

MARIANNE ACHIAM, MICHAEL HALDRUP  
AND KIRSTEN DROTNER

# EXPERIMENTAL MUSEOLOGY

Institutions,  
Representations,  
Users



# EXPERIMENTAL MUSEOLOGY

*Experimental Museology* scrutinizes innovative endeavours to transform museum interactions with the world. Analysing cutting-edge cases from around the globe, the volume demonstrates how museums can design, apply and assess new modes of audience engagement and participation.

Written by an interdisciplinary group of researchers and research-led professionals, the book argues that museum transformations must be focussed on conceptualising and documenting the everyday challenges and choices facing museums, especially in relation to wider social, political and economic ramifications. In order to illuminate the complexity of these challenges, the volume is structured into three related key dimensions of museum practice – namely institutions, representations and users. Each chapter is based on a curatorial design proposed and performed in collaboration between university-based academics and a museum. Taken together, the chapters provide insights into a diversity of geographical contexts, fields and museums, thus building a comprehensive and reflexive repository of design practices and formative experiments that can help strengthen future museum research and design.

*Experimental Museology* will be of great value to academics and students in the fields of museum, gallery and heritage studies, as well as architecture, design, communication and cultural studies. It will also be of interest to museum professionals and anyone else who is interested in learning more about experimentation and design as resources in museums.

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Users

*Edited by Marianne Achiam,  
Michael Haldrup,  
and Kirsten Drotner*

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# INTRODUCTION: FOR AN EXPERIMENTAL MUSEOLOGY

*Michael Haldrup, Marianne Achiam, and Kirsten Drotner*

In November 2018, the National Museum of Denmark opened a small, temporary exhibition, *Meet the Vikings*, that attempted to create new spaces of speculation and imagination in the museum. The exhibition juxtaposed a relatively traditional showcase exhibition of gold finds from what, in popular parlance, is known as ‘The Viking Age’ (c. 700–1,000) in Scandinavia with oil paintings of early Danish kings and queens in addition to displays of imagined clothes and headwear and various scenographies created by reality star and fashion designer Jim Lyngvild. The exhibition followed an earlier initiative by the museum that year, *Meet the Danes*, which offered guided tours and various events aimed at introducing non-Danish visitors to national particularities such as biking culture, welfare politics and childcare. At the same time, the exhibition reflected the new director’s ambitions of creating a museum space affording ‘a sense of and demonstration that the past and the future are never given beforehand’ (Blüdnikow, 2017, n.p.). Contrary to what might have been yet another small leadership initiative to strengthen the museum profile to international visitors and/or attract attention through spectacular curatorial experiments, the exhibition ignited a heated, domestic debate and critique. Did the country’s most distinguished cultural-history institution abandon its time-honoured role as a guarantor of authenticated, scientific knowledge through its collaboration with a well-known designer/reality star? Did it trivialise its unique holdings by circulating contrived, kitschy and fairytale-like and, according to some reports, nationalistic representations of the past by pandering to uneducated and ignorant users?

Without engaging with the curatorial and scientific merits of this particular exhibition, it is fair to say that the public debate surrounding its opening indicates that when choosing to experiment with their institutional roles, representational instruments and their relations to users museums are faced with a minefield of unpredictable outcomes in relation to both professional and public reception. Hence, the example quoted above clearly illuminates a growing need to more systematically

understand, evaluate and construct how museums interact with the world around them. This interaction offers options and obstacles that are not limited to cultural-historical museums, they also face natural-history museums, science centres, art galleries and heritage parks. In this volume, we therefore embrace an inclusive conceptualisation of museums and will refer to all of these institutions as ‘museums.’

Worldwide, museums currently strive to redefine their ‘art of relevance’ (Simon, 2016) to the public – of which the above example merely provides anecdotal evidence. In public as well as professional debate, many of the challenges facing museums are framed in terms of various dilemmas related to the tension between the traditional role of the museum as a beacon of public enlightenment and the urgency of attracting new audiences in an increasingly consumerist experience economy. In handling these dilemmas, some museologists have recently called for ‘post-critical’ museologies (Dewdney et al., 2013), while others propose a strengthening of critical positions (Bishop, 2014; Shelton, 2013). With budgets under pressure and with the additional long-term financial consequences of the COVID-19 pandemic sweeping the globe from late 2019 on, museums increasingly find themselves confronted with the task of reinventing and redefining their role and relevance for society at large, thus moving beyond their classical positions as shrines of either education or entertainment. While the new museology of the 1990s (Hooper-Greenhill, 1992; Vergo, 1989) provided opportunities and tools for reflecting in general terms on the societal role played by museums as institutions and cultural producers, we argue here that we now need to hone in on more concrete conceptualisation and documentation of the everyday challenges and choices facing museums when they relate to the world around them. This argument is especially urgent, since museums must find specific solutions to these challenges and choices, and they must do so within wider social, political and economic ramifications that are rarely of their own making. The result is handling a range of very concrete dilemmas, as outlined above.

We call for an experimental museology in which museum professionals’ actual practices are aligned with interdisciplinary academic discourses so as to better handle the particular dilemmas faced by museums in balancing, for example, dimensions of enlightenment and entertainment. Experimentation is of course not a new concept in museology and museum practice. Both have always to some extent relied on experimental approaches to their dissemination of knowledge, attempting to reach diverse audiences and raising questions of inclusion, diversity and rights. Through discrete experiments, museums have developed new concepts and ideas for exhibitions and communicative outreach, just as institutions have imported and cross-fertilised traditions and formats from one type of museum to another. For example, cultural museums borrow ideas from science centres’ traditions of audience engagement through hands-on activities just as science centres are influenced by genres and aesthetics traditionally found at art galleries’ display of visual art. Moreover, museological (sub)disciplines have increasingly developed design-based approaches to develop, test and evaluate museum exhibitions and modes of communication (such as Sarah Kenderdine’s Laboratory for Experimental Museology at École

Polytechnique Fédérale de Lausanne, see Chapter 1, this volume). However, this volume offers a sustained effort to systematically identify, interrogate and reflect on experimentation as a distinct approach to museum interaction across different institutional and disciplinary boundaries in order to help advance its conceptual as well as practical appropriations.

So, rather than asking disconnected, analytical questions about digital integration, object representations or audience engagements across online and offline spaces, this volume addresses how museums may handle ongoing dilemmas by fostering change through experimentation within wider design ecologies. Our key claim is that academics, professionals and practitioners alike need to move beyond analysis. While analysis and critique are vital, they are not enough. We need to adopt experimental approaches that foreground co-design and co-creation so as to transform current, often binary, discourses and existing practices. Further, we contend that experimental museology is a way of productively aligning museum professionals' actual expertise and academic discourse so that both groups are better positioned to illuminate contingencies and optimise joint risk-taking when exploring new vistas and courses of action.

Last, but not least, this volume is premised on a holistic approach to understanding museums. We approach museums as networked nodes which, today as in the past, are in constant interaction with the surrounding world in its physical and economic as well as cultural and social dimensions. This holistic view implies an attention to how various forms of museum interaction evolve, or might evolve. Museum interaction is instigated by someone (often the museum itself), it is about something, and it is directed at someone. Yet the outcomes may differ from what was intended. So, museum interaction may be perceived as a form of dynamic communication across a range of sites and settings, involving multiple actors and media and taking many directions: from the museum to one or more groups of receivers (visitors, students, tourists, community groups, stakeholders, policy-makers, funders); in dialogues between one or more museum professionals and the public; and, more rarely, from one or more receivers to the museum. As the volume chapters document, such a holistic approach is felicitous when the ambition is to not only analyse existing museum interaction, but also experimenting with its elements, their relations and boundaries.

The volume organisation reflects this holistic approach. The three volume sections – institutions, representations and users – address the key dimensions of museum interaction, or museum communication. They also highlight different traditions in handling current dilemmas, traditions that experimental museology should be mindful of when providing its answers.

## **Institutions, representations, users**

Current debates of how museums could change their interactions with the world around them have been evident in museology and museum practice at least since the 1990s. Reflecting our observation that these interactions can be defined as

various forms of communication, the debates can be identified to revolve around three key issues: (1) the need to redefine the role of museum institutions in relation to their users and society at large; (2) the need to recognise the non-neutrality and performative properties of representation such as displays, interfaces and learning resources; and (3) the need to re-conceptualise relations to users in the creation and dissemination of knowledge.

In terms of the institutional role of museums, recent research illuminates two rather different avenues. One is to follow neoliberal calls to define cultural institutions, including museums, as players in a competitive market of cultural consumption (Falk & Sheppard, 2006; Rentschler & Hede, 2015). This avenue implies that museums step up in terms of generating revenue and secure consumer satisfaction, for example through special events, entertaining exhibitions and more slick café, shop and lounge areas. Another avenue suggests that museum institutions should redefine themselves more clearly as catalysts of public value for citizen groups and communities or, even, as active agents in shaping more sustainable, just and equitable futures. Yet, as noted by Robert Janes and Richard Sandell in the introduction to their recent comprehensive review of museum activism:

[D]espite this increasing understanding of the museum as both non-neutral and active in shaping the way we perceive, think and act, there remains a persistent anxiety among museum workers in how to negotiate the opportunities and challenges this capacity for influence presents.

*(Janes & Sandell, 2019, p. 9)*

Both the commodity and social-value avenues define museums in relation to factors and goals beyond the museum itself, and both involve processes of transformation. ICOM's suggestion to define museums as 'democratising, inclusive and polyphonic spaces' that 'contribute to human dignity and social justice, global equality and planetary wellbeing' (ICOM, 2019) resonates with, and may be seen as a response to, the current discussions on the need for more activist and affirmative roles of cultural institutions.

So, closely related to the contested institutional position of museums is a need to rethink the modes of representation that are traditionally defined as emblematic for the way museums present themselves to the public, and to see these modes as part of a wider field of museum communication. Acknowledging this wider field also invites explorations of a broader range of communicative modes including, for example, social media and interactive archives, community workshops and events, narrative exhibition routes, gamification of educational material, cultural festivals and co-creation with artists in residence. Importantly, museum incentives to widen their range of representations are brought about by conflicting policy discourses and practices which predate the advent of new communication technologies (Drotner et al., 2018). Yet, the massive uptake of digital technologies also in museums have catalysed communicative modes that situate time-honoured pillars of representation, such as exhibitions, within wider contexts of use. Potential and actual audiences can

get behind the scenes online, they can interact with the ‘connected museum’ (Drotner & Schröder, 2013) in their social media feeds, and encounter signature excavations in airport lounges.

The transformations in modes of representation indicate that representations cannot simply be defined as entities encapsulating inherent information. Rather, they attain meaning and significance through communicative processes of production and reception. This relational understanding points to transformations in how museum users are defined. Visitor studies remains the mainstream tradition of analysing who comes to the museum, their individual motivations, needs and behaviour (e.g. Falk & Dierking, 2013). This psychological approach and its experimental and quantitative methodologies are increasingly supplemented by studies drawing on sociological and cultural traditions. Here, focus is on meaning-making as situated and dynamic socio-cultural practices dependent on contexts of application and use; and studies of these practices often rely on qualitative and explicitly interpretive methodologies. Also, the objects of interest in the sociological and cultural traditions are not, or not merely, visitors engaged in activities at a physical museum, but equally people encountering museums online, in their local communities and through media such as radio and television. Interpretive scholars often call these people audiences, a term whose primary legacy is interpretive media and communication studies (Schröder, 2018).

Yet, there is considerable conflation of terms – visitors, audiences, guests, users, citizens – and this conflation is a clear indication that the ‘receiving end’ of museum communication has assumed increasing professional importance since the 1990s. This introduction applies the term user(s) in an attempt to evade the conceptual binaries of visitors and audiences dominating museum studies; but we are mindful of the fact that the term ‘user’ may invoke an individualistic understanding that the volume does not support. Across the different traditions, there is a growing recognition that people are committed and active knowledge producers also in their various engagements with museums and have to be studied as such. This volume offers a range of examples of how such studies may be taken as stepping-stones of experimentation which serve to challenge museums’ perceptions of (intended) users and users’ understanding of each other.

Taken together, the analytical dimensions of institutions, representations and users reflect the need to take a holistic approach when studying museum interaction with the surrounding world. Just as importantly, as documented above recent research trends in each of these traditions point to an increasing recognition that museums need to challenge their rationale for being in the world in a manner that goes beyond Stephen E. Weil’s famous call to museums ‘being for somebody’ (Weil, 1999). One way to heed that challenge is to identify a third position forged beyond the institutional binaries of experience economy and public funding; the representational binaries of entertainment and enlightenment; and the user binaries of individual needs and social interpretation. Forging such a position, we argue, is facilitated through long-term experimentation that catalyses sustainable transformations of relations between and across institutions, representations and users.

