space of time is particularly necessary when dealing with multi-temporal environmental changes such as extinction that can seem too overwhelming to process.

Rather than telling extinction stories with big numbers as scientific reports typically do, museums can tune in to other, more personal scales. Acknowledging grief is the first part of managing it, of living with loss. The idea of the 'endling', the last animal of its species, is particularly elegiac (Jørgensen 2017). It provides a focus for mourning that can work as a proxy for grieving a whole species (Barnett 2019). Museums have used endling animals like Martha, the last passenger pigeon, whose final years were spent in the Cincinnati Zoological Gardens, and the unnamed thylacine who died in the Hobart Zoo, to carry messages of biodiversity loss on both local and global scales (Jørgensen and Gladstone 2022). The dates of their deaths, 1 September 1914 and 7 September 1936 respectively, place these animals in human history, on human timescales, in a way that humans can feel their loss.

Deborah Rose uses the concept of 'shimmer', something she learned from Aboriginal people of the Victoria River region of Australia's Northern Territory, to frame ideas that cross over between people and animals, between the living and the no-longer-living, between the present and the ancestors. She likens it to Isabelle Stengers' philosophical strategy of 'reciprocal capture', which enables 'new immanent modes of existence in which neither entity transcends the other or forces the other to bow down' (Rose 2017: 51). The well-established museum device of Cabinets of Curiosity or 'Wonder Rooms' (*Wunderkammer*) are ideal places for this type of complex encounter (Robin 2018). They can work as places of 'transformation not absorption' in Rose's distinction, where 'different ways of being and doing find interesting things to do together' (Rose 2017: 51).

Museums can offer unique encounters with physical remains of species that no longer exist through practices that change time. Taxidermy has long been a crucial tool of science and is the focus of most exhibitions in Natural History museums. Through taxidermy, the decomposition of the animal body is slowed and those remnants may be the last that remain of a species. However, we should not assume that slowing down material time means that the animals and their meaning are fixed (Samuelsson 2018) or that their physical form is static (Patchett and Foster 2008).

These bodies can be woven into many narrative strands as they are used in different ways, including scientific, historic, and artistic (Bezan 2019). Taxidermized animals in museum displays are important to exploring big ideas like extinction and the Great Acceleration of change in the Anthropocene, although museums have not always used them in ways that promote multispecies justice (Guasco 2021). In the twenty-first century, taxidermized animals have found their way into 'high art' (Robin 2009). Through a process not unlike 'shimmer', repurposed taxidermies move away from animals as objects for Linnaean classification to ethical subjects whose passing is mourned. As taxidermy has become high art in and beyond museums, it speaks to a new ethics for non-human others. The transition of taxidermy specimen objects out of natural history and into art installation reflects the changing nature of museums, and how the distinctions between art and environment museums blur in times of 'unnatural' history. As taxidermies become *objets d'art*, they transform the human encounter with ancestral animals, and the aims and objectives of the institutions that host them. Taxidermy is 'vivacious', weaving the past – a time when the individual was alive – into the present, and invites us to articulate alternative futures (Desmond 2019).

Museum encounters with the taxidermy of extinct animals are thus encounters with time, a weaving together of past, present, and future. Rather than thinking of exhibitions with these animals as ways of *learning about* extinction, they can be reformulated as *being with* extinction. They offer the opportunity to encounter 'nature's broken clocks' (Huebener 2020) in the face of environmental crisis.

Synchronizing audience and ideas: playing with time

Slowing time in the museum is a didactic method to enable immersion in foreign worlds, other times and complex topics. Museums slow down the material world, and they slow down the audience. They are tools of 'synchronization', sites where common time is produced (Jordheim and Ytreberg 2021).

