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**IMAGINED PAST AND FUTURE:
SUSTAINABILITY AND MUSEUMS
IN THE ANTHROPOCENE**

Humanity and its institutions are facing a complicated question: how to survive, how to continue? We should not expect that everything can grow continuously, that the material state of society and individuals will become more and more prosperous, and that we will build bigger and bigger museum buildings and open more and more expensive exhibitions. The environmental crisis is not somebody else's business, it affects us all.

Among other institutions, museums also have to think about how to operate in an increasingly limited world. One topic that has gradually come to the fore since the 1990s is so-called green or sustainable museums. The topic is very broad and can be dealt with in a variety of ways: some museums calculate their ecological footprint and look for ways to bring it close to zero, others insulate their buildings and install geothermal heating and LED lighting, others sort garbage and promote cycling to work, and others still make exhibitions out of garbage and run courses on how to mend clothes. At this point, there is nothing to be surprised about because,

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in reality, there is not yet an exact definition of what sustainability means for museums. The models are still at the development stage.¹

Understandably, museums do not operate separately from the environment and society. Their relationships with the surrounding environment is twofold. On the one hand, museums are influenced by the climate, political situation, cultural environment, and demographic situation. On the other hand, museums are institutions that deal mainly with collecting objects. Museums not only collect and exhibit objects and phenomena related to people and culture, they also deal with the creation of organised and systematic information about the entire material world. When discussing sustainability and museums, we need to keep both of these aspects in mind.

Since the advent of modern museums in the 18th century, both the physical and social environment have changed drastically. The idea that humanity has entered a completely new geological era – the Anthropocene, the main feature of which is that it was created by the actions of man – is becoming more and more established. How all this affects museums and how museums affect society have become extremely topical issues. It is impossible to predict the future, but at the same time it is possible to create it. Heritage is one of the materials for creating the future, and museums are a tool. Man makes sense of the world, and the world creates man; heritage also plays a part in this recursive process. Heritage helps a person to find a place in the world and in society, to place oneself between the past and the future. Heritage helps a person to make sense of the world, and at the same time, being a part of the world, heritage helps to create human personality.

The purpose of this article is to analyse how the definition of a new geological era affects museums. First, we will give an overview of the development of the concept of the Anthropocene and its connections with museums. One of the most obvious museum responses to the Anthropocene is the concept of sustainable or green museums. It is a very extensive topic, of which we chose only one part, specifically exhibitions, for analysis. As a case study we chose the *If Boxes Could Talk...* exhibition in Tartu City History Museums, which was completed as part of the Sustainable and Sustaining Exhibitions

1 Martin Müller, Julie Grieshaber, 'The sustainability star: a model for museums', *ICOM News*, 16/01/2023, <https://icom.museum/en/news/the-sustainability-star-a-model-for-museums/> [accessed on 03/09/2023].

continuing education course held at the Pallas University of Applied Sciences. The exhibition explored on the one hand the application of sustainability ideas in the preparation of a practical exhibition and, on the other hand, the mechanisms of creating cultural sustainability using the model of artificial cultures.

THE ANTHROPOCENE – IT SOUNDS GLORIOUS

For better understanding, Earth's history is divided into stages. Geological time, which is also called geochronology, is a system of determining the order of formation of the layers of the Earth's crust. The units of the geochronological scale are, starting with the most general: eon, era, period, epoch. We are currently living in the Phanerozoic Eon, Cenozoic Era, Neogene Period, Holocene Epoch. The Holocene epoch began after the last ice age (11,500 radiocarbon years ago) and continues to this day. In 2000, the Nobel laureate chemist Paul Crutzen proposed that the latest period in the Earth's history was a new geological epoch, and suggested calling it the Anthropocene.² Although human influence has been felt for tens of thousands of years, until the Industrial Revolution it had not caused a globally apparent environmental change. In order to bring a new epoch into play, it is necessary that it be clearly distinguished in the geological deposits. Future scientists should see any significant changes in the transition from one era to another when studying the Earth's strata. The geological, geochemical, and biostratigraphic changes in the sedimentary layers that have formed today allow such a distinction.³

We must recognise that man has become a geological force that is transforming the Earth, already changing it to a significant degree. Human activities change the Earth's landscapes, climate and biosphere, changes that can leave traces. When we observe human effects on the environment on a cosmic scale and a geological time-

2 Paul J. Crutzen, Eugene F. Stoermer, 'The Anthropocene', *IGBP Newsletter*, 41 (2000), 17–18. In 2002, Paul J. Crutzen published an article on the same topic in the journal *Nature*: Paul J. Crutzen, 'Geology of Mankind', *Nature*, 415 (2002), 23.

3 Jan Zalasiewicz, Mark Williams, Alan Smith, Tiffany L. Barry, Angela L. Coe, Paul R. Bown, Patrick Brechley, David Cantrill, Andrew Gale, Philip Gibbard, F. John Gregory, Mark W. Hounslow, Andrew C. Kerr, Paul Pearson, Robert Knox, John Powell, Colin Waters, John Marshall, Michael Oates, Peter Rawson, Philip Stone, 'Are we now living in the Anthropocene', *GSA Today*, 18 (2) (2008), 4–8.