## An experimental museology?

In promoting an ‘experimental’ approach to museology we obviously build on what has been termed the ‘fourth’ or post-critical wave of museology<sup>1</sup> with its focus on exhibition design and practice. This wave is often associated with work developed at the Leicester School of Museum Studies in the United Kingdom and with the work of especially Nina Simon in the U.S.A. and their insistence on multi-vocalism, collaboration and participation (Dewdney et al., 2013; Drotner & Schröder, 2013; Knell et al., 2007; Macdonald, 2007; Simon, 2010). Within this line of research, the museum is sometimes suggested to be a site ‘laboratory’ (Heller et al., 2015; see also Kenderdine, this volume) and/or a site of experimentation within the exhibition space (Bjerregaard, 2019; Macdonald & Basu, 2007; Tzortzi, 2015). In such spaces generative approaches ‘meet’ museological and disciplinary knowledge in the creation of exhibitions, encounters with users and often with a reflection on the institutional role of museum practices. Hence, Peter Bjerregaard emphasises that not only do museum exhibitions entail the capacity to generate research in and of themselves, but:

Working intensely with collections, testing ideas out in a physical environment, and relating more or less directly to a lay audience does not only tell us something new about how to make exhibitions, but may also provide us with more insights into the subject matter of the exhibition. That is, the exhibition has the potential to create a *research surplus*; through the making of exhibitions we are liable to *learn more* about the topic of the exhibition. But, (...) this research surplus does not only concern *how much* we know, but also involves *different ways* of knowing. It seems as if the making of exhibitions allows us to understand things in ways that are different to the usual textual production of research and can therefore add perspectives to more conventional cycles of research.

*(Bjerregaard, 2019, pp. 1–2. See also Pieroux et al., this volume)*

The ‘research surplus’ that Bjerregaard refers to here, is what within the field of design studies is often referred to as a particular ‘designerly way of knowing’ (Cross, 2007). Such knowledge production distinguishes itself from scientific and scholarly ways of knowing because it is characterised by a synthesising approach to problem-solution based on continuous iterative cycles of experience-based construction, reflection and re-construction (Cross, 2007, pp. 22–27). Following from this, we stress the need to not simply accumulate discrete examples of practical exhibition design but to systematically demonstrate the validity of cross-fertilising qualitative user studies, exhibition design, constructivist education studies and ethnographic media and communication studies in order to compare and evaluate practical design experiments on a theory-based foundation (Macdonald, 2007; Schroder, 2018; Treagust et al., 2014).

Drawing on Bruno Latour’s and Peter Weibel’s exhibition (and text), *Making things public* (Weibel & Latour, 2007), Binder and colleagues (Binder et al., 2011, p. 52)

argue that design interventions and processes are marked by ‘thing-ing,’ by which they mean the process of materialising and constituting embodied worlds that enable users to experience and explore these worlds. Learning from this process of ‘thing-ing,’ understood as a purposeful staging of performative interventions (whether this staging takes the form of a museum display, a citizen workshop or a theatre performance) is what recurrently feeds into the accumulation of designerly knowledge (Binder et al., 2011, pp. 118ff.).

Despite the fact that many museums today embrace commercial models of design thinking, such as IDEO (IDEOU, n.d.; see also Eid, this volume) not many engage with design as a systematic form of research and a specific form of knowledge formation. Although design scholars have increasingly developed tools for analysing and understanding participatory design processes also with a distinct focus on museums activities, exhibitions and their users, design-based research has rarely made its way to the field of museology. In applying thing-ing in a systematic fashion, museology may benefit from a closer encounter with developments in practice-based design research and design anthropology (Gunn et al., 2013; Koskinen et al., 2011; Vaughan, 2017). This approach usefully emphasises the value of moving design from ‘the lab’ to ‘the field,’ conducting embedded design research and systematic, iterative design experiments and using these experiments as tools of knowledge-formation and theory-building (Markussen, 2017).

The editors have been given a unique opportunity to explore and evaluate practice-based co-design and design-based research on a large scale. From 2016 to 2020 we were part of the Our Museum research and development programme (Our Museum, n.d.), which may be the largest collaborative research programme on museum communication on a global scale. Funded by the VELUX FOUNDATIONS and the Nordea-fonden, the programme included 35 museum professionals and university researchers collaborating on 13 different projects, each of which explored how museums, now and in the past, can facilitate cultural citizenship by co-creation of new modes of communication. Eight projects were based on a ‘design-anthropological’ approach (Gunn et al., 2013) where the key researcher works in ‘the field’ of a museum institution over a sustained period of time as part of the exhibition or communication team. In that way, each project could draw on knowledge generated from working ‘behind the scenes’ (Macdonald, 2002) at a particular museum institution, co-constructing particular exhibitions or communication strategies and analysing and evaluating user interactions. In this way, each project got first-hand knowledge of how particular representations worked for which groups of users, and hence why certain strategies were successful in facilitating users’ cultural citizenship (see the contribution from Nicolaisen et al., this volume). Moreover, by generating ‘designerly’ project knowledge of particular design ecologies in tandem with joint seminar discussions of processes and results across projects the programme combined designerly and scholarly modes of knowledge formation. As a result, systematic design of museum communication co-evolved with analytical museum research based on practical involvement and commitment.



With this volume, we aim to widen and compare the Our Museum programme approach by casting the net as wide as possible in geographical, topical and institutional terms, thus hopefully solidifying the knowledge base on which to establish a set of guidelines and suggestions for future museology and museum practices, which we address in the final chapter of this volume.

## Contributions and chapter overview

As argued previously, experimental approaches are applied both in museology and museum practice as ways of working creatively with museum communication and user empowerment are evolving across the museum field globally and flourishing in a diversity of forms. As such this volume does not pretend to deliver a final manual for how to further this trend. Rather, the ensuing chapters explore the diversity of experiments conducted and the various implications such processes have for our understanding of contemporary and future museum practices, particularly when it comes to reconfiguring relations between institutions, representations and users. Hence, the volume will document and discuss cutting-edge examples of how museums design, apply and assess new modes of audience engagement, participation and co-creation. It does so by critically scrutinising concrete cases of innovative endeavours to redefine museological practice within museums focusing on the redesign of institutions, representations and user relations. Volume authors are all scholars experienced in practice-based museum design and they represent a range of theoretical and empirical traditions, thus providing both range of orientation and depth of insight to the field. Taken together, the volume chapters will illuminate results across a diversity geographical contexts (Europe, North and South Americas), fields and museums – from science centres, cultural-historical museums and art galleries – thus building a reflexive repository of design practices, experiments and experiences that can help strengthen future museum research and design.

Reflecting on the vision of curator G. B. Goode of the Smithsonian Institute, U.S.A. in 1889 that the museum in the future would ‘stand side by side with the library and the laboratory’ Sarah Kenderdine (Chapter 1) reflects on the potential of museums as ‘thinking machines’ with a particular emphasis on the role of immersive visualisation especially as an intermediary between big data, digital archives, gallery spaces and other physical locations as well as modes of networked access. Drawing on her work with the Laboratory for Experimental Museology, Lausanne, and ongoing empirical experiments in museum practice, she explores how museums can make computation experiential, spatial and materialised, embedded and embodied. Also with an emphasis on visualisation, Rodrigo Tisi Paredes, in Chapter 2, discusses how visualisation and immersive environments can be used to stage ‘impossible objects.’ Based on a reading of museums as performance spaces, he reflects on experimental design of two exhibitions developed in collaboration between MESS, a collaborative platform for designers, architects, engineers, sociologists and other professionals, and the Museo Chileno

de Arte Precolombino (The Chilean Museum of Pre-Columbian Art) in Santiago de Chile. Both examples worked in different ways to make pre-Colombian embodied and material heritage present (e.g. through video-holographic mediated 'interaction' between pre-Columbian indigenous people and contemporary museum-goers) and show how immersive exhibition spaces can evoke presence, make objects that cannot be physically transported to the rooms of the museum present to viewers, and finally introduce collaborative processes of creation.

In Chapter 3, Jennifer Carter and Christina Lleras address how recent and painful pasts can be incorporated into the plans of a yet-to-come Museum of Memory in Bogotá, Columbia. Illuminating clear and formulated intentions by the staff of playing an institutional role for the understanding of the traumatic civil war that has tormented the country and thereby activate their individual and collective senses of responsibility and agency toward political intervention, Carter and Lleras consider how the planning team of a national museum-in-the-making – as yet unconstrained by the realities of the everyday functioning of a bricks-and-mortar building – imagined a Colombian memorial museum coming-into-being through the lens of this thinking; and they ask: what happens when process becomes praxis? Along related lines, Erika Grasso and Gianluigi Mangiapane, in Chapter 4, analyse the innovative institutional role of a museum, closed to the public. The Museum of Anthropology and Ethnography at the University of Turin has been closed to the public since 1984. Yet, it has implemented various participatory practices and audience engagements/development projects. The chapter illustrates two related initiatives. The first focused on connecting with young, second-generation immigrants and the Turin LGBTQ community, while the second initiative harnessed the resources of West African diaspora groups as part of museum education and exhibition design. Based on these analyses, the authors discuss how the initiatives have enabled the museum to reflect on its future social and political role.

Shifting focus to representations of natural heritage as part of an immersive display, Rodanthe Tzanelli, in Chapter 5, asks how museums working in a consumerist economy can still fulfil a mission to educate audiences. Mostly advertised as a family leisure attraction, Tropical World in Leeds, UK, offers a repository of flora and fauna from extinguishing species residing originally in colonised regions, and is now home to the largest collection of tropical plants outside Kew Gardens, London. With a focus on the global aesthetic potential of nature, which simultaneously advocates an ethical order of cross-generational sustainability, the garden facilitates a multisensory walk into future potentialities regarding environmental protection that also contains potentials for building new pedagogies of feeling, dialogue and responsibility. Similarly, Mieke Bal, in Chapter 6, departs from a critical and ethical reflection on current consumerist strategies in the museum field. Drawing on the author's successful curation of an exhibition at the Munch Museum in Oslo, Norway, the chapter aims to help advance future visitor experiences in museums by exploring and re-theorising notions of time. Departing from ideas of linear time as constitutive of user experiences at the museum, Bal

considers how shock effects in the exhibition can offer a strategy for challenging museum audiences' position as passive consumers. Hence, the chapter documents how museums may experiment with ways of combining artworks in the museum so that they offer different viewer experiences from those found in mainstream art museums.

Turning back to a view of the institutional role of museums in evaluating and learning from experiments with dissemination of art to the public, Wesley Xavier, Diana Castro and Vanessa Brulon, in Chapter 7, reflect on evidence from three Brazilian museums, The Museum of Conspiracy (Museu da Inconfidência) and Casa dos Contos Museum, located in Ouro Preto (a UNESCO world heritage site), and the Rio Art Museum (MAR). The authors point out that museums perform a dual role. They can be places of cultural reinforcement and mechanisms of distinction, legitimacy and maintenance of consensus and appropriation of the city. Yet, they also have the potential to make users conscious of the very same mechanisms and of contradictions present in cultural spaces and in everyday life. In Chapter 8, Haitham Eid relates the concept of experimental museology to parallel discussions of 'experimental innovation' as an emerging framework in business practice that promotes the expansion of internal experimentations across all organisational levels, and he investigates its prospects for cultural heritage institutions and museums. Through practical examples from the museum field in Australia, the United States and the United Kingdom, the chapter examines various experimental innovation models that encourage creativity among museum staff and advance museums as viable and relevant cultural organisations in society.