Slow only exists in relation to a pace that is perceived as normal, or fast. Considering the existence of multiple timescales (Jordheim 2014), there is no universal slow time; it differs from society to society, and from time to time. What *is* universal is that slow always means

less: a shorter distance or less volume in a given period of time. Fewer events, less actions. In the case of museums, slowness may be synonymous with fewer objects, fewer learning objectives, less texts and audio-visual input, less variety, less variation in media. Less to cover for visitors. More time to dive deeper and explore questions that otherwise disappear in the fireworks of actions, media and information. This seems like a renunciation of *Wunderkammer*, but in times of information overload and rapid change, it is precisely this 'less' that may lead to a greater sense of wonder.

Slowing time in the museum may also mean daring to choose time-consuming and less financially profitable solutions. Not to churn out hastily assembled temporary exhibitions, but to give curators, researchers, educators and designers time to create spaces for reflection and deep-level learning, foregoing exponentially increasing visitor numbers and investing in time for personal encounters, placing trust in the power of the narrative. Consequently, slow may also run in the face of the modern museum's 'business model', resulting in fewer visitors, fewer tickets, fewer reviews in the news, and less funding.

Calling for slow museum practices therefore not only raises awareness of the museum's institutional 'slowness' as a media; it opens a fundamental discussion about how museums should be operated, evaluated, and financed. Slowing time in the museum is about decoupling the relationship between exponential growth and success, and to disarray what Jennifer Rauch calls 'the bias toward "more-faster-better"' (Rauch 2018: 98). The challenge is that museums, constantly searching to keep the image of dust away, are part of societies in which acceleration and progress are perceived as synonymous. The 'faster' characterizes technological development, social exchange, everyday life and personal experience (Rosa 2013). Museums operate in this mantra of acceleration; they must show numbers and growth, and never stand still. In other words, slowness is the museums' great fear, but also their great opportunity.

The Jewish Museum Berlin opened the children's museum ANOHA in June 2021. This museum is all about immersion into one of mankind's oldest, yet still highly topical stories: the encounter of the biblical flood and Noah's ark that saved both animals and humans. Originally a Mesopotamian myth recorded in cuneiform on clay tablets, it was, in modified form, included in the Hebrew bible and is now extant across Judaism, Christianity and Islam. The story invites children to think about 'God and the World', diversity, responsibility, and sustainability (Jewish Museum Berlin 2021). Children are led to understand that the flood came about because people behaved incorrectly, and only we humans can create a new beginning.

In ANOHA, children aged 3-10 and their adult companions are invited to forget time and to immerse themselves in the story of the ark (Kleine-Engel and Rentzsch 2021). There are no films, no texts, no guided tours to be managed, but there is trained educational staff and a 2700m^2 playground for wonder, imagination, and encounters. The ANOHA ark is a round, wooden construction in an old storehouse. In the 4,000-year-old Mesopotamian tradition of the flood, the ark is described as circular, and according to exhibition director Ane Kleine-Engel, the round shape of the ark is also reminiscent of the Jewish understanding of time as spiral-shaped: everything repeats itself; everything comes back[2]. The visitors can come back to questions, doubts and ideas they have had before. Slow time is not necessarily linear.

In contrast to the Threatened and Extinct Species Gallery in Paris, there is no huge, sculptural clock in Berlin. The heart of the ark is 150 animal sculptures, from a 7cm long cockroach to a 3m tall mammoth. These animals are 150 opportunities to meet and reflect upon being different and co-existing; they are playmates and mirrors. Each animal is an upcycled work of art, which will certainly be remembered for a long time after a visit. Deep-level learning in ANOHA also means remembering the story of the threatened polar bear next time you see a shovel (Figure 2). The unusual material composition of the animals is impressive, and it is obvious that the production took a long time. The slow production of the exhibited objects demonstrates that every species is unique and valuable. Nature cannot be mass produced – it can't even be copied. There is just one nature. The slow upcycling process also makes clear that the children, with their own questions, enthusiasm, worries and ideas, are worth the investment of time. For the sake of children and the future of our planet it is worth moving into a slow time.