frame, we can safely say that we live in an artificial environment. This statement may change something in our understanding, but the real world we live in is like this and has been like this for millennia. If humans were suddenly to disappear from our planet, the effects we have created would remain for millennia. Geologist Jan Zalasiewicz proposes an average thickness of 5 cm for the geological layer associated with human activity.⁴ On a geological scale, dead coral reefs would obviously leave the biggest mark. Coral reefs are formed as a result of living organisms and consist of limestone. The cessation of their growth and their replacement with mud and sand clearly indicate large and rapid changes in the Earth's ecosystems. About 36 billion tons of carbon are released into the atmosphere due to human activities, primarily the burning of fossil fuels.⁵ About half of this remains in the atmosphere, and the other half dissolves in the oceans. The oceans are a giant carbon reservoir, containing about 38,000 billion tons of carbon, which is about 50 times more than the atmosphere. Carbon dioxide gas dissolves in water and forms carbonic acid. Organisms that make calcareous skeletons use carbonate ions to build them. However, in an acidic environment, bicarbonate ions are formed from carbonate ions. The more the acidity of seawater increases, the less such living organisms can live there and the smaller the amount of limestone formed from them. If the amount of carbon dioxide in the atmosphere doubles, according to predictions, the amount of limestone formed by coral reefs may decrease by 30%. As a result, the thinning limestone layers could be small but still noticeable. Another sign of increasing ocean acidity is the breakdown of the limestone sediments that cover the sea floor. In their place acid-insoluble clay forms the geological layer. Similar events in the history of the Earth took place approximately 55 million years ago at the beginning of the Eocene epoch when, over a relatively short period of time (about 10,000 years), the content of carbon dioxide in the atmosphere significantly increased and the global temperature increased by 5–10 degrees. The traces of this acidification event have remained in the sediments.⁶

4 Jan Zalasiewicz, *The Earth after us: what legacy will humans leave in the rocks?* (Oxford: Oxford University Press, 2009), 122.

5 Hannah Ritchie, Max Roser, *CO₂ emissions. Our World in Data*, <https://ourworldindata.org/co2-emissions> [accessed on 03/09/2023].

6 Zalasiewicz, *The Earth after us: what legacy will humans leave in the rocks?*, 143.

The term 'Anthropocene' has become a real buzzword today, and neither museologists nor museums are an exception. In the following, we will focus on just a few examples. Understandably, a series of exhibitions dealing with various aspects of the Anthropocene have already been organised.⁷ Between 2020 and 2023, the *Art in the Age of Anthropocene* exhibition project was carried out at the Estonian Art Museum, the central themes of which were the rethinking of Estonian art history based on an ecocritical perspective, the potential of contemporary art to deal with the environmental crisis, and the museum's green transition. The project ended with an exhibition, the focus of which was the question of the possibility and necessity of art in an era of environmental crisis.⁸ Several museologists have discussed the relationship between the Anthropocene and museums in scientific articles.⁹

The actions of environmental activists in museums have received a lot of media attention. In November 2021, the BP or not BP theatre group together with Earth-preacher Reverend Billy and the Stop Shopping Choir organised an action in front of the British Museum. Two large banners had the slogans: 'COLONIALISM × FOSSIL FUELS = CLIMATE CRISIS'. The action was timed to coincide with the Glasgow Climate Conference (COP26). According to the protesters, The British Museum carries the pride of the former empire, sponsored by the oil industry, and exemplifies 'the historical damage caused

7 See for e.g. Finn Arne Jørgensen, Dolly Jørgensen, 'The Anthropocene as a History of Technology. Welcome to the Anthropocene: The Earth in Our Hands, Deutsches Museum, Munich', *Technology and Culture*, 57 (1) (2016), 231–237, DOI: 10.1353/tech.2016.0026 [accessed on 03/09/2023]; Lotte Isager, Line Vestergaard Knudsen, Ida Theilade, 'A New Keyword in the Museum: Exhibiting the Anthropocene', *Museum & Society*, 19 (1) (2021), 88–107; Bergsveinn Þórrsson, 'Walking through the Anthropocene. Encountering materialisations of the geological epoch in an exhibition space', *Nordisk Museologi*, 1 (2020), 103–119; Nina Möllers, 'Cur(at)ing the Planet – How to Exhibit the Anthropocene and Why', *RCC Perspectives*, 3 (2013), 57–66.

8 *Art in the Age of the Anthropocene*, Estonian Art Museum (05/05/2023 – 08/10/2023), <https://kunstimuuseum.ekm.ee/en/syndmus/art-in-the-age-of-the-anthropocene/> [accessed on 03/09/2023].

9 See e.g.: Mitchell Kiefer, 'Re-basing Scientific Authority: Anthropocene Narratives in the Carnegie Natural History Museum', *Science as Culture*, 30 (1) (2021), 117–139, DOI: 10.1080/09505431.2020.1766010; Gil Oliveira, Eric Dorfman, Nicolas Kramar, Chase D. Mendenhall, Nicole E. Heller, 'The Anthropocene in Natural History Museums: A Productive Lens of Engagement', *Curator. The Museum Journal*, 63 (3) (2020), 333–351, <https://doi.org/10.1111/cura.12374>; Massimo Bernardi, 'The Covid-19 Pandemic and the Inescapable Challenge of the Anthropocene for Museums', *Museum International*, 73 (3-4) (2021), 146–155, DOI: 10.1080/13500775.2021.2016285; Rosie Ibbotson, 'De-extinction and representation: Perspectives from art history, museology, and the Anthropocene', *International Review of Environmental History*, 3 (1) (2017), 21–42, DOI:10.22459/IREH.03.01.2017.05 [accessed on 03/09/2023].

by British colonialism and UK Carbon pollution'.¹⁰ This has been followed by several different actions in several famous museums, where activists have, for example, thrown soup on Van Gogh's *Sunflowers* or glued themselves to Leonardo da Vinci's *The Last Supper*.¹¹ It is certainly worth pointing out that the International Council of Museums (ICOM) adopted an appeal regarding climate activism in museums.¹² First of all, ICOM notes what might seem obvious at first glance, but is in fact paradoxical, i.e. the fact that museums have been chosen as places of action shows the symbolic significance and importance they have in any discussion on climate issues. ICOM emphasises that museums are allies of climate activism in achieving common their goals, while also pointing out that activists should consider the impact of their activities on museums, visitors and museum workers.