In Chapter 9, Palmyre Pierroux, Birgitte Stauge and Rolf Steier invite us further into the museum as a research space for collaborative experimentation. The chapter presents an exhibition experiment at the National Museum of Art, Architecture and Design in Oslo, Norway, in which museum curators and educators, university researchers and an architectural firm collaboratively explored the design and use of virtual reality. Drawing on theories of co-design and participatory design the chapter proposes a new model of multi-professional collaboration in museum practice. The model is based on the authors' examination of the partners' collaborative process with a particular focus on how their respective interests co-evolved over a one-year period of workshops, meetings and mockups, culminating in a full-scale implementation of an exhibition. Also focusing on curator-academic collaboration, Line Nicolaisen, Marianne Achiam and Tina Ibsen, in Chapter 10, examine how science museums may go beyond putting science on display, by purposefully deconstructing scientific knowledge, values and practices and reconstruct these to create environments that appeal to more diverse groups of users. The chapter examines this de-/reconstruction process through the development of an award-winning exhibition *Made in Space* at the Tycho Brahe Planetarium, Copenhagen, Denmark, an exhibition specifically designed to be inclusive to users across the gender spectrum. The authors trace the adaptive transformations of established astrophysics knowledge, values and practices as these progress through a series of workshops involving astrophysicists,

designers and education researchers to finally become embodied in the exhibition. A similar focus on participatory design processes marks Chapter 11, by Anne Scott Sørensen. She considers how participatory design can be applied as a contextualised platform for museum experimentation. Through a case study of a current initiative at The Workers' Museum in Copenhagen, Denmark, Sørensen explores three examples of and participatory design in museum communication: *Activist!* (an exhibition), *Museum Rebels* (a partnership with young activists) and the *Protest Workshop* (an installation and learning centre established during the exhibition) all pointing to the need for elaborate feedback mechanisms and more explicit formulation of outcomes that are relevant to, and can be recognised by, the participants who contributed.

While each chapter in this volume explores experimental museology and museum practices from very different angles, the final, editorial chapter, reflects on commonalities and perspectives across volume sections and chapters in order to provide a set of general guidelines for future experimental museology. Noting the relational, transformational and processual character of the term, the chapter illuminates the necessity for museums to adopt such dimensions into daily practice in order to not only meet the demands of complex communities and often contradictory obligations but to help shape future directions.

## Note

- 1 The first wave of museology was generated within the disciplinary pillars of museum practice (art, archaeology, history and so on). The second wave, the 'new museology,' stressed the institutional role of museums in relation to power and identity, while the third wave stressed museums as catalysts of dialogue and societal action.

## References

- Binder, T., De Michelis, G., Ehn, P., Jacucci, G., Linde, P., & Wagner, I., (2011). *Design things*. The MIT Press.
- Bishop, C. (2014). *Radical museology*. Walther König.
- Bjerregaard, P. (2019). *Exhibitions as research: Experimental methods in museums*. Routledge.
- Blüdnikow, B. (2017). Det skal være vildt og udfordrende [It must be wild and challenging]. *Berlingske*, 24 April. Interview with director Rane Willerslev. <https://www.berlingske.dk/kultur/det-skal-vaere-vildt-og-udfordrende>
- Cross, N. (2007). *Designerly ways of knowing*. Birkhäuser.
- Dewdney, A., Dibosa, D., & Walsh, V. (2013). *Post-critical museology*. Routledge.
- Drotner, K., Dziekan, V., Parry, R., & Schröder, K. C. (Eds.). (2018). *The Routledge handbook of museums, media and communication*. Routledge.
- Drotner, K., & Schröder, K. (2013). *Museum communication and social media: The connected museum*. Routledge.
- Falk, J. H., & Dierking, L. D. (2013). *The museum experience revisited*. Routledge.
- Falk, J. H., & Sheppard, B. K. (2006). *Thriving in the knowledge age: New business models for museums and other cultural institutions*. Altamira Press.
- Gunn, W., Otto, T., & Smith, R. C. (2013). *Design anthropology: Theory and practice*. Bloomsbury.

- Heller, M., Scholz, A., & Wegner, A. (2015). *The laboratory concept: Museum experiments in the Humboldt Lab Dahlem*. Nicolaische Verlagsbuchhandlung.
- Hooper-Greenhill, E. (1992). *Museums and the shaping of knowledge*. Routledge.
- ICOM. (25 July, 2019). ICOM announces the alternative museum definition that will be subject to vote. <https://icom.museum/en/news/>
- IDEOU. (n.d.). Build relevant skills for the modern world. <https://www.ideo.com>
- Janes, R. R., & Sandell, R. (2019). *Museum activism*. Routledge.
- Knell, S. J., MacLeod, S., & Watson, S. (Eds.). (2007). *Museum revolutions: How museums change and are changed*. Routledge.
- Koskinen, I., Zimmerman, J., Binder, T., Redstrom, J., & Wensveen, S. (Eds.). (2011). *Design research through practice: From the lab, field and showroom*. Morgan Kaufmann.
- Macdonald, S. (2002). *Behind the scenes at the science museum*. Berg.
- Macdonald, S. (2007). Interconnecting: Museum visiting and exhibition design. *CoDesign: International Journal of CoCreation in Design and the Arts*, 3, 149–162.
- Macdonald, S., & Basu, P. (2007). *Exhibition experiments*. Blackwell.
- Markussen, T. (2017). Building theory through design. In L. Vaughan (Ed.), *Practice-based design research* (pp. 87–98). Bloomsbury Academic.
- Our Museum. (n.d.). [www.ourmuseum.dk](http://www.ourmuseum.dk)
- Rentschler, R., & Hede, A.-M. (2015). *Museum marketing*. Routledge.
- Schröder, K. C. (2018). Audience reception. In Philip M. Napoli (Ed.), *Mediated communication* (pp. 105–128). De Gruyter Mouton.
- Shelton, A. (2013). Critical museology: A manifesto. *Museums worlds: Advances in research*, 1(1), 7–23.
- Simon, N. (2010). *The participatory museum*. Museum: 2.0.
- Simon, N. (2016). *The art of relevance*. Museum: 2.0.
- Treagust, D. F., Won, M., & Duit, R. (2014). Paradigms in science education research. In N. G. Lederman & S. C. Abell (Eds.), *Handbook of research on science education* (pp. 3–17). Routledge.
- Tzortzi, K. (2015). *Museum space: Where architecture meets museology*. Routledge.
- Vaughan, L. (Ed.). (2017). *Practice based design research*. Bloomsbury.
- Vergo, P. (1989). *The new museology*. Reaktion Books.
- Weibel, P., & Latour, B. (2007). Experimenting with representation: *Iconoclash!* and *Making Things Public*. In S. Macdonald & P. Basu (Eds.), *Exhibition experiments* (pp. 94–108). Blackwell.
- Weil, S. E. (1999). From being about something to being for somebody: The ongoing transformation of the American Museum, *Daedalus*, 128(3), 229–258.

## **PART I**

# Institutions



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# 1

## EXPERIMENTAL MUSEOLOGY: IMMERSIVE VISUALISATION AND CULTURAL (BIG) DATA

*Sarah Kenderdine*

In 1889, Smithsonian Institute curator George B. Goode (1891, p. 427) delivered an anticipatory lecture entitled ‘The future of the museum’ in which he forecast that the museum would one day ‘stand side by side with the library and the laboratory.’ As public cultural institutions, the primary mission of galleries, libraries, archives and museums is to provide citizens with knowledge not only about but *through* their collections and cultural heritage materials. With the advent of the Internet, from the mid-1990s the opportunities emerged for websites of public collections to become a virtual counterpart to the physical museum (Cameron & Kenderdine, 2007; Kreiseler et al., 2017). Much has been made of the democratising potential of the digital transformation of museums (*Museums and machines*, 2016; Taylor & Gibson, 2017). Paradoxically, the mass digitisation of public collections and their vast unseen annals, along with the concomitant metadata, has brought about an information overload that not only defies curation but also arguably further submerges the meaning of the archive in its own data (Vesna, 2007).

In recent decades, museum commentators have hinted that visualisation is a crucial intermediary between the digital archive and its big data, functioning both within galleries and beyond their physical location as networked access. A brief review of online cultural heritage collections reveals a visualisation revolution that requires rethinking the operational framework and the role of the museum in society (see, Windhager et al., 2019). At a deeper level, as Cui (2019) points out, information visualisation has itself altered how we view databases. Nonetheless, a large gap exists between what a human can do with data and what a machine might do. While this problem is often described in terms of a scalability challenge for visual analytics, in reality both human and machine limitations are at the root of this fundamental issue. Creating greater public engagement with collections through visualisation is not the magical solution for



the problems facing museums – it is one step in a revolution of the way in which stories are told, and narrative unfolds.

While, on one level, visualisation is regarded as a simple means of communication, of a one-way information transfer, the critical frontier of advanced analytic tools, visualisations and situated interfaces are those that can bring audiences into meaningful communication with and creative co-production of cultural heritage. The museological turn toward a humanistic ethos has hardly been rapid. Interrogations began as far back as the 1980s, with the application of post-colonial critique to museums (see, Bennett, 1995, 2004), which occurred in parallel with the proposition that it might reinvent itself as the ‘new’ museum (Vergo, 1989). Since this time, museological and curatorial domains have been serially re-born as participatory, responsive, reflexive, inclusive, interrogative, relational and activist, with varying degrees of real structural change (see, Abungu, 2004; Butts, 2002; Chipangura & Chipangura, 2020; Coleman, 2018; Mithlo, 2004; Vawda, 2019).

Experimental museology not only embraces this constantly changing landscape, it also challenges the mentality that feigns to ‘open up’ the museum through digitalisation while leaving intact its outdated, linear and canonical ethos as the chief custodian of heritage and authority on history. My own work in the field of experimental visualisation has made a departure from these institutional orthodoxies, as it has sought to transform public engagement with heritage through the application of aesthetic practice to cultural (big) data and the design of novel interactive frameworks. One of the earliest systems I created, *The Virtual Room*, was realised for Museum Victoria, Australia. Designed as a permanent gallery for situated experience in 2003, this stereographic interactive and immersive environment was one of the world’s first large-scale visualisation systems for the mass public (see, Kenderdine & Hart, 2003). I then went on to collaborate extensively with the iCinema Centre for Interactive Cinema Research at UNSW Australia and then to lead two research laboratories in the domain: the Applied Laboratory for Interactive Visualisation and Embodiment (ALiVE), Hong Kong, and UNSW Sydney’s Expanded Perception and Interaction Centre (EPICentre).

In 2017, I established the Laboratory for Experimental Museology (eM+) at École polytechnique fédérale de Lausanne (EPFL) in Switzerland (Laboratory for Experimental Museology, n.d.). eM+ combines research from scientific, artistic and humanistic perspectives and promotes post-cinematic, multisensory experiences using experimental platforms. Its location in a 1,500-square-metre warehouse is home to nine large-scale visualisation systems, enabling transdisciplinary research at the intersection of aesthetics, immersive visualisation, interactive narrative and cultural data.

Despite such ground-breaking work, the expansion of the museological realm into the rich sensory, perceptual and social potential of experimental visualisation remains uncharted territory for many museums. This impasse was nowhere more evident after collecting organisations in 2020 around the world were closed to publics during the COVID-19 crisis, museum and gallery curators, directors and collection managers have been prompted to fling open the portals of their

archives online. That a plethora of ‘virtual visits’ have plunged us into emptied gallery spaces illustrates just how many institutions have failed to fully understand the needs and desires of their audiences. In an era of networked digital culture, as set out by Hull and Scott (2013), many members of the public are able and ready to exploit the creative and participatory opportunities via the combined affordances of digital archives and social media.

Mapping out a possible path for such a future museum, this chapter elucidates some of the innovations in visualisation that I have developed in the domain of experimental museology, categorised as three approaches: collections visualisation, embodied visualisation and spatial and temporal visualisation. Before doing so, I provide here a brief overview of the state of the art of visualisation in the cultural heritage sector, the context out of which my own expertise continues to evolve.

## Visualisation and experimental museology

Mapping data to visual representations has been used for centuries to reveal patterns, to communicate complex ideas and to tell stories. For Leonardo da Vinci, visuality in painting was the paragon of apprehension, surpassing both poetry and music. Daniel Albright (2014), in his theory of ‘panaesthetics,’ examines the way in which one art form can be translated to another (e.g. a painting is transformed into a musical composition).

Image-making for Harald Klinke (2014, p. 5) is not a ‘simple process of externalisation of internal pictures – the process of drawing and painting [is] central to the process of thinking. It is not perception alone, but the complex process of picture-making that grasps reality and gives ideas about the world some sort of order.’ At various junctures in the discourse of the humanities, scholars have pronounced new notions about how humans constitute reality. Both W.J.T. Mitchell’s ‘pictorial turn’ (1994) and Erwin Panofsky’s ‘iconology’ (1939) are theories that focussed on images rather than language. Ernst Cassirer, on the other hand, characterised images as ‘giving sense to the world by symbolising ... experience in a process of perception and representation’ (Cassirer quoted in Klinke, 2014, p. 6). As such, and as Klinke contends (2014, p. 6), ‘the question of images and their epistemic content ultimately points back to the human, who perceives, imagines and creates pictures. ... The power of images stems not from the images themselves, but from humans, who give them meaning.’