Figure 2: Upcycled polar bear in ANOHA. Photo: Yves Sucksdorff/ANOHA – Die Kinderwelt des Jüdischen Museums Berlin

Several animals in the museum invite you to consider the spectre of extinction. A few of them, like the smilodon and the mammoth, are already extinct. The polar bear is trapped in a man-made net. With the help of the children, however, this technology can become his salvation by being pulled to the ark. The bear's snout is made from a snow shovel; its back is a sledge. In this way it connects the human approach to snow and ice, misery and joy, but the eyes of wristwatches remind us that the climatic conditions are in times of change. The orangutan has space on its lap for small animals and can protect them. We learn: if an animal's habitat is lost, other species are threatened too.

One of the museum's most drastic curatorial measures is not exhibiting animal pairs. With both the myth and the biblical story in mind, and thinking of illustrated children's books or toys like Fisher-Price's ark, there are always pairs of animals and the assurance of reproduction. In Berlin, however, we found only one penguin, one cat, one polar bear. The possibilities for reproduction are gone. All species are vulnerable. Apart from this message, the variety of animal figures also invites us to think about multicultural societies, inclusion and different family structures. Extinction is just one of many topics that can be discussed and brought into play in Berlin. In ANOHA, slowing time in the museum means delving to the bottom of very different questions, each at their own pace. The rush of small children's feet does not contradict this concept.

In sum, museums already have the tools in place to slow time for their visitors and their collections. This much-needed change of pace can offer the opportunity for reflection and transformation while facing an ever-accelerating environmental crisis. Offering ways for

people to think *about* and *with* extinction may be museums' greatest contribution to addressing this real and present danger.

Exhibiting extinction as slow time speeds up

The articles in this thematic issue on Exhibiting Extinction are all grappling with the tension between fast environmental loss and taking the necessary time to reckon with extinction. The cases reveal how messy time can be, from tracing the complicated histories of specimens and artefacts to using exhibits as journeys 'walking back' in time or forward to the future.

The encounter with the body of the extinct is inherently time travel, as new modes of making are 'folding time' (Van Allen 2020). Miranda Cichy finds personal meaning in encountering study skins of the paradise parrot. She slows down to observe the details – a missing wing, handwritten tags, shimmering colours. Like many modern extinctions, the bird has been gone longer than it survived after entering the European knowledge system of description with a Latin binominal. In tracing specimens of the paradise parrot, Cichy offers a backroom encounter with paradise parrot bodies through history, empathy, and loss. Mourning in the encounter with an extinct specimen can facilitate a working through of culpability and action (Stark 2018). Adam Searle picks up on this thread in his analysis of countering loss through the institutionalization of the memory of the extinct Pyrenean ibex, also known as the bucardo. Extinction is situated in time and space – the bucardo *means* something to the local community of Torla, Spain as an endemic emblem of both geography and extinction – yet the timeline of extinction is muddled by the attempts to bring the species back using cloning. Cultivating care by being attentive to the lifeworlds of other beings (Van Dooren *et al*. 2016), especially dead ones, takes time.

While the bucardo's display home is close to its original habitat, most extinct animals on display do not follow that pattern. The many artefacts of extinction on display in European museums frequently came from 'othered' places. They have been acquired through colonial processes of environmental destruction and disruption, ripped from their original lifeworlds. Care has to be taken in narrating this violence for, as Rick De Vos has observed, 'the practice of recounting stories of extinction establishes spatial and temporal distance – a gap that shields the narratee from the extinct animal and the act of killing' (De Vos 2017: 8). Laura Bertens and Ann Marie Wilson show in their analysis of the extinct specimens in the Naturalis exhibit *Nature's Treasure Trove* that the problematic legacy of Dutch colonialism and collecting demands recognition. The extinct quagga and cape lion, along with the orangutang (which may be extinct soon), are on display as wonderous unique treasures that should instil national pride. Yet as Bertens and Wilson point out, the reason these specimens are priceless treasures is because of the irreparable loss of extinction – and this was in large part due to Dutch colonial practices. Complex social relations run through natural history taxidermic mounts (Alberti 2008). Time and space fold together in the *Wunderkammer* made new.