The Anthropocene is a term that captures extremely important aspects of the modern world. The central idea of the Anthropocene is the inseparability of man as a biological being from nature, technology and culture. Man is both part of nature and a creator of culture, a changer of nature, and a victim of technology. Man, together with technology, creates the artificial. More and more, man also creates the natural. In fact, there is no natural environment that has not been transformed by mankind, either on Earth or even in near space. One of the most characteristic features of the modern world is the loss of boundaries between the natural and the artificial. This stems not only from an extreme increase in the human impact on nature, but also in that the once so-clear concept of 'nature' itself is rapidly losing its former meaning. It seems that it would be more correct not to talk about the difference between natural and artificial but about the process of artificialisation, which, relying above all on technology, blurs the fundamental border between natural and artificial. The idea of nature standing apart from man and human culture has lost its previous meaning. The distinction between natural

10 Colin Sterling, '(Post) Anthropocene museologies', *DriftingCurriculum*, 1, <http://driftingcurriculum.org/a1> [accessed on 03/09/2023].

11 Rayan Waddoups, 'How Museums Became Staging Grounds for Protest Movements', *Surface* (2022), <https://www.surface-mag.com/articles/just-stop-oil-protests-museums-environmental-activism/> [accessed on 03/09/2023].

12 ICOM. Statement: *Museums and Climate Activism* (2022), <https://icom.museum/en/news/icom-statement-climate-activism/> [accessed on 03/09/2023].

and artificial has been inherent in human culture since its inception. On the other hand, human activity has always tried to shift and blur this border. This trend is also as eternal as human culture. Everything created by man is based on natural materials and processes; man only modifies them to varying degrees. For example, all synthetic polymers are still based on natural precursors that we transform and modify. However, such natural fibres as cotton and wool are the end products of a rather complex chemical and mechanical processing. To what extent do we have to modify the starting materials for it to be considered artificial? Presented in this way, the border between natural and artificial becomes relative – we can talk more about artificial objects and phenomena and about those that are, in turn, more natural.¹³

Technologies connect our lives, identities, and activities and participate in both creating our place in the world and shaping the human self. In addition to everyday life, technology also changes the way we think, the metaphors we use when talking about the world, and the feelings that nature evokes in us. The term Anthropocene inevitably draws attention to the future. What are we in for next? Is the human species going extinct? Is our civilisation in danger? Such questions are inevitable and, at the same time, aimed at the future. Museums, as steps of memory, deal with heritage, so the connections between heritage and the future must be addressed.¹⁴

WHAT DOES HERITAGE HAVE TO DO WITH THE FUTURE?

At first glance, it seems that this is a pointless question, as in the conventional approach heritage, and its preservation, are aimed at the future. After all, the Republic of Estonia's Heritage Conservation Act stipulates that 'Preservation and awareness of cultural heritage help to maintain the identity and character of the state and the regions thereof and ensure a diverse living environment carrying cultural

13 Bernadette Bensaude-Vincent and William R. Newmann emphasize the same gradual distinction between natural and artificial in the preface to their collection of articles published in *The Artificial and the Natural: An Evolving Polarity* (Cambridge, London: The MIT Press, 2007).

14 The relationship between museums and heritage is definitely getting more and more attention. One example is the article collection published in *A Museum Studies Approach to Heritage*, ed. by Sheila Watson, Amy Jane Barnes, Katy Bunning (Abingdon, New York: Routledge, 2019).

memory for the present and future generations.¹⁵ Inscribed here is the assumption that we do indeed need precisely what we preserve, that future generations value what is left to them. This undoubtedly has its own selfish purpose, specifically we want to be seen as good ancestors worth remembering. This approach to the future, or rather the lack of it, also automatically means that memory institutions and other heritage institutions are constantly increasing the amount of heritage. There has certainly never been as much heritage as there is now.

What the role of heritage could be in creating the future has only begun to seriously interest researchers in the last decade.¹⁶ We think the reason for such late interest lies in the fact that heritage is still tied to the past, and the future seems somehow self-evident if the glory of the past is preserved. After all, according to the conventional understanding, heritage is something that remains permanent and unchanging when everything else changes. Heritage is something that anchors us in the past, bringing stability and security to our lives. It may be related to the belief that the past provides some kind of guarantee for the future. In the case of inheritance, the emphasis is always on passing it on to future generations. It is taken as something natural, but how exactly this creation of the future from the past works is still unclear. What should be the role of heritage in future societies is, however, a burningly important issue.

Heritage is connected with sustainable development, i.e., the future, but even within such an approach, heritage is still only a means of solving the problems and concerns of our present time. It seems that the heritage will not reach the distant future. We hope that the people of the future will also need everything that the heritage offers us now. But this is very unlikely. A person's thinking and acting inevitably depend on a specific culture. Nobody lives outside of culture. However, the cultures of the future will certainly be different from today's, and thus, their approach to heritage will also be different. If social and cultural conditions change significantly, the concept of heritage also changes and could even disappear. We project the legacy of the past and present into an idealised future,

¹⁵ Heritage Conservation Act § 3, <https://www.riigiteataja.ee/akt/119032019013> [accessed on 03/09/2023].

¹⁶ *Cultural heritage and the future*, ed. by Cornelius Holtrof, Anders Högberg (Abington, New York: Routledge 2021).

knowing deep down that it doesn't work that way. There have already been so many revolutionary events in the lifetime of people living now that such naive belief is disappearing. If anything can be said about the future, it is that it will be quite different from today.

Heritage is a unique phenomenon, as it naturally links the past, present and future. After all, a very large part (although by no means all) of heritage comes from the past; it is dealt with by people living now, and the idea of heritage itself already contains the future, as it is preserved for future generations. So, thinking about what the future of heritage might be is important for heritage itself, on the one hand, while on the other hand, it also offers opportunities to create a desirable or at least tolerable future. Inheritance shapes the way of thinking about the world, and this, in turn, is the basis for the creation of the future. More directly or indirectly, heritage affects people's perceptions of society and culture. Heritage binds people together with their history, language, values and way of life.

Heritage management so far has focused primarily on the past, leaving the future in the shadow of the hazy horizon. Thus, the potential of heritage management remains largely untapped. It is often argued that inheritance is non-renewable and limited. Apparently, this approach also needs to be reviewed. If we treat heritage as mere objects and phenomena, then indeed it is. At the same time, heritage as a process is renewable, constantly renewing itself. Perhaps more attention should be paid to preserving this process instead of piling up more and more objects that we somehow consider vital for future society.

Above all, heritage management should be based on the creation of future-oriented values and meanings. In a sense, it's about transforming perspective from the past into the future. Heritage is not something of the past something directed towards the future. It is a social and cultural resource that underlies planning for the future. We think this is the most important function of heritage in general. Heritage management is the reinterpretation of contemporary social and cultural realities using selected interpretations of the past. Its purpose is to shape the present into a desirable future. We have no other choice but to ask constantly: What knowledge and whose culture do we want to preserve, and why is it necessary to do so?

MUSEUM RESPONSES TO THE ANTHROPOCENE

Sustainability and consideration of the environment are deemed to be areas that ensure the seriousness of museums in the 21st century. If we line up the most pressing problems of the present time, we get quite a long list: climate change, the price of energy, war in the middle of Europe, the recession, the pandemic, and the rise of militant nationalism. Apparently, this alarming list can be extended even further. This cluster crisis affects different aspects of the environment and society and naturally also affects museums, where sustainability is both a requirement and a necessity.

Today's museum must be environmentally friendly and sustainable in its activities. The first task is easier to complete, although it is not easy per se. Museums tend to have a larger ecological footprint than other cultural institutions¹⁷ because of the large number of temporary exhibitions, which involve large costs and the transportation of objects and people, as well as the need for precise regulation of environmental conditions in warehouses and exhibition halls. Of the three main museum cost areas – real estate, personnel, and exhibition activities – the only right thing is to save on administrative costs. Anything that reduces energy use, such as energy-efficient museum buildings, passive environment control, LED lighting, will also reduce costs in the long run.

Exhibitions are one of the most important museum activities. Exhibitions form the essence of the museum because most visitors go to museums specifically for this reason. Museums devote a great deal of money, staff time and other resources to organising exhibitions. Creating an exhibition means finding a balance between preserving the objects, showing them to as many people as possible, financial possibilities, and the environmental impact of the exhibition. It is in the power of museum staff to try to reduce this impact in every possible way. First of all, you have to think about whether the planned exhibition is necessary at all. Is the museum staging an exhibition because it is written in the work plan or because the museum really has something important to announce to the world. The exhibition with the smallest ecological footprint is an exhibition that did not

17 Julie's Bicycle, Arts Council England, *Culture, Climate and Environmental Responsibility. Annual Report 2019–20*, <https://juliesbicycle.com/wp-content/uploads/2022/01/ACE-JB-annual-report-2019-20.pdf> [accessed on 03/09/2023].

take place. You should also think about the size of the exhibition: not everything in this world needs to be big and powerful. Even a small exhibition can be beautiful and comfortable, cozy and sustainable.

How long should an exhibition be open? If only the economy is taken into account, then the longer an exhibition is open, the better. Understandably, other circumstances must also be taken into account, but a longer opening time for temporary exhibitions is certainly not a bad idea. Permanent exhibitions, which are set up for longer periods, have their own problems. They are usually designed in such a way that after closing, the entire exhibition has to be dismantled and a new one installed. In terms of sustainability, an intermediate solution would be better. Some parts of the exhibition could be more permanent, and some parts could be changed. In this way the costs would be lower and people would be interested in visiting the permanent exhibitions repeatedly.

In most cases, museums use objects from their own collections for exhibitions, and this in itself is a sustainable practice. Depositing items from other museums is more expensive, especially if they come from other countries. Transporting museum objects and employees long distances is questionable in terms of ecological footprint. A variety of furniture, showcases, stands, bases, and all kinds of auxiliary material are used in the installation of exhibitions. The more you manage to use the existing rooms and furniture, the better.

CASE STUDY PART I: THE SUSTAINABLE EXHIBITION

The *If the Boxes Could Talk...* exhibition was held in the 19th Century Tartu Citizen's Home Museum, which is part of Tartu City History Museums. The 19th Century Tartu Citizen's Home Museum is located in a wooden house built in the 1740s (Fig. 1). The museum has recreated the interior of a bourgeois house from the 1830s. The living room, dining room, husband's study, and bedroom are furnished in the characteristic German Biedermeier style of that time. A cozy atmosphere is created by the kitchen, which is in the middle of the house with a large number of household items and a working English stove. Since there is no electric light in the museum, the visibility of the exhibition depends on natural light from the windows.

The exhibited objects were various boxes and cases. We prepared the exhibition using the principle of an exhibition within an exhibition



FIG. 1. CURATORS OF THE EXHIBITION MADIS LIPLAP (LEFT) AND KURMO KONSA IN FRONT OF THE 19TH CENTURY TARTU CITIZEN'S HOME MUSEUM. PHOTO: SALME KULMAR.

by adding new objects to the existing environment, which made the rooms more exciting and stimulated the imagination of the viewers. The exhibits had to stand out in the interior, but at the same time they were not allowed to break the existing display. For this purpose, we made D-cardboard bases for the boxes, which we covered with blue paper. In this way, the objects added to the interior were easy for visitors to find (Fig. 2). As for cardboard D-Board Light (DBL), it is a material made entirely from recycled raw materials.¹⁸ We collected the necessary materials from the leftovers of previous exhibitions. The exhibits came from the City Museum's own collection; only one exhibit (a microscope) was deposited from the University of Tartu History Museum. In summary, we can say that the exhibition was designed to use sustainable materials and scraps, using minimal resources.

18 ELTETE. D-Board Light, <https://eltete.com/tpm/d-board-light/> [accessed on 03/09/2023].



FIG. 2. THE BLUE CARDBOARD BASE DISTINGUISHED EXHIBITION OBJECTS FROM PERMANENT OBJECTS. PHOTO: COURSE PARTICIPANTS.

MUSEUMS AND CULTURAL CHANGE

Although the above-mentioned initiatives to make museums and exhibitions greener are of the utmost importance, it is still not enough. Much more emphasis should be placed on the social and cultural sustainability of museums. In summary, museums must be important in society, and this also ensures their survival in difficult circumstances. But how can this be achieved? It is easy to say that museums must deal with topics and issues that are important to society and be closely connected with communities. This is correct, but this too is not enough.

Designing a sustainable world is, first of all, related to large-scale cultural change.¹⁹ It is no news that a whole series of norms and values characteristic of Western culture are such that they do not fit into a sustainable world and are obviously the main obstacle to the development of such a society. The expectation of continuous economic growth, the desire for an increasingly better and more abundant life, the expectation of continuous renewal, and the glorification of success and competition are still the basic values of our culture.

Creating a more sustainable world is, therefore, not about more wind turbines and more powerful nuclear reactors, rather it is clearly a cultural issue. The artificial environment, and even more, the ever-accelerating change of this environment, forces us to change culturally. Culture is the way in which people behave in specific social, economic and political circumstances and also the ways in which they explain and justify their behaviour.

To ensure sustainable development, changing people's values and behaviours, i.e., culture, is considered one of the key issues.²⁰ For example, Martin, Maris, and Simberloff state that: 'Fundamental shifts in values ensure the transition from a growth-centred society to one acknowledging biophysical limits and centred on human well-being

19 See e.g.: Jean-Luis Martin, Virginie Maris, Daniel S. Simberloff, 'The need to respect nature and its limits challenges society and conservation science', *Proceedings of the National Academy of Sciences*, 113 (22) (2016), 6105–6112, <https://doi.org/10.1073/pnas.1525003113> [accessed on 03/09/2023].

20 Paul W. Schultz, Lynette Zelezny, 'Reframing environmental messages to be congruent with American values', *Human Ecology Review*, 10 (2) (2003), 126–136; Martin, Maris, Simberloff, 'The need to respect nature and its limits challenges society and conservation science'; Christopher D. Ives, Joern Fischer, 'The self-sabotage of conservation: reply to Manfredi *et al.*', *Conservation Biology*, 31 (6) (2017), 1483–1485, doi: 10.1111/cobi.13025; Michael J. Manfredi, Tara L. Teel, Kimberly L. Henry, 'Linking Society and Environment: A Multilevel Model of Shifting Wildlife Value Orientations in the Western United States', *Social Science Quarterly*, 90 (2) (2009), 407–427, doi: 10.1111/j.1540-6237.2009.00624.x [accessed on 03/09/2023].

and biodiversity conservation'.²¹ Is this possible at all, and if so how? Here, the opinions of the researchers differ very significantly. At the same time, the vast majority of work on the links between sustainability and culture is based on environmental issues. In the context of heritage research, these issues have not yet received direct attention.

Whether culture can be intentionally changed by humans remains a highly controversial question in light of previous research. Different disciplines present very different and often contradictory opinions here. Social psychology has traditionally argued changing human values is very difficult; they are stable and change slowly along with changes in the environment.²² Changes in value system are usually related to changes in the social-ecological context²³, in the demographic and ethnic composition of society²⁴, in the development of the individual²⁵, etc.

21 Martin, Maris, Simberloff, 'The need to respect nature and its limits challenges society and conservation science', 6105.

22 Valdiney V. Gouveia, Kátia C. Vione, Taciano L. Milfont, Ronald Fischer, 'Patterns of Value Change During the Life Span', *Personality and Social Psychology Bulletin*, 41 (9) (2015), 1276–1290, doi: 10.1177/0146167215594189; Taciano L. Milfont, Petar Milojev, Chris G. Sibley, 'Values Stability and Change in Adulthood: A 3-Year Longitudinal Study of Rank-Order Stability and Mean-Level Differences', *Personality and Social Psychology Bulletin*, 42 (5) (2016), 572–588. doi: 10.1177/0146167216639245; Michele Vecchione, Shalom H. Schwartz, Guido Alessandri, Anna K. Döring, Valeria Castellani, Maria Giovanna Caprara, 'Stability and change of basic personal values in early adulthood: An 8-year longitudinal study', *Journal of Research in Personality*, 63 (2016), 111–122. doi: 10.1016/j.jrp.2016.06.002 [accessed on 03/09/2023].

23 Ronald Inglehart, Wayne E. Baker, 'Modernization, cultural change, and the persistence of traditional values', *American Sociological Review*, 65 (1) (2000), 19–51, <https://doi.org/10.2307/2657288>; Shalom H Schwartz, Anat Bardi, Gabriel Bianchi, 'Value adaptation to the imposition and collapse of communist regimes in East-Central Europe', *Political psychology: cultural and crosscultural foundations*, ed. by Stanley A. Renshon, John Duckitt (London: Palgrave Macmillan, 2000), 217–237; Michael J. Manfredi, Jeremy T. Bruskototter, Tara L. Teel, David Fulton, Shalom H. Schwartz, Robert Arlinghaus, Shigehiro Oishi, Ayse K. Uskul, Kent Redford, Shinobu Kitayama, Leeann Sullivan, 'Why social values cannot be changed for the sake of conservation', *Conservation Biology*, 31 (4) (2016), 772–780, doi: 10.1111/cobi.12855 [accessed on 03/09/2023].

24 Shalom H. Schwartz, 'A theory of cultural value orientations: Explication and applications', *Comparative Sociology*, 5 (2-3) (2006), 137–182, doi:10.1163/156913306778667357; Manfredi, Teel, Henry, 'Linking Society and Environment: A Multilevel Model of Shifting Wildlife Value Orientations in the Western United States'; Christopher M. Raymond, Jasper O. Kenter, Plieninger Turner, Nancy Tobias, Karen Alexander, 'Comparing instrumental and deliberative paradigms underpinning the assessment of social values for cultural ecosystem services', *Ecological Economics*, 107 (2014), 145–156, <https://doi.org/10.1016/j.ecolecon.2014.07.033> [accessed on 03/09/2023].

25 Anat Bardi, Robin Goodwin, 'The dual route to value change: Individual processes and cultural moderators', *Journal of Cross-Cultural Psychology*, 42 (2) (2011), 271–287, doi: 10.1177/0022022110396916 [accessed on 03/09/2023]; Judith G. Smetana, Jessica Robinson, Wendy M. Rote, 'Socialization in adolescence', *Handbook of Socialization: Theory and Research*, ed. by Joan E. Grusec, Paul D. Hastings (New York: Guilford, 2014), 60–84; Gouveia, Vione, Milfont, Fischer, 'Patterns of Value Change During the Life Span'.

On the other hand, some studies show that people's values can change quite quickly in response to changing situations and contexts.²⁶ There seem to be more proponents of the possibility of purposeful cultural change in the field of organisational research, which is not surprising since this is often the goal there.²⁷

Changing culture is a difficult and confusing task, as culture tends to be inert and rather difficult to change. People want to preserve existing ideas, values and traditions. Fortunately, the situation is not completely hopeless. The solution is a completely different approach to the whole bundle of problems. Instead of changing culture, we have to create artificial cultures that meet our wants and needs. This is a radically different solution to the task of culture change. Changing people has proven to be a weak spot in many world improvement schemes. Indeed people do not want to change the existing culture. However, they willingly agree to participate in new and playful cultures because they add a new dimension to everyday life. It is quite likely that it is easier to create a new culture, and do so in a so-called playful sense, than to change existing culture. We consider existing cultures to be natural and given as such. But when we make a new culture, we don't think that we want to change something very fundamental. From this point of view, it is easier to create a new artificial culture than to change the existing culture.

ARTIFICIAL CULTURE AND ITS CREATION

We use the term artificial cultures to describe conscious and deliberate cultural change. As an artificial culture, I consider a purposefully and intentionally created system of basic understandings, values, norms, and artefacts, which creates the context for the activities of a certain group of people, thus distinguishing it from other groups of people.²⁸

26 Christopher M. Raymond, Jasper O. Kenter, 'Assessing and applying transcendental values to the management of ecosystem services', *Ecosystem Services*, 21, Part B (2016), 241–257, <http://dx.doi.org/10.1016/j.ecoser.2016.07.018> [accessed on 03/09/2023].

27 Mats Alvesson, Stefan Sveningsson, *Changing Organizational Culture: Cultural Change Work in Progress* (London and New York: Routledge, 2008).

28 Kurmo Konsa, 'Managing the Culture of Diversity: An Artificial Culture Approach', *The International Journal of Diversity in Organizations, Communities and Nations*, 10 (1) (2010), 419–430.

As a model of the structure of artificial culture, we used the model presented by E. H. Schein, a researcher of organisational culture.²⁹ It is quite a simple model; one could even say that it is a primitive model, but in our opinion, it is well suited for the initial treatment of the problem of cultural change. Schein distinguishes three levels in culture:

- artefacts, i.e., the built environment,
- values and beliefs,
- deeper basic insights.

Artefacts, or the artificial environment, are all that we see, hear and perceive directly in culture. These are physical, behavioural and verbal manifestations of a given culture, such as architecture, language, objects, techniques, works of art, clothing, behaviour, customs, expression of emotions, myths, stories, heroes, rituals, ceremonies, religion, social structure, symbols, politics, etc.

Values and beliefs are the basis for justifying behaviour and choosing between different behaviours. For both individuals and groups, values serve as standards for evaluating whether actions, events or people are desirable or undesirable. Values guide what people attend to, what they perceive and how they interpret and process information. At a cultural level, values are ingrained in norms, attitudes and behaviours that exist within and between collectives. Values are not directly observable or traceable; they are related to morality and express people's perception of what is desirable. Examples of values include the statements 'preserving the past is important' and 'people must live according to God's directions', and the approach that leads people to want to 'preserve the honour of the community', etc.

Deeper basic notions are subconscious, self-evident, unspoken beliefs about the world and man. They form the basis of values and beliefs. Basic notions show a person what reality is, how we know the truth about the world, what time and space are, who human beings are and how they are defined, what the I of man is, what man's personality is and what the relationship between man and reality is, as well as what the nature of the social system is, on which human relationships are based.

29 Edgar Schein, *Organizational Culture and Leadership* (San Francisco: Jossey-Bass, 2004).



FIG. 3. COURSE PARTICIPANTS CREATE AN ARTIFICIAL CULTURE. THE HISTORICAL ATMOSPHERE OF THE HOUSE MUSEUM CONTRIBUTED SIGNIFICANTLY TO THIS. PHOTO: KADRI LAUR.

In the model described, the components of culture constantly influence each other. Basic perceptions are expressed in norms, which in turn influence behaviour. Changes in values also lead to changes in behaviour and other artefacts. But the opposite effect also exists in that new behaviours and values can, over time, affect basic perceptions.

The structure of the artificial culture to be created is a description of artefacts, values, beliefs and basic understandings. The structure is a kind of dynamic list that is constantly being updated, as the initial structure of a culture cannot, of course, be very comprehensive. In the course of the functioning of an artificial culture, its structure is constantly improved. Creating a value system is at the heart of any artificial culture, and it is these values that determine how people function in a culture. In the course of communication between

participants in an artificial culture, the values inherent in the given culture become clear. Discussions about values do not disappear from any culture; they take place constantly, and values are constantly changing, which in turn leads to a change in the whole culture. The elements of artificial culture do not form a rigid system, their interrelationships can be of different strengths, and in some cases, even conflicting values and norms can coexist peacefully. This again stems from the logic of culture itself as contradictory elements are always present and are simply introduced at different points in time.

The reality of artificial culture is shaped by the creation of narratives based on values, just as the world of human natural cultures is created through stories. Stories mean narratives in all sorts of forms. Shared stories, metaphors and thought patterns create a dynamic artificial cultural reality that, in turn, influences participants' perceptions, behaviours and decisions.³⁰

In the course of the functioning of an artificial culture, the identity inherent in that culture begins to develop. The created stories and the information exchanged during their creation form the content of the artificial culture. Artificial culture starts to work when its norms and values are acted upon when they are applied in real situations.

CASE STUDY PART II: THE SUSTAINABLE CREATION OF CULTURE

The starting point of artificial culture is the idea of what kind of artificial culture one wants to make. There can be a problem that you want to solve with the created artificial culture or, for example, a game situation. This is the starting point based on which the structure of the culture will be built. The aim of the *If Boxes Could Talk...* exhibition was to create an exhibition with the smallest possible ecological footprint, and to test the creation of artificial culture. Based on this starting point, we defined the structure of the artificial culture to be created during discussions with course participants (Fig. 3). Artefacts of artificial culture naturally included the objects we used to make the exhibition, that is, various boxes and cases,

³⁰ Hermann Blume, Christoph Leitgeb, Michael Rössner, 'Editors introduction', *Narrated Communities – Narrated Realities: Narration as Cognitive Processing and Cultural Practice*, ed. by Hermann Blume, Christoph Leitgeb, Michael Rössner (Leiden, Boston: Brill, Rodopi, 2015), 7–13, 7.

as well as the general design of the exhibition, labels, placement of objects in the room, bases, etc. There was practically no information about most of the objects on display, which is, unfortunately, quite a common situation with many museum objects. This made the task of creating the exhibition more complex and, at the same time, more creative. The values that the exhibition reflected were primarily related to the role of museums in society, their connections with the green worldview, and the cultural change taking place in society. Basic understandings create a foundation for values, and thus are extremely important in justifying values and shaping them into a unified and coherent system. The central theme was the relationship between man and technology in general and how museums reflect reality.

When creating an artificial culture, the participants agree among themselves on values, norms, basic principles, and artefacts, hold discussions about them and select the most suitable. During this process, the meanings of these cultural elements emerge and are discussed. It is very important that values and other cultural elements do not remain only as declared words, but that the participants also understand what they mean in the given context, to themselves and to other participants in the process.

We used storytelling to bring artificial culture to life. The participants describe artificial culture as a real environment that influences and shapes them. The reality of an artificial culture is formed through the telling of many coherent stories of that culture.

The created narratives formed part of the exhibition. Visitors to the exhibition were given a leaflet with the objects in the exhibition marked with numbers, each number having a story about that object. Since there was no more detailed information about the objects, it was a good opportunity to create fictitious stories. For example, the following story accompanied the toolbox in the hallway (Fig. 4):

ANTEROOM

Dear guest, perhaps you noticed when you entered the house that the threshold of our modest home is worn. Isn't it the case that if there are people moving around in the house, the threshold wears out quickly? According to the good old custom, people do not step on the threshold when entering

ARTEFACTS
<p>We were able to stage the exhibition in every room in the house. Different boxes were displayed according to the former use of the space.</p> <p>Different languages, perceptions of life, and habits can act as closed environments, or boxes. Each is slightly different in appearance and content. They accommodate a certain identity.</p> <p>The Au Corylopsis du Japon perfume box and the storage box for microscopic preparations refer to the two genders in the context of their era and their everyday activities, such as taking care of their beauty and well-being and pursuing a career in science.</p> <p>To use boxes as a means of telling a story, whether it's showing the consumption of everyday life by placing different boxes in their respective rooms or showing different social/identity boxes.</p> <p>When exhibiting, we used some thick paper or fabric of a certain colour/tonne on which to place the boxes and which would tie the whole exhibition together. It would also be easy to reuse these materials later.</p> <p>These boxes and packaging represent our consumerism and its growth through the ages, all the way to how we are drowning in the garbage we create today.</p> <p>Which box or package is valuable and which is not? When an object, be it a box or other packaging, reaches the museum, it is no longer an ordinary object and is treated and stored differently. It is given value, even though there may be a whole dump full of similar ones.</p>
VALUES
<p>The winner is not the museum that prepares the exhibition with the biggest budget but any museum that creates a pleasant and inspiring environment.</p> <p>Museums should encourage people to think about their lives in the long term: what they produce and consume, where their resources come from, where their waste goes, and how their lives affect other people and the wider environment.</p> <p>Every person and institution, including the museum, has the opportunity to make the world a better place. However, in doing this any momentum generated by the museum should not hurt anyone. A museum must care about the environment as well as people, objects and thoughts.</p> <p>All things, even the most insignificant, matter. Objects are related to different aspects of human existence.</p>
BASIC PRINCIPLES
<p>Human ingenuity is amazing, and so the natural becomes artificial, and the artificial becomes more and more natural.</p> <p>The relationship between humanity and nature is an interwoven network of creative and destructive processes.</p> <p>The mixing of natural and artificial is ethically ambivalent and can be both a blessing and a curse.</p> <p>The use of technology makes the world artificial. It is also the only way we can communicate with the world.</p> <p>The essential peculiarity of museums lies in their relation to the real material world. Museums collect, preserve and study objects that come from the world as parts of it. This relationship with the real world allows us to see, create and represent a structured world. This structure is based on the order in nature (as determined by the natural sciences) and the order in human society created by man.</p>

FIG. 4. ARTEFACTS, VALUES AND BASIC PRINCIPLES OF ARTIFICIAL CULTURE WERE CREATED AS PART OF THE *IF BOXES COULD TALK...* EXHIBITION.

the house to make sure that the threshold remains nice and fresh for a long time. We invited a craftsman to the house today to check the threshold and make the necessary improvements. You see, he was just here; he even left his toolbox here (OBJECT). Since he is nowhere to be seen, he probably went to the wood market near Emajõgi to look for a piece of board for repairs.

During the operation of the artificial culture, a series of stories were created that were connected to the boxes selected for the exhibition,

forming a coherent description of a fictitious 19th-century family. At the same time, the real objects exhibited help visitors perceive the fictional story as real, forming 'anchors' that confirm the reality of the story.

CONCLUSION

Museums have great potential to become leaders of cultural change. People trust museums and consider them authoritative institutions. In most cases, museums are not directly related to politics. Which by no means means they are not political; we must not forget that everything that happens with heritage is political. Museums are publicly accessible and open to all members of the community. Museums perform research and educate people; they make people curious and create in them the wish to participate. What happens in museums organically connects different professions, scientific fields and people with different views and experiences.

Today's world, with all its problems, means that the museum must take into account its impact on the environment in all its undertakings and make every effort to reduce unnecessary environmental effects. In a world where it is not possible to live, it is also not possible to visit museums. However, how we start to create sustainable cultures is still open for the time being. We started by telling stories. We used the concept of artificial culture to describe purposeful cultural change. Artificial culture offers a new conceptual approach to dealing with and practical implementation of cultural change. Instead of changing the existing culture, the focus is on creating a new culture. Artificial cultures have great potential for solving sustainability problems, as they work by changing people's values and cultures, which are very often the cause of the problems.

KURMO KONSA, MADIS LIPLAP: IMAGINED PAST AND FUTURE: SUSTAINABILITY AND MUSEUMS IN THE ANTHROPOCENE

KEYWORDS: ANTHROPOCENE; MUSEUMS; SUSTAINABILITY; CULTURAL TRANSFORMATION; ARTIFICIAL CULTURE

SUMMARY

The purpose of this article is to analyse how the definition of a new geological era affects museums. First, we will give an overview of the development of the concept of the Anthropocene and its connections with museums. One of the most obvious responses of museums to the Anthropocene is the concept of sustainable or green museums. It is a very extensive topic, of which we chose only one part, specifically exhibitions, for analysis. As a case study, we took the *If Boxes Could Talk...* exhibition in Tartu City History Museums, which was completed as part of the Sustainable and Sustaining Exhibition continuing education course at the Pallas University of Applied Sciences. The exhibition explored, on the one hand, the application of sustainability ideas in the preparation of a practical exhibition and, on the other hand, the mechanisms of creating cultural sustainability using the model of artificial cultures.

Anthropocene is a term that captures extremely important aspects of the modern world. The central idea of the Anthropocene is the inseparability of man as a biological being, nature, technology, and culture. Man himself is both part of nature and a creator of culture, a changer of nature, and a victim of technology. In fact, there is no natural environment that has not been transformed by mankind, either on Earth or even in near space. Sustainability and consideration of the environment are deemed to be areas that ensure the seriousness of museums in the 21st century. If we line up the most pressing problems of the present time, we get quite a long list: climate change, the price of energy, war in the middle of Europe, the recession, the pandemic, and the rise of militant nationalism. Apparently, this alarming list can be extended even further. The cluster crisis affects different aspects of the environment and society and naturally also affects museums, where sustainability is both a requirement and a necessity.

Designing a sustainable world is, first of all, related to large-scale cultural change. It is not news that a whole series of norms and values characteristic of Western culture are such that they do not fit into a sustainable world and are obviously the main obstacle to the development of such a society. The expectation of continuous economic growth, the desire for an increasingly better and more abundant life, the expectation of continuous renewal, and the glorification of success and competition are still the basic values of

our culture. To ensure sustainable development, changing people's values and behaviours, i.e., culture, is considered one of the key issues. Changing culture is a difficult and confusing task, as culture tends to be inert and rather difficult to change. People want to preserve existing ideas, values, and traditions. Fortunately, the situation is not completely hopeless. The solution is a completely different approach to the whole bundle of problems. Instead of changing culture, we have to create artificial cultures that meet our wants and needs. It is a radically different solution to the task of culture change. Museums have great potential to become leaders of cultural change. People trust museums and consider them authoritative institutions. However, how to start creating sustainable cultures is still open for the time being. We started by telling stories. We used the concept of artificial culture to describe purposeful cultural change. Artificial culture offers a new conceptual approach to dealing with and practical implementation of cultural change. Instead of changing the existing culture, the focus is on creating a new culture. Artificial cultures have great potential to solve sustainability problems, as they work by changing people's values and cultures, which are very often the cause of the problems.

CV

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Madis Liplap (b. 1967) is an esteemed interior designer who has created several exhibition designs in Tartu and Tallinn. Madis Liplap's artwork is characterized by diversity and sensitive choice of material – the artist has worked with interior design, interior objects as well as graphic drafts.