‘Visualisation’ encompasses these theories of the image and the function of their creation as a cognitive, transformative act. Visualisation, in the words of Scagnetti (2011), can be described as ‘a medium for communication (or persuasion, or engagement)’; a tool for understanding (or problem solving, planning, orienting)’; a ‘visual rhetoric’ made of objects, including relations among those objects and tools for managing the relation between objects and environment; and as a ‘visual epistemology’ describing how we interpret the world. ‘Information visualisation’ is a graphical representation of (digital) data specifically designed to harness and augment basic powers of human perception for the task of comprehending large-

scale information, and interactive visual representations of data are proven to further ‘amplify cognition’ (Card et al., 1999). Suffice to say, in response to digitisation, databases and networks, visualisation is becoming a dominant force through all disciplines. The application of digital visualisation techniques to cultural heritage data sets is today celebrated as a new and innovative research methodology (Bailey & Pregill, 2014).

In defining visualisation as a representation, interpretive and revelatory, visualisation is both science and language. Like science, it represents data accurately and methodically, allowing us to detect underlying patterns, trends and relationships and, like language, it is used to convey meaning. Through visualisation, data is encoded into symbols and thus forms a system of semiotics. And yet visualisation poses specific problems for knowledge production.

As design and humanities scholar Johanna Drucker points out in the preface to her book *Graphesis* (2014), the reader of visualisations must learn the conventions of the diagrammatic knowledge form as this syntax is not inherent. These forms of visualisation may be infinitely varied and/or highly specific. In other words, graphic inscription itself is defined by characteristics that makes it hard to analyse. Unlike language, it is not a system that has a stable code, this makes visual analysis and visibility different from linguistics and language-based notational systems. Furthermore, images may conceal the decisions and processes on which they are based and appear to simply represent ‘knowledge.’ Visual representation reveals what is at stake in the distinction between *information* and *interpretation* within humanities practices. Drucker (2014, preface) argues that ‘generative,’ ‘dynamic’ and ‘diagrammatic’ images *produce* knowledge and that visualisations constitute information that possess the same legitimacy as any other human expression, such as written text. For Drucker, visualisations are ‘graphical forms expressing interpretation’ (2014, p. 54), and that because of the ‘fundamentally interpreted condition on which data is constructed’ (2014, p. 129) visualisations are a feature of both ‘knowledge production and [its] presentation’ (2014, p. 69).

The visualisation of cultural heritage collections began in the mid-1990s, as humanities research sought to expand the possibilities of descriptive and analytic data in object notation, metadata and the standard ‘simple search’ interface or inventory. On one hand, the constraints of relying on collection metadata as a search tool were immediately evident, it being uneven, unfinished and sometimes subjective. On the other hand, information retrieval itself, as underscored by Rogers et al. (2014), has presented serious limitations as a model for meaningful public engagement with cultural heritage collections.

Visualisation as an experimental approach is nonetheless unique in its potential to support all kinds of informal learning spaces. Cultural heritage collections comprise a potentially vast array of encounters within varied institutional settings, and experimental applications of visualisation have the potential to open up the museological realm to exploration both within and beyond the institutional walls. As outlined by Falk and Dierking (2019), the first methods to enhance the understanding of data through new visualisation literacies arose from research

partnerships between science museums and educators, often with a specific focus on visual literacy or analytics as an enabler for scientific learning, study, or knowledge transfer (i.e., Kenderdine et al., 2016; Lock et al., 2018; Moss, 2019). Along these lines, visualisation has been developed as an effective tool for education, journalism and research knowledge transfer. Yet, when a visualisation is presented within the confines of the museum itself it is often curtailed in its capacity to respond to or collaborate with audiences, due to the fact that it is often employed to facilitate one-way communication, civic education or audience survey.

In contrast, creative approaches to interactive aesthetics and design have taken more inventive turns in the hands of artists (Jacobs et al., 2016). Countless examples of this rich field are documented in the proceedings of the Electronic Visualisation and Arts conferences (n.d.), which emerged from the Computer Arts Society, established in 1969, demonstrating the extent to which artists have been innovating throughout the entire modern history of computational science. Arguably evolving from media artists' initiatives, unique research partnerships have flourished in recent years, uniting creatives with educators, technologists, entertainment and gaming industries, heritage professionals and cultural institutions. These interdisciplinary alliances have fostered a burgeoning of innovation in sensory experiences via the creative exploration of multimodal technologies and dimensional realities, interface design, interactivity and data visualisation (Cantoni et al., 2019).

The domain of digital humanities emerged during the same decade (see, Schreibman et al., 2004; 2015). Collaboration between the digital humanities and electronic arts on the visualisation of cultural material and use of computational methods has however been very limited, a trend that Jänicke et al. (2017) identified in a study of the disciplinary crossover between the humanities and visualisation research communities between 2005 and 2015. Addressing this gap, Johanna Drucker (2011; 2014; 2015) has comprehensively theorised the visual and visualisation in the digital humanities. Drucker (2014) specifically emphasises the role of visual cultures in contesting accepted forms of authority, through intellectual tools of imaginative thought, creative and aesthetic expression, as well as insisting on the role of subjectivity within all forms of human activity. Delineating the capacity of visualisation as a tool for critical response, Drucker (2013) points to a shift from the idea that the interface is an object, to its being the locus of interpretive activity, citing forensic features, distributed materiality, performative acts, enunciative dimensions and systemic ecologies as some of the potentially rich modalities of the medium.

In contrast, empiricist notions of data have, as Kitchin (2014) highlights, dominated mainstream information visualisation because they provide a convenient narrative for the aspirations of knowledge-oriented businesses in selling their services (e.g., for data brokers, data analytic providers, software vendors, consultancies). Along similar lines, Mayr and Windhager (2018, p. 3) delineate the drawbacks and benefits from a cognitive perspective of 'standard techniques for

visually representing spatiotemporal data (coordinated linked views, animation or slideshows, layer superimposition, juxtaposition, and space-time cube representations).’ As Chris Sula describes, visualisation can be used to aid decision making as well as facilitate collaboration, engaging new audiences and fostering higher levels of understanding. He extends a typical cognitive science approach to visualisation, amplifying the emotional, aesthetic, social, collaborative and shared responses to visualisations as fruitful areas of visualisation research for cultural heritage. In order to provide a counternarrative for information-based digital humanities, Drucker and Nowviskie (2004, para. 45) specifically adopt the term ‘speculative,’ to define approaches that ‘make it possible for subjective interpretation to have a role in shaping the *processes*, not just the *structures*, of digital humanities.’

Visualisations have a crucial relationship to the physical realms of place, beings and matter – a dimension that has been sorely overlooked. Alongside the notion of digital materiality, an awareness is needed of the importance of the situated experience for knowledge transfer that engages both mind and body. Signalling the complexity of the domain of visualisation for museums, Windhager et al. (2019) argue that interactive visualisation must utilise both the screen and the onsite experience in a physical setting. Not et al. (2019) further this claim to promote tangible interaction as a means to augment digital artefacts, while Claes and Moere (2015) outline the role of tangible interaction on public information displays in increased information discovery.

Questions have however been raised by Kreiseler et al. (2017) regarding the quality of public engagement on offer in forms of visualisation designed with Web architecture in mind, and how explorable they actually make a collection. The increasing role of data science in this field has also brought with it ethical dilemmas, such as bias across the originating data and the algorithms and visualisations deployed to interpret and present it. These criticisms join calls for greater transparency, explainability and interpretability (Baur et al., 2020; Blackwell, 2015), a sentiment perhaps most aptly encapsulated in Whitelaw’s (2015) proposition for more ‘generous interfaces’ for digital cultural collections. Ultimately, the need to overcome the data-centric view of automating knowledge and grapple with the human-computer interaction dimensions associated with a dynamic knowledge exchange remains intact (Wang et al., 2009).

The application of experimental museological approaches to visualisation engines is a significant new avenue for engagement with the mass data of cultural heritage. The experimental museology ethos provides an array of interactive models, tools and processes that support large-scale collections, including complexity, relationships, dynamism, aesthetics and embedded narratives (i.e., emergent interactive narrative). These approaches also harness various techniques aimed at engaging participants in sense-making, which can amplify cognition via affective modes and multi-modal interfaces that enable content-based adaptation to emotional experiences. These and other affordances are illustrated in the three approaches I am about to outline.

## Collections visualisation

Decades of digitisation have made a wealth of cultural material available online and offline. The Victoria and Albert Museum's collection offers over one million items, and Europeana's aggregated archives number some 31 million, while the National Library of Australia's Trove hosts around 128 million digitised newspaper articles. Many of the interfaces employed what Shneiderman (1996, p. 337) most famously heralded as the 'Visualisation Information-Seeking Mantra,' which entails 'overview first, zoom and filter, then details on demand.' More than 25 years later, this logic remains prevalent in the design strategies of websites of cultural organisations.

The ways that collections can be reassembled, mined and experienced are proliferating as are paradigm-changing technologies such as machine learning, computer vision and novel visualisations. Digital tools for the past decade have in turn enabled a wide array of interaction technique. On the one hand, visualisation of cultural heritage data has to encompass sense-making, from foraging to synthesis. On the other hand, the integration of algorithms and visualisation techniques for large amounts of data in visual analytics can be applied as part of these interactive aspects to help reduce the cognitive burden of searching as well as the mismatch between data size and complexity, and human acuity (Cui, 2019).

I was presented in 2011 with the challenge of creating a database for approximately 100,000 objects, a small subset of the 16 million records held in Museum Victoria's vast collections (*mArchive*). As part of this endeavour, I established a number of new concepts for visualisation, including the notion of 'cultural data sculpting' (Kenderdine et al., 2012), where users are provided with multimodal analytical tools to shape heterogeneous datasets through their visualisation in an interactive and immersive environment (Kenderdine et al., 2012). Sculpting information in this way specifically enables users to 'explore cultural data as a cultural artifact so as to expose a multiplicity of narratives that may be arranged and projected instantaneously atop the data archive architecture and its metadata' (Kenderdine et al., 2012, p. 205). The resulting application took the form of a real-time curating machine and a shared playground for interaction that opened up the museum storehouse. The non-text-based interactive collections engine was installed in an omnidirectional, omnispatial virtual environment designed for about 30 people at any one time (Kenderdine & Hart, 2011; 2014). *T\_Visionarium*, is yet another example that reveals the power of aesthetic transcription as a fundamental parameter for archival reuse. Developed over various iterations from 2004 to 2009 at UNSW Sydney's iCinema, the core of the project was 24 hours of television footage. Following machine and human analysis and classification of this footage, a database of 24,000 hours of segments was established. As the viewer interacted, the 3D panoramic display of clips would automatically generate a live re-composition of the archive in a transnarrative experience (see Bennett, 2007).

Exposing the structure and processes of subjective interpretation through visual means are at the heart of cultural visualisation. Yet, as visual representations are

used with greater frequency within the digital humanities, the instability of graphical systems are too often bracketed in a rush to make use of visual conventions with roots in the representation of statistical information. As a result, the interpretative richness of visuality gets sacrificed as well. And these forms of visualisation are certainly not suited to the fundamental process of doing interpretation in visual form. What cultural collections need most of all is to apply a humanistic model of interface and interaction that emphasises exploration and interpretation over task and information retrieval.

Overcoming these barriers to engagement was a primary interest in the works exhibition, *Infinity Room 2*, presented in 2019 at ArtLab EPFL, Lausanne. Celebrating the 50th anniversary of EPFL's foundation, the exhibition transformed some of the school's vast archives, records and assemblages into a series of experimental visualisations. The first of the total of eight installations, excavated the collection *Open Science* to create an eclectic assemblage of fifty iconic objects from EPFL, exhibited as an array of 'augmented' storage lockers. Using a tablet as an augmented reality interface, participants were able to 'open' a series of doors, each revealing an unexpected 3D object within, as a contemporary *Wunderkammer* of art and science.

Another major EPFL collection, the *Alain Herzog Archive* is a sweeping photographic vision of campus life via half a million images taken over a quarter century. With no extant metadata available except for dates, the collection was visualised for the installation using machine learning algorithms to hone it into themes of science or architecture, which were then narrowed into a range of subthemes, including robots, portraits and more. Oscillating between 'distant reading' patterns deduced from the coherence of the tagging, through to large-scale projections of single images, this process recomposited the archive, moving between recognisable classifications and surprising juxtapositions, sometimes with humorous results for EPFL staff, students and alumni.

The centrepiece of *Infinity Room 2*, *Jazz Luminaries* situated viewers within a social network constellation of the jazz greats in the Montreux Jazz Archive. The work transforms this UNESCO Memory of the World collection, recently digitised at EPFL, into an interactive installation, which combines machine learning, computer vision and novel visualisations, all of which are engaging artists, scientists and the public who are able to generate new meanings out of the archive. Reclined under the full dome in a hemispheric gestalt, participants in *Jazz Luminaries* were able to generate an experience of their own, to unfold the social network of more than 5,400 musicians whose recordings are held in the Montreux Jazz Archive (Montreux, n.d.).

Through a unique multimodal interface *Jazz Luminaries* allows viewers to cut, remix and replay over 13,000 videos of those 5,400 jazz greats, displayed in a full dome measuring six metres in diameter. Each musician is represented by a node, which is interconnected to other Montreux Jazz Festival artists based on their historic collaboration over the years. Navigating this vast archive enlivens the constellation of relationships between these artists. The proximity of the nodes in

the network (and thus their link strength) are based on the number of times any one musician played with another artist at the festival. At the centre of this universe is the legendary B.B. King, the ‘King of the Blues,’ who jammed with countless others having, as *The Sydney Morning Herald* reported in 2006, appeared at Montreux for more than 20 years (Figures 1.1 and 1.2).

Hermetically sealed in personalised headphones, twelve participants at a time lounge beneath the jazz ‘star’ map under a spherical dome. A spherical ball acts as the interface and its operations replace the text-based search with auditory strategies of ‘tuning.’ This interface emulates the curvature of the dome itself, which has an ability to completely envelope the ‘spherical gestalt of the human visual field,’ as McConville claimed (2007, p. 77). Similar to radio channel surfing, participants move the selector over the nodes, and the move serves to activate the sound files linked to each artist as well as those of their collaborators. Surfing produces a rapidly changing sonic cloud or an anarchic assemblage of clips. Cutting between discovered video fragments, the participant can select those with the most intensity or reciprocity. Choosing the clip again rewards them with the performance in its entirety. Shedding its original framed recorded form, the footage explodes into a fractal of perspectives.

The participant performs this ‘remix’ for all the other people who recline around them under the dome. As they surf, they are intimately aware that they are sharing a selection with their counterparts. Socialising the interface in this way, those gathered lay back and enjoy a vibrant unfolding of the Montreux Jazz Archive at the hands, and ears, of others. Centred on properties of recollection, regeneration and reworking, as well as rich modes of visualisation, interaction engagement and serendipitous discovery, *Jazz Luminaries* marks the shift from a linear classification of objects within inventories to their remix. It embodies the paradigmatic move from the traditional model of stewardship (of curation and managed access) to one of co-production and new forms of distributed authority.

This future has yet to arrive in the museological mainstream. Windhager et al. (2016, p. 75) underscore that ‘digital interfaces mostly strive to augment and enrich traditional in situ-interaction with collections,’ while the remote exploration of cultural collections on screens still falls short of the *in-situ* experience of a museum collection. The full potential of visualisation requires designing specific suitable prosthetic architectures that place audiences at the centre of the archive.

## Embodied visualisation

The communication and transmission of cultural expression crucially relies on enacted practices, which are intimately linked through people and their physical being. Perpetuated through forms including performance, dance, song or ritual acts, such heritage is kept alive through repeated, ever-changing acts, which form ‘repertoires’ (Taylor, 2003). In some instances, however, such practices have vanished, due to the rupture of a community’s cultural transmission. In other



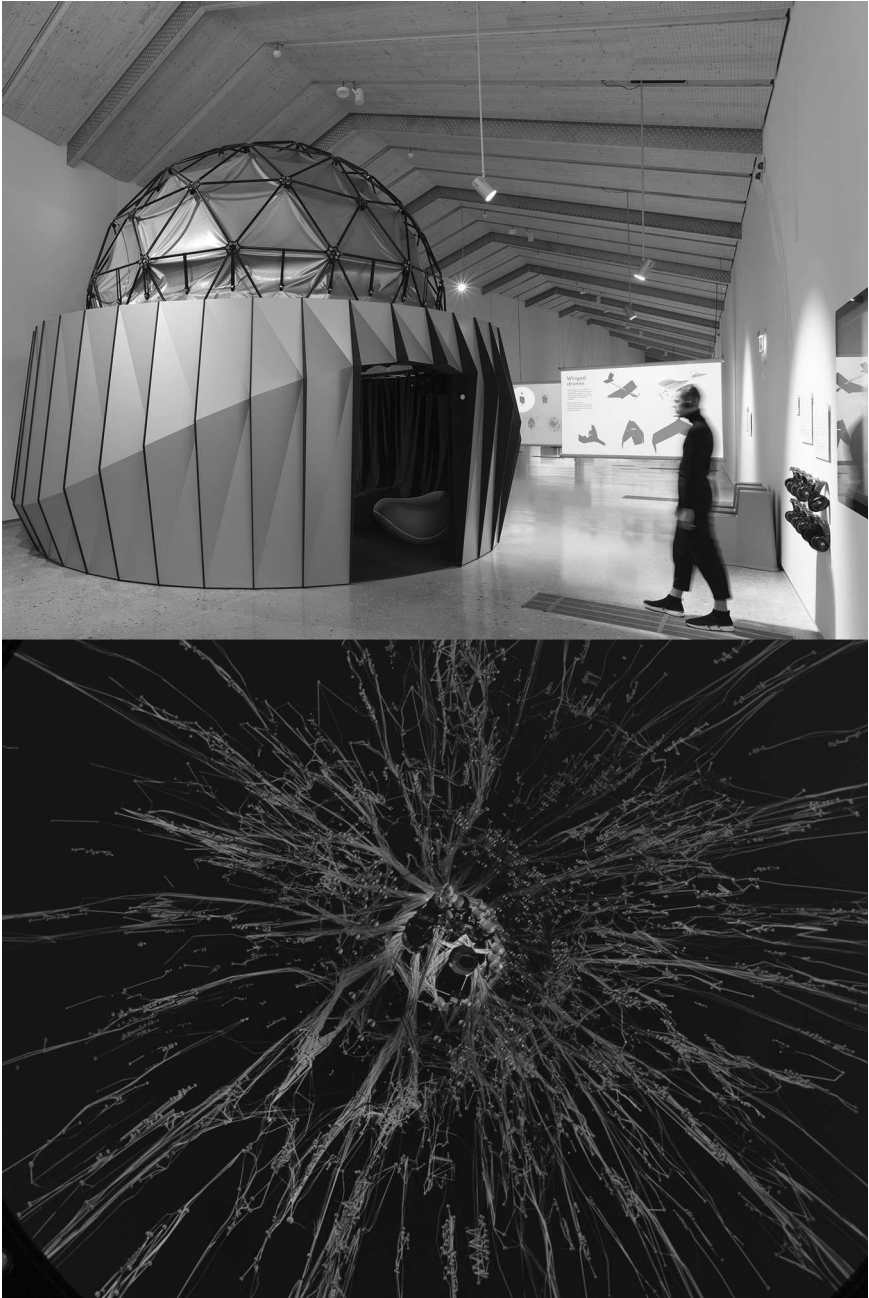


FIGURE 1.1 *Jazz Luminaries, Infinity Room II*, ArtLab 2019. Photo: Catherine Leutenegger.



**FIGURE 1.2** *Jazz Luminaries, Infinity Room II*, ArtLab 2019. Photos: Catherine Leutenegger/Sarah Kenderdine.

instances, there has been an appropriation or revival of a practice from the past, as in the case of popular historical re-enactment, but even these forms feature attributes of tacit and embodied expert knowledge.

As the domain of intangible heritage has garnered increasing scholarly attention, the theorisation of the body as a repository of knowledge has begun to consolidate across a number of disciplines. Although the notion is not new in performance studies, a novel understanding has recently emerged that view performers' or actors' embodied capacity as generative archives. The premise is that otherwise inaccessible knowledge can be unlocked via embodied acts – also called 'embodied historiography' (Branch & Hughes, 2014; Johnson, 2015). This notion segues into my own work concerning embodied knowledge archives and their experimental visualisation (Chao et al., 2018; Kenderdine, 2015; Kenderdine & Hart, 2014). The primary visualisation methodologies I have developed as part of a novel embodied historiography centre on the means to create a digital record of tacit knowledge. Most of all, this documentation must be accessible to others at a later date, especially without the presence of the original expert to demonstrate or teach that knowledge.

A prime example of this work is the Hong Kong Martial Arts Living Archive (HKMALA), established in 2012, which applies new digital methods to

reconstruct, analyse and transmit Chinese embodied heritage. HKMALA is an ongoing research collaboration between the International Guoshu Association, City University of Hong Kong, and eM+ at EPFL. From the early- to mid-20th century, Hong Kong provided refuge to teeming thousands of immigrants from mainland China, and among them were some of the most prominent martial artists in the world. With globalisation, urbanisation and a dwindling number of practitioners, this living heritage is in danger of being lost. Kung fu hinges on person-to-person exchange between an expert and a novice and requires the imitation of movements of a master or an instructor (Chan et al., 2011; Komura et al., 2006). For this reason, HKMALA undertakes its unique approach to embodied historiography through performance-based reconstruction to build an archive that currently contains nineteen styles by 33 elite practitioners and over 130 motion capture datasets. As part of the endeavour to institute the body as the principal site for embodied knowledge, we have developed a range of digital prostheses, from using life-size models and 3D interfaces, to interactive real-time applications in large-scale virtual environments (Chao et al., 2016; 2018; Kenderdine & Shaw, 2016; 2018).

Multimodal participation is a crucial tool, manifest in the HKMALA *Pose Matching* installation. Featured in the ArtLab exhibition *Kung Fu Motion* in 2018, on a human-scaled projection screen, the participant is prompted to take up the stance of a ‘master.’ Once in position, sensors ‘motion capture’ their movement and body position. These are matched, with a video sequence of poses presented on the screen, originally performed by a kung fu master. As the participant configures their body to match the poses, a corporeal conjunction is created, in which the somatic memory of the kung fu master is imprinted on their body. Beyond its playful aspect, this installation could be an invaluable teaching and learning tool for current and future generations of kung fu practitioners (Lindgren & Johnson-Glenberg, 2013).

A number of the HKMALA datasets have been reconfigured as interactive environments, supporting research showing that immersive visualisations offer dynamic situations for learning and embodied cognition (Stefaniak, 2014). Situated in the Re-ACTOR system, a six-sided, panoptic virtual reality environment at eM+, the *Kung Fu Visualisation* brings together historical materials with creative visualisations of one of the kung fu master’s reenacted performances. On each of Re-ACTOR’s six sides, an interactive control panel allows visitors to view six different visualisation styles, elucidating the underlying dynamics of the master’s movements. These visualisations deploy advanced documentation processes, including motion capture, motion-over-time analytics, 3D reconstruction and panoramic video, exposing the depth and array of intricate dynamics in the embodied repertoire (Figure 1.3).

This project also harnesses the fast-paced developments arising in cinema and game industries, such as volumetric video and 3D animation based on motion capture. The Digital reconstruction of Lam Sai Wing (2018), is a powerful example of what is possible in the digital reconstruction of archives of embodied



**FIGURE 1.3** Hong Kong Martial Arts Living Archive: motion capture and *Kung Fu Visualisation*. Photos: Sarah Kenderdine.

transmission. Lam Sai Wing was one of the most important early-20th century kung fu master practitioners of the south Chinese tradition in Hong Kong. Taking up technologies that have perfected the manufacture of 3D human avatars, the virtual reconstruction of the late master's facial and bodily features from old photographic portraits were mapped onto a sequence of his martial arts movements. While, in yet another example of the power of visualisation for transmission, these moves were simulated with data extracted from contemporary reenactments performed by his descendant, Master Oscar Lam.

The ongoing difficulty of ensuring such heritage can be re-performed and that its repertoire is made available to the body is a major challenge for experimental museology. It is, however, promising that the visualisation of embodied acts provides the opportunity for both the documentation and reproduction of tacit knowledge for future generations.

### Spatial and temporal visualisation

The final part of this chapter presents some of my work on post-cartographic and deep mapping, which has sought to reconstruct the role of narrative in the visualisation of vast temporally and spatially distributed sites and objects. Early visualisation projects in this domain feature a 3D, 360-degree panoramic screen, augmented in order to enliven participants within an interactive 'omnidirectional' environment. *PLACE-Hampi*, for example, is viewed from a motorised platform, which a single visitor is able to control while up to 25 people are in the space in

360 degrees and 3D (see, Kenderdine, 2013). Focussed on significant archaeological, historical and sacred locations of the World Heritage Site Vijayanagara (Hampi), South India, *PLACE-Hampi* creates an embodied theatre of participation in the drama of Hindu mythology (see, Kenderdine, 2007). Comprising high-resolution augmented stereoscopic panoramas and surrounded by a rich sound field of ambisonic recordings, the viewer in *PLACE-Hampi* is co-present in their narrative rediscovery of the cultural landscape.

As critical cartographers Kitchin and Dodge (2007) have argued, maps are always in the state of becoming, brought into being through embodied social and technical practices to solve relational problems such as plotting, planning or navigating. Maps of this kind thus emerge through a mix of creative, reflexive, playful, tactile and habitual practices as a co-constitutive process – a production that is constantly in motion. In parallel, according to Buchmüller et al. (2019), visualisation design is moving from presenting big data as a mosaic, a river or series of ribbons, in a map, fixed in time, onto a moving stream or rug that captures collective movement and spatial-temporal dimensions dynamically.

An example of this approach is the *Atlas of Maritime Buddhism*, a large-scale mapping project that I began in 2016. The aim of the *Atlas* is to relate the story of the spread of Buddhism from India through the seaports of Southeast Asia and South China Sea, which triggered a profusion of cross-cultural exchanges that had a profound impact on Asian and world history.

The *Atlas* comprises multiple overlapping chronological events, supported by archaeological and historical evidence that has never been brought together before from disparate spatial locations represented by approximately 170 generalised information layers. With contributions from researchers around the world, it includes geospatial coordinates, gazetteers for hundreds of sites; images of archaeological sites and artefacts, religious and geopolitical empires and zones of influence, inscriptions and transcriptions of Sanskrit texts, historic maps, accounts by Buddhist monks and ambassadors, records of trade, hydrographic data, monsoon records and shipwreck datasets. Thousands of locations have also been recorded in ultra-high resolution 3D panoramic and spherical imaging across hundreds of world heritage sites, spread across 12 countries. In addition, hundreds of priceless sculptures from national and local museums have been modelled in 3D, to create an extraordinary survey of iconographic transformation throughout the region.

Given this vast heterogeneity, the *Atlas* has demanded a new form of visual, cartographic and time-space narrative strategy, beyond traditional forms of interpretation (see, Presner & Shepard, 2015). The schema for *Atlas* supports narrative construction via the world's first deep-mapping data browser – an interface for exploring narrative patterns, processes and phenomena. This deep mapping schema converts the chart of information from a mimetic object (based on a perceived territory) into a navigational one, where 'everything is on the move' (November et al., 2010, p. 595). Conceiving of maps through a deep-mapping schema, following Ridge et al. (2013), assumes that they are never fully formed (or

static) but that they instead emerge in dynamic navigational processes where emergent narrative formations are possible.

The *Atlas* then comes to life in its specially conceived 360-degree, omnidirectional panoramic environment, as an interpretive tool for the space in which culture and body converge within a topological map of place. In this way, the visualisation of cultural cartography in the *Atlas of Maritime Buddhism* opens onto a thousand plateaus where the stories can be remapped in myriad dimensions and directions, demonstrating the potential for visualisation to enact a powerful re-thinking of museological objects as deep maps of space and time. Such a re-imagining of maps fundamentally changes the focus of cartography, away from notions of accuracy, design, aesthetics and power. It shifts mapping toward the complex, contingent interactions between the researchers collecting the data, the designers of the information visualisation system, its users, geo-temporal data and the nonphysical aspects of place. The reconfiguration of this vast data set as an immersive, interactive ‘deep map’ addresses the fundamental challenges of narrative coherence for museum audiences exploring digital cultural atlases.

## Conclusion

In this chapter, I have provided a panorama of the changing landscape of visualisation as it is emerging from my own work in experimental museology, in conjunction with recent research in data science and the digital humanities. I have also demonstrated that the influence and input from artists has also been important to the progress in visualisation. What is evident today is that many cultural institutions have taken great pains to become more participatory and audience focussed, in tandem with a shift of principles within heritage science. The framework of experimental museology offers ideas, creativity and tools needed for the application of visualisation to cultural heritage collections. However, more interdisciplinary work remains to be done to ascertain how and where physical-digital interaction in big data visualisation and technology design can be balanced and will effectively support public engagement and learning, experience and ability. To reconfigure the future museum as an avenue for sensory discovery, openness and participation, that incorporates embodied as well deep mapping approaches, new avenues must be continuously generated.

## Bibliography

- Abungu, G. (2004). Democratising museums and heritage: Ten years on. *South African Museums Association Bulletin*, 30(1), 3–5.
- Albright, D. (2014). *Panaesthetics: On the unity and diversity of the arts*. Yale University Press.
- Bailey, J., & Pregill, L. (2014). Speak to the eyes: The history and practice of information visualization. *Art Documentation: Journal of the Art Libraries Society of North America*, 33(2), 168–191.

- Baur, T., Heimerl, A., Lingenfelder, F., Wagner, J., Valstar, M. F., Schuller, B., & André, E. (2020). eXplainable cooperative machine learning with NOVA. *KI – Künstliche Intelligenz*, 34, 143–164.
- Bennett, T. (1995). *The birth of the museum: History, theory, politics*. Routledge.
- Bennett, T. (2004). *Pasts beyond memories: Evolution, museums, colonialism*. Routledge.
- Bennett, J. (2007). *T\_Visionarium: A user's guide*. UNSW Press/ZKM.
- Blackwell, A. F. (2015). Interacting with an inferred world: The challenge of machine learning for humane computer interaction. *Aarhus Series on Human Centered Computing*, 1(1), 1–12.
- Bradley, K. (2015). Why museums hide masterpieces away. BBC Culture online. 23 January 2015. <http://www.bbc.com/culture/story/20150123-7-masterpieces-you-cant-see>
- Branch, B., & Hughes, E. (2014). Embodied historiography: Rupture as the performance of history. *Performance Research*, 19(6), 108–115.
- Buchmüller, J., Jäckle, D., Cakmak, E., Brandes, U., & Keim, D. A. (2019). MotionRugs: Visualizing collective trends in space and time. *IEEE Transactions on Visualization and Computer Graphics*.
- Butts, D. (2002). Māori and museums: The politics of indigenous recognition. In R. Sandell, (Ed.), *Museums, society, inequality* (pp. 225–243). Routledge.
- Cameron, F., & Kenderdine, S. (2007). *Theorizing digital cultural heritage: A critical discourse*. MIT Press.
- Cantoni, V., Mosconi, M., & Setti, A. (2019). Technological innovation and its enhancement of cultural heritage. *2019 IEEE International Symposium on Innovations in Intelligent Systems and Applications (INISTA)*, 1–6.
- Card, S.K., Mackinlay, J., & Shneiderman, B. (1999). *Readings in information visualization: Using vision to think*. Morgan Kaufmann.
- Cassirer, E. (1923–1925). *The philosophy of symbolic forms* (J. M. Krois, Trans.), 4 volumes. Yale University Press.
- Chipangura, N., & Chipangura, P. (2020). Community museums and rethinking the colonial frame of national museums in Zimbabwe. *Museum Management and Curatorship*, 35(1), 36–56.
- Claes, S., & Moere, A. V. (2015). The role of tangible interaction in exploring information on public visualization displays. *Proceedings of the 4th International Symposium on Pervasive Displays*, 201–207.
- Chan, J., Leung, H., Tang, J., & Komura, T. (2011). A virtual reality dance training system using motion capture technology. *IEEE Transactions on Learning Technologies*, 4(2), 187–195.
- Chao, H., Kenderdine, S., & Shaw, J. (Eds). (2016). *300 Years of Hakka Kung Fu: Digital vision of its legacy and future*. International Guoshu Association.
- Chao, H., Delbridge, M., Kenderdine, S., Nicholson, L., & Shaw, J. (2018). Kapturing Kung Fu: Future proofing the Hong Kong Martial Arts Living Archive. In S. Whatley, R. Cisneros, & A. Sabiescu (Eds.), *Digital echoes* (pp. 249–264). Palgrave.
- Coleman, L. (2018). *Understanding and implementing inclusion in museums*. Rowman & Littlefield.
- Cui, W. (2019). Visual analytics: A comprehensive overview. *IEEE Access*, 7, 81555–81573. Scopus.
- Davey, E. (2010, 31 March). *The 99% of the British Museum not on show*. BBC London online. [http://news.bbc.co.uk/local/london/hi/people\\_and\\_places/arts\\_and\\_culture/newsid\\_8595000/8595594.stm](http://news.bbc.co.uk/local/london/hi/people_and_places/arts_and_culture/newsid_8595000/8595594.stm)

- Digital reconstruction of Lam Sai Wing, (2018). Created for the Hong Kong Martial Arts Living Archive (HKMALA), by Sarah Kenderdine's Laboratory for Experimental Museology (eM+) at EPFL and Jeffrey Shaw of the CityU Hong Kong.
- Drucker, J. (2011). Humanities approaches to graphical display. *Digital Humanities Quarterly* 5(1), 1–21.
- Drucker, J. (2013). Performative materiality and theoretical approaches to interface. *DHQ: Digital Humanities Quarterly*, 7(1), 1.
- Drucker, J. (2014). *Graphesis: Visual forms of knowledge production*. Harvard University Press.
- Drucker, J. (2015). Graphical approaches to the digital humanities. In S. Schreibman, R. Siemens, & J. Unsworth (Eds.), *A new companion to digital humanities* (pp. 238–250). John Wiley & Sons.
- Drucker, J., & Nowviskie, B. (2004). Speculative computing: Aesthetic provocations in humanities computing. In S. Schreibman, R. Siemens, & J. Unsworth (Eds.), *A companion to digital humanities*. Blackwell.
- Falk, J. H. & Dierking, L. D. (2019). Reimagining public science education: the role of lifelong free-choice learning. *Disciplinary and Interdisciplinary Science Education Research*, 1(10). <https://doi.org/10.1186/s43031-019-0013-x>
- Goode, G. B. (1891). *The museums of the future*. Smithsonian Institution.
- Hull, G., & Scott, J. (2013). Curating and creating online: Identity, authorship, and viewing in a digital age. In K. Drotner & K. C. Schröder (Eds.), *Museum communication and social media* (pp. 130–150). Routledge.
- Jacobs, R., Benford, S., Luger, E., & Howarth, C. (2016). The prediction machine: Performing scientific and artistic process. *Proceedings of the 2016 ACM Conference on Designing Interactive Systems*, 497–508.
- Jänicke, S., Franzini, G., Cheema, M. F., & Scheuermann, G. (2017). Visual text analysis in digital humanities. *Computer Graphics Forum*, 36(6), 226–250.
- Johnson, K. (2015). Rethinking (re)doing: Historical re-enactment and/as historiography. *Rethinking History*, 19(2), 193–206.
- Kenderdine, S. (2007). Somatic solidarity, magical realism and animating popular gods: Place-Hampi 'where intensities are felt.' *Proceedings, 11th International Conference on Information Visualisation*, N.4272012, 402–408.
- Kenderdine, S. (2008). An entanglement of people-things: Place-Hampi. *International Journal of Digital Cultural Heritage and E-Tourism*, 1(2–3), 139–156.
- Kenderdine, S. (2013). *Place-Hampi: Inhabiting the panoramic imaginary of Vijayanagara*. Kehrer Verlag.
- Kenderdine, S. (2015) Embodiment, entanglement and immersion in digital cultural heritage. In S. Schreibman, R. Siemens, & J. Unsworth (Eds.), *A new companion to digital humanities* (pp. 22–41). Wiley-Blackwell.
- Kenderdine, S., & Hart, T. (2003). This is not a peep show! The virtual room at the Melbourne Museum. *Proceedings of International Committee on Hypermedia and Interactivity*, Paris September, Pittsburgh: Museum Archives and Informatics. CDROM.
- Kenderdine, S., & Hart, T. (2011). Cultural data sculpting: Omni-spatial visualization for large scale heterogeneous datasets. *Museums and the Web 2011: Proceedings*, Philadelphia, 6–9 April. [https://www.museumsandtheweb.com/mw2011/papers/cultural\\_data\\_sculpting\\_omni\\_spatial\\_visualiza.html](https://www.museumsandtheweb.com/mw2011/papers/cultural_data_sculpting_omni_spatial_visualiza.html)
- Kenderdine, S., & Hart, T. (2014). mARChive: Sculpting Museum Victoria's collections. *Museums and the Web: Proceedings*, 2–5 April, Baltimore, USA. <https://mw2014.museumsandtheweb.com/paper/marchive-sculpting-museum-victorias-collections/>



- Kenderdine, S., Nicholson, J., & Mason, I. (2016). Modelling people and populations: Exploring medical visualization through immersive interactive virtual environments. In J. Nicholson, A. Darzi, E. Holmes, & J. C. Lindon (Eds.), *Metabolic phenotyping in personalized and public healthcare* (pp. 333–367). Elsevier.
- Kenderdine, S., & Shaw, J. (2016). A digital legacy for Living Culture. In H. Chao, S. Kenderdine, & J. Shaw (Eds.), *300 Years of Hakka Kung Fu: Digital vision of its legacy and future*. International Guoshu Association.
- Kenderdine, S., & Shaw, J. (2018). The museological re-enactment of Lingnan Hung Kuen. In H. Chao (Ed.), *Lingnan Hung Kuen across the century: Kung Fu narratives in cinema and community* (pp. 137–159). City University of Hong Kong Press.
- Kenderdine, S., Shaw, J., & Gremmler, T. (2012). Cultural data sculpting: Omnidirectional visualization for cultural datasets. In F. Marchese & E. Banissi (Eds.), *Knowledge visualization currents: From text to art to culture* (pp. 199–221). Springer.
- Kitchin, R. (2014). Big data, new epistemologies and paradigm shifts. *Big Data & Society*, 1(1), 1–12.
- Kitchin, R., & Dodge, M. (2007). Rethinking maps. *Progress in Human Geography*, 31(3), 331–344.
- Klinke, H. (2014). Introduction: The image and the mind. In H. Klinke (Ed.), *Art theory as visual epistemology* (pp. 1–10). Cambridge Scholars Publishing.
- Komura, T., Lam, B., Lau, R. W., & Leung, H. (2006). E-Learning martial arts. *International Conference on Web-Based Learning* (pp. 239–248). Springer.
- Kreiseler, S., Brüggemann, V., & Dörk, M. (2017). Tracing exploratory modes in digital collections of museum Web sites using reverse information architecture. *First Monday*, 22(4-3). <https://firstmonday.org/ojs/index.php/fm/article/download/6984/6090>
- Laboratory for Experimental Museology. (n.d.). <https://www.epfl.ch/labs/emplus/>
- Lindgren, R., & Johnson-Glenberg, M. (2013). Emboldened by embodiment: Six precepts for research on embodied learning and mixed reality. *Educational Researcher*, 42(8), 445–452.
- Lock, J. G., Filonik, D., Lawther, R., Pather, N., Gaus, K., Kenderdine, S., & Bednarz, T. (2018). Visual analytics of single cell microscopy data using a collaborative immersive environment. *Proceedings 16th SIGGRAPH International Conference*, Article no. 1.
- Mayr, E., & Windhager, F. (2018). Once upon a spacetime: Visual storytelling in cognitive and geotemporal information spaces. *ISPRS International Journal of Geo-Information*, 7(3), 96.
- McConville, D. (2007). Cosmological cinema: Pedagogy, propaganda, and perturbation in early dome theaters. *Technoetic Arts*, 5(82), 69–85.
- Mitchell, W. J. T. (1994). *Picture theory: Essays on verbal and visual representation*. University of Chicago Press.
- Mithlo, N. M. (2004). 'Red man's burden': The politics of inclusion in museum settings. *American Indian Quarterly*, 28(3-4), 743–763.
- Montreux Jazz Digital Project. (n.d.). <https://www.epfl.ch/innovation/domains/cultural-heritage-and-innovation-center/montreux-jazz-digital-project-2/>
- Moss, K. E. (2019). A beacon for broader impact: Illuminating science. *Journal of Visual Communication in Medicine*, 42(2), 66–75.
- Museums and machines: Curating tech to democratize art, culture, history and science. (2016, October 17). Transform. <https://news.microsoft.com/transform/museums-and-machines-curating-tech-to-democratize-art-culture-history-and-science/>
- Not, E., Cavada, D., Maule, S., Pisetti, A., & Venturini, A. (2019). Digital augmentation of historical objects through tangible interaction. *Journal on Computing and Cultural Heritage*, 12(3), 18:1–18:19.

- November, V., Camacho-Hübner, E., & Latour, B. (2010). Entering a risky territory: Space in the age of digital navigation. *Society and Space*, 28(4), 581–599.
- Panofsky, E. (1939). *Studies in iconology: Humanistic themes in the art of the renaissance* (facsimile repr., 1927). Oxford University Press.
- Presner, T., & Shepard, D. (2015). Mapping the geospatial turn in *A New Companion to Digital Humanities*. In S. Schreibman, R. Siemens, & J. Unsworth (Eds.), *A companion to digital humanities* (pp. 199–212). Blackwell.
- Ridge, M., Lafreniere, D., & Nesbit, S. (2013). Creating deep maps and spatial narratives through design. *International Journal of Humanities and Arts Computing*, 7(1–2), 176–189.
- Rogers, K., Hinrichs, U., & Quigley, A. (2014). *It doesn't compare to being there: In-situ vs. remote exploration of museum collections*. <https://research-repository.st-andrews.ac.uk/handle/10023/7239>
- Scagnetti, G. (2011). Visual epistemology for design in complex systems, lecture at Tecnológica de Monterrey: Academic leaders' program. <http://namedgaia.com/index.php?/teaching/visual-epistemology/>
- Schreibman, S., Siemens, R., & Unsworth, J. (Eds.), (2004). The digital humanities and humanities computing: An introduction, *A companion to digital humanities* (pp. xxiii–xxvii). Blackwell.
- Schreibman, S., Siemens, R., & Unsworth, J. (Eds.). (2015). *A new companion to digital humanities*. Wiley-Blackwell.
- Shneiderman, B. (1996). The eyes have it: A task by data type taxonomy for information visualizations. *Proc. IEEE. Visual Lang.* Art. no. 336.
- Simon, N. (2010). *The participatory museum*. Museum 2.0.
- Stefaniak, J. (2014). Immersive simulation: The replication of environments to practice problem solving. In M. Gosper & D. Ifenthaler (Eds.), *Curriculum models for the 21st century: Using learning technologies in higher education* (pp. 313–324). Springer.
- Sula, C. A. (2013). Quantifying culture: The value of visualization inside (and outside) libraries, museums, and the academy. In J. P. Bowen, S. Keene, & K. Ng (Eds.), *Electronic visualisation in arts and culture* (pp. 25–37). Springer.
- Taylor, D. (2003). *The archive and the repertoire: Performing cultural memory in the Americas*. Duke University Press.
- Taylor, J., & Gibson, L. K. (2017). Digitisation, digital interaction and social media: Embedded barriers to democratic heritage. *International Journal of Heritage Studies*, 23(5), 408–420.
- The Sydney Morning Herald. (2006, 5 July). B. B. King Farewells Montreux. <https://www.smh.com.au/entertainment/music/bb-king-farewells-montreux-20060705-gdnwc1.html>
- Wawda, S. (2019). Museums and the epistemology of injustice: From colonialism to decoloniality. *Museum International*, 71(1–2), 72–79. <https://doi.org/10.1080/13500775.2019.1638031>
- Vergo, P. (1989). *The new museology*. University of Chicago Press.
- Vesna, V. (2007). *Database aesthetics: Art in the age of information overflow*. University of Minneapolis Press.
- Wang, X., Jeong, D. H., Dou, W., Lee, S.-W., Ribarsky, W., & Chang, R. (2009). Defining and applying knowledge conversion processes to a visual analytics system. *Computers & Graphics*, 33(5), 616–623.
- Whitelaw, M. (2015). Generous interfaces for digital cultural collections. *Digital Humanities Quarterly*, 9(1), 1–15.

- Windhager, F., Federico, P., Mayr, E., Schreder, G., & Smuc, M. (2016). A review of information visualization approaches and interfaces to digital cultural heritage collections. In W. Aigner, G. Schmiedl, K. Blumenstein, & M. Zeppelzauer (Eds.), *Proceedings of the 9th Forum Media Technology 2016, St. Pölten, Austria*. <http://ceur-ws.org>
- Windhager, F., Federico, P., Schreder, G., Glinka, K., Dörk, M., Miksch, S., & Mayr, E. (2019). Visualization of cultural heritage collection data: State of the art and future challenges. *IEEE Transactions on Visualization and Computer Graphics*, 25(6), 2311–2330.

# 2

## MUSEOGRAPHY AND PERFORMATIVITY: PERFORMANCE DESIGN FOR IMPOSSIBLE OBJECTS AND IMMERSIVE DISPLAYS

*Rodrigo Tisi Paredes*

The incorporation of digital technologies along with a variety of immersive, more broadly accessible presentational forms in exhibition design are crucial in the updates that several museums and cultural institutions are adopting. Chile is not far from this reality. This text will elaborate on technological experiments that this author explored through an experimental design approach that employs both forms of art (experiential data) and forms of science (objective data), and the capacity of performance<sup>1</sup> to give meaning and life to non-physical things, captured through the term ‘performance design.’<sup>2</sup> In the following pages, I discuss the experimental design of two exhibitions developed with *MESS*<sup>3</sup> and a team from Santiago of Chile’s *Museo Chileno de Arte Precolombino* or MCHAP (Pre-Columbian Art Museum).<sup>4</sup> The challenge of these experiments was first to demonstrate that immersive exhibition spaces can evoke presences that are of value for culture and the transmission of heritage, second, to design, via the notion of impossible objects, displays that would make present (for viewers) things that could not be transported to the rooms of the museum, and third, to work on a collaborative process of creation with several professionals that the museum was not used to. Using new digital forms that are fast becoming part of mainstream culture allowed me to conceive fresher, more exploratory and more immersive, experience-oriented exhibitions to create new forms of display, using panoramic photography and video in large formats, animated video projections, drone-enabled videos, interactive 3D animations, mapping projections, recorded ethnographic testimonies, landscape sounds, ancient drawings, diagrams and texts. All these communicational elements served as interfaces that allowed visitors to decode and interact with the content presented, but also to evoke objects that were absent from the rooms of the museum, either because they were lost in the past or located in an inaccessible desert.

Opportunities like these give designers a space to explore their design processes and methodologies and find new means of participation and interaction. Because the technology is becoming more and more user-friendly, digital platforms help to connect diverse peoples and consequently contribute to shape new social perceptions that lead to a stronger understanding of collective experience.

Performance plays a fundamental role in giving form to different acts, and therefore to culture by shaping different spatial-temporal situations that ultimately become moments of experience. Performance can also help to shape the transmission of knowledge within different cultural contexts and for different groups of people. For the purposes of exhibition design, this understanding of performance helped me to speculate on the impact that these design experiments could have.<sup>5</sup> This turns out to be significant concerning impossible objects,<sup>6</sup> because it allowed me to construct complex illusional displays, informed by the combination of concrete facts and more subjective perceptions of reality, to evoke absent (archeological) objects – as well as places, peoples and customs outside the museum. Such performative objects employ common forms/languages/codes/values and are built with material and immaterial fragments and audio-visual effects. They allow participatory, experiential learning and demonstrate that immersive spaces can recall presences that are of symbolic value for the preservation and renewal of cultural heritage.

### **Exhibition spaces, to travel**

In an increasingly consumerist world, one could say that exhibition spaces within museums are significant because they give form to specific contents intended for broad audiences that are relevant for society. These groups are of different classes and of different ethnicities with different cultural backgrounds, and more importantly, they are all mass media inflected. Questions of sense, meaning, context and illusions are part of the equation museums must solve to perform. Audiences can be captivated, just like their perception can be manipulated (Debord, 2000). Exhibitions are fundamentally theatrical and participatory for they are how museums act to transmit the knowledge they create. As spaces for engaging and manipulating audiences in experiences of knowledge, exhibitions are set somewhere in between the black-boxes of theatres and the white cubes of gallery spaces. The white cube is a transitional device that attempts to bleach out the past and at the same time controls the future by appealing to supposedly transcendental modes of presence and power. The problem with these transcendental principles is that, by definition, they speak of another world, not the one we live in (O'Doherty, 1986). Furthermore, in discussing theatrical spaces, Peter Brook elaborates on black boxes to problematise the idea of empty spaces, and argues that there is no such thing as an empty space as they are always read or framed within a context that comes with the cultural background and viewer's mind (Brook, 2008). These black spaces can be framed on different contexts and function more like spaces for travel, for 'visiting' parallel spatial situations that appear because

perception is manipulated (Foucault, 1967).<sup>7</sup> In this sense, performance design could play a fundamental role in museums, helping to create this kind of grey box space of imaginative travel. Relevant to this point, Barbara Kirshenblatt-Gimblett (1998) describes two common display approaches: in-situ displays, which are based on the use of dioramas, period rooms and other mimetic re-creations of settings, and in-context displays, which include particular objects arranged according to conceptual frames of reference as a taxonomy, evolutionary sequence, historical development, with a set of formal relationships. These two modes of display differ in their approach to the performativity of objects displayed and the nature of their *mise-en-scène*. In-context displays depend on the 'drama' offered by the artefact. Here, objects become the actors, and knowledge orchestrates them in environmental settings. They privilege experience and tend to thematise rather than set their subject forth. In-context display build an intellectual framework for the reading of the pieces displayed, most of the time concerning spatial situations and its peoples. The design experiments discussed here are placed on a middle point between in-situ and in-context displays, because they contribute to constructing an ambience where these objects exist (existed or could exist), inviting the audience to imaginatively travel and contextualise display materials within particular narratives of meaning and value.

### **Presences and absences, to display**

Just like people display objects to communicate to themselves and others, museums display objects of the past to present and re-present stories that are of cultural value to society. Objects are relevant because they contribute to the shaping of memories but also because they offer certain meanings or values.<sup>8</sup> Depending on the context in which they are presented, these objects allow for the 'collaborative' construction of new (symbolic) meanings with the people who consume or appreciate them. From a sociological standpoint, John Urry argues that such 'travelling' objects that are chosen for display can be problematic, because their value changes with different audiences, as readings of them depend on the situational context. Yet objects are significant, because they can help articulate cohesion within different groups of society as they represent collective beliefs which are relevant to describing heritage and belongings (Urry, 1995). When objects from ancient cultures are displayed and appreciated, they enable and project new meanings and values for society. This highlights questions about the display itself, the performativity propelled by the objects presented and, more importantly, the political economies around such cultural valorisation.<sup>9</sup> Given that the exhibition of objects has the potential to build arguments, construct new readings of reality and raise questions about present and future times, a performative approach to design matters. It enables an understanding of cultural transmission as enacted by objects and peoples (events), formal intellectual frameworks and audiences' situations, which are all involved in a 'collaborative' performance with the goal of constructing meaning via memorable temporal experiences

(Tisi, 2011). From this perspective, performance design searches for the construction of impossible objects, i.e. objects that cannot be presented physically but can be made present to audiences via various material forms and communication technologies, whether mechanical, electronic or digital. With their particular backgrounds, audiences play a fundamental role in the perception of these impossible objects, as they need to ‘travel’ to make them perform.

### **Museographer, to integrate**

The driving question of my design experiments was this: How can an exhibition effectively present the heritage of an ancient culture and associated issues without having these historical objects present? This observation pushed me, as the museographer, to think about collaboration. I decided to shape a performance of participation throughout the design process, which formed not only the exhibitions but also the phases carried out to execute them.<sup>10</sup> The designers worked on the artistic dimensions of the exhibition and the museum specialists worked on the scientific/technical aspects of the content. We engaged in negotiations to develop the narrative and the spatial progression that unfolded the stories. As an outsider called in to work closely with a museum team (that included the director of the museum, the chief curator, other curators, a videographer, a conservationist, a graphic designer and a communication specialist, among others), I could take some risks that the internal team could not, for instance conceiving an exhibition without objects. Everyone on the team was open to exploring the performative approaches; indeed, they were intrigued – and willing to experiment with the capacities that performance design and digital technologies offered throughout the process. This willingness on the part of the museum team was crucial and resulted in a rich process, technologically and theoretically complex displays and a positive, collectively realised outcome.

We did, however, face difficult moments and debate throughout the development process. Discussions were mainly focussed on economic concerns and the amount of technology the museography should have. A back-and-forth methodology of iteration (typical of any design process) invited members of the team to participate and speculate on our meetings about what was possible and what was not, thereby addressing issues and finding new possibilities, but also making the design process slower. While I was cautious about when to open a space for deliberation and when to assert my initial design ideas, this collaboration nourished the result in unexpected ways. The process included a variety of evaluations done with different materials and prototypes, meant to test experiences and build fragments of the elements to be displayed. The exhibition experiments served to validate both my performative approach (that was not only looking at the result but also the process) and further collaboration with the curator, allowing the team to re-think the proposed narratives behind each of the exhibitions. Ultimately, the collaborative process contributed to the creation of new communicational forms, including parallel campaigns based on social networks.<sup>11</sup> Together, the exhibitions

and ancillary campaigns helped to develop an extension of the museum's presence beyond the limits of its building.

## **ROSTROS del Norte Grande (*FACES of the Great North*)<sup>12</sup>**

The design of the exhibition *ROSTROS del Norte Grande*, which opened in 2016 at Sala Fundación Minera Escondida (Antofagasta), was based on different illustrations gathered over several decades. Most of these drawings were realised by illustrator José Pérez de Arce and were meant to present the everyday life of *Atacameños*, who lived in northern Chile several hundred years ago.<sup>13</sup> The museum opened the exhibition in northern Chile, to display its contents first to those who live in the communities of that area. The second presentation was in a small exhibition space located in San Pedro de Atacama and served to pay respect to living descendants of native *Atacameños*. After these successful presentations, the exhibition moved to the Santiago museum.

The entry area of the exhibition space displayed the printed drawings of Pérez de Arce. The following (main) space presented six stories via digitally animated figures, which were based on ethnographic videos, and different interviews conducted to living *Atacameños*. The museography considered an immersive display landscape, of six vertical screens, shaped like totems, and placed on a circular form, in a semi-dark space, enlivened with ambient natural sounds typical of the desert. The totem/screens displayed video animations combining faces from the original archaeological drawings and those of living descendants. On a confined space at the back, an intriguing video animation that looked like a hologram dancing figure was displayed by vertical projections. All seven images floating in the darkness of the room narrated stories, like the spoken memories of relatives as ghosts of a past communicating an intangible heritage. All elements were assembled to stimulate audio-visual senses of viewers, they told stories in an enigmatic temporal ambience, bringing past and present together (see Figure 2.1).

Pérez de Arce's illustrations are important because they enact an effort to portray the faces of our pre-Columbian ancestors. Based on archaeological excavations, the drawings depict the people who lived in the Atacama Desert, their everyday life activities, and the objects they used. These drawings present ways in which these ancient peoples lived and interacted, allowing us to see and imagine their lives. The drawings teach us about ancient clothing, crafts, cookware, weapons and other objects that people used. The performance design team re-created these static evocations of past lives in a more dynamic form to establish a dialogue with the audience. Without present bodies, the animations of people, practices and environments constituted the impossible objects and matter of the display, like absent presences.

The museography provided a performative experience, inviting visitors to navigate through moments of the past and to raise questions of the present (and the future) of *Atacameños*. The animated drawings in the immersive space lead the audience to think about possible reformulations not only of some kind of





**FIGURE 2.1** Left: immersive space displaying video-holographic forms of indigenous people of the past interacting with people living in the present. Right: local descendant listening to the past stories about her own ancestors illustrated by archaeological drawings. Here, design elements stage an encounter between past and present, provoking questions of a ‘dead’ past versus living heritage. Photograph credits: Simón Gallardo (left), Rodrigo Tisi (right).

abstracted cultural heritage but also the inherited social problems, and problematic practices, that exist in the north and with us today. More broadly speaking, the museography shaped something relevant because it raised questions about local customs, survival practices, ancestors, traditions and heritage that root aspects of Chilean culture.

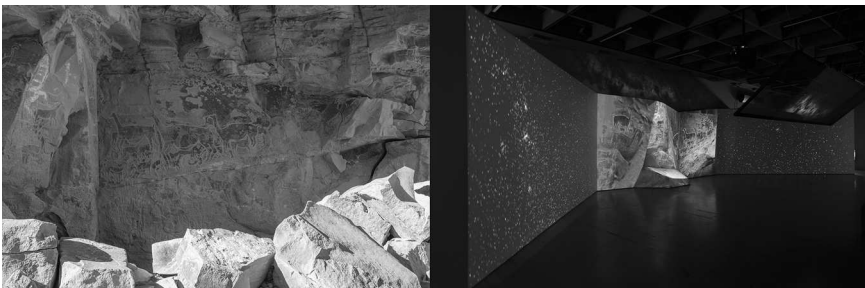
The impossible objects thus created evoke long-ago individuals and bring awareness to the past alive in the present. The aim was to narrate information relevant to a local discussion of ancient traditions and original towns – and to call local attention about local issues related to water and land production. The exhibition presented in the north of the country was meant to reach an audience mainly composed of students and their families (local descendants) and also foreign tourists. The exhibition explores contingent stories about living people, endangered agriculture, local barter and the minimisation of water resources. For *Atacameños* culture, water is a fundamental survival resource, and water issues are a pressing concern, as this area is now facing water scarcity due to climate change.

To articulate these concerns in a compelling and direct way, the exhibition employed on-site ethnographic research. The team shot video and recorded ambient sounds of the desert (water, animals and plants), as they are seen and heard today. These audio-visual pieces became valuable fragments of site documentation, evoking current experiences of the living descendants. They helped viewers feel the site, the past that is alive in the present moment, not least in the bodies and experiences of local descendants.<sup>14</sup> The sounds and images of the desert help animate the impossible objects – the totems – enriching thereby the theatrical, in-situ aspects of the display. They serve as well to construct the in-context aspects, expanding the narrative to include the geographical site and its environmental issues. The museum experience, then, is like neither the black box nor the white cube, but somewhere in between, a hybrid grey, completed by the subjective readings of the visitors.

Because social practices are ‘inherited’ – repeated and revised as ways to deal with environmental, economic, socio-cultural concerns, the value of these impossible objects is better understood if we consider Richard Schechner’s notion of restored behaviour.<sup>15</sup> This lens plays a double role here. First, it helps us see re-enactments of historical objects as preserving and renewing meaning, and secondly, it helps us see how these same re-imagined objects raise awareness of different (regional) situations. The display of *ROSTROS* then becomes a device for storytelling based on evidence of the past intertwined with the present, a ‘stage tour’ of reality.<sup>16</sup> This experimental approach to the archives (and research drawings) construct the narrative of a particular past-present, stimulating possible readings by the viewer and raising questions about the lives of these families in the future (the descendants that are honoured in the animated videos). In 2017, *ROSTROS del Norte Grande* was presented in Santiago and recognised as the best museography of the 6th Design Biennial of Chile. It seems that the cultural bridges that this performance design established between the ancient *Atacameños* and their living descendants made the difference.

### TAIRA: el amanecer del arte en Atacama<sup>17</sup>

After completing *ROSTROS del Norte Grande*, I was called again. In this occasion, I was asked to devise a way to present the rock-art of TAIRA’s eave (see Figure 2.2).<sup>18</sup> This was a challenging invitation because the artworks in question are engraved on the rock walls of the Loa river’s canyon, in a remote, inaccessible part of the Atacama Desert. TAIRA’s rock-art can be seen, to use current-day terms, as site-specific environmental art-work.<sup>19</sup> The engravings cannot be understood as isolated ‘art objects,’ as they are connected to local beliefs and natural life cycles of the place (Berenguer, 2017). Neither the artwork nor the natural elements intrinsic to it – intense blue sky, volcanos, canyons, fresh water springs, dry desert, bright stars, strong winds and animals, like llamas and guanacos – can be transported to a museum space.<sup>20</sup>



**FIGURE 2.2** Left: TAIRA’s eave: main triangular panel of the found rock art. Right: TAIRA’s eave installation, a multimedia immersive wall animated with mapping at the MCHAP in Santiago. Photograph credits: Rodrigo Tisi (left) and Pablo Blanco (right).

For this round, the museography challenge was to re-create the engravings and the natural elements that co-exist on site. Unlike the previous exhibition, where the work was based on illustrations, the challenge here was to find ways to re-present and present original archaeological objects. This exhibition was mainly focused on the wall of rock art but also included certain archaeological objects, symbolic to the customs and beliefs of TAIRA's community. The design process ended up producing a site-specific-like art-gallery-wall designed for the space of the museum, which acted as a panoramic, immersive space/wall, emulating natural site conditions and simulating the experience of an on-site visit. Because the rock-art is neither well-known nor well-preserved, the museum's goals were to present the role that the eave has for the local community, highlight its value at a national and international level, and recognise it as a unique heritage site in the middle of the Atacama Desert.

The exhibition *TAIRA: el amanecer del arte en Atacama*,<sup>21</sup> was meant to trigger a memorable experience for museum visitors and, rather than serving only as touristic cultural consumption, respectfully commemorate rituals of local ancestral values to its own community. Since much of the rock art of TAIRA reveals a deep concern for the fertility of