We should not think that these issues of extinction extended only to animals in the natural history museum. Johanna Parker shows how the discourse of extinction applied to colonial collectors of Australian Aboriginal remains. In the nineteenth century, the belief that Indigenous peoples were almost, if not already, extinct drove collectors to frame human remains as unique and curious specimens on a par with rare and extinct animals. Major ethnographic collections were justified by extinction discourses that distanced survivors from their ancestors. In Gitte Westergaard's analysis of the collection and display of Hawaiian royal cloaks called 'ahu'ula, she reveals a similarly underacknowledged link between ethnographic and natural history collections. The 'ahu'ula as significant cultural objects are also inherently witnesses to extinction: the characteristic yellow feathers of the capes came from Hawaiian honeycreepers, which are now extinct. Westergaard argues that the 'ahu'ula is a biocultural artefact that provides scope for 'storying extinction' (Bastian 2020) in cultural history settings.

Because extinction entangles the past, present, and future, museums can enrol participants in a process. Sarah Wade shows how incorporating slow crafts is a deliberate and caring form of responding to environmental crises. Knitting and crocheting are participatory practices that can bring art and science together in generative and playful forms. For example, the Deutsches Museum's *Welcome to the Anthropocene* exhibit used a massive collaborative crocheted coral reef as an 'ecological memorial' to reefs which are threatened under current environmental conditions (Möllers 2014). Although Wade is somewhat critical about the leisurely

pace of these 'slow crafts' as a response to rapid ecological change, such a meditative and quiet intervention might be precisely what is needed to communicate extinction and its act of silencing (Reinert 2018). As Isla Gladstone and colleagues make clear in their analysis of Bristol Museum and Art Gallery's *Extinction Voices*, silence can be empowering as a museum intervention. Not seeing and not hearing can create spaces and times for response.

Movement, deliberate and slow, is also a way to engage with the time of extinction. At La Brea Tar Pits, today's visitor walks into the Ice Age and yet is simultaneously in modern Los Angeles. Alison Laurence shows how physical and odorous proximity of the tar and the displays of extinct mammals integrated into the seeps create an affective encounter that plays with time. Her use of 'quick' for the living as a counterpoint to the extinct dead invokes the disjuncture of time: the dead are slowed down, the living sped up.

Exhibiting extinction is about playing with time. While all museums can evoke some element of time travel, standing in front of an animal covered with fur or feathers or scales that no longer exists anywhere except within a glass case is peering back in time and looking into our future. As the IPBES (2019) report makes clear, more and more species are destined to join those extinction-themed cases. The immensity and permanence of extinction weighs heavy in the encounter that takes place only in the museum. Thinking about extinction is an intellectual and didactic challenge, and museums are particularly well suited to visualize the Long Now and offer visitors time-outs for immersion and reflection. This needs to be a conscious choice on the part of museums, for 'to tell the time is to stake out a position, to declare an investment in the values reflected by one clock over another, an act that shapes the future in all its inequities and promise' (Huebener 2020: 201).

Returning to the Muséum national d'Histoire naturelle, we can ask: How can and should we mark time in this room that is filled with extinction? The monumental clock still ticks and chimes the hour – just as the clocks on our wrists and desktops continue to move the time minute by minute – but such time-telling tells us only about the present moment. Time functions on another scale when extinction is involved, with the jumbling of past, present, and future. The bodies in this room are the clock, signalling change that visitors need to be aware of and coordinate themselves with. Those bodies need to become significant so that visitors can *think with* extinction. Perhaps this darkened, bleak space is the kind of space for time that extinction needs: a space in which the speed of extinction can be slowed down.

Received: 26 March 2021
Finally accepted: 19 April 2022

Acknowledgement

This research is supported by the JPICH project Extinction as Cultural Heritage? Exhibiting Human-Nature Entanglements with Extinct and Threatened Species funded by the Research Council of Norway (project 296921).

Notes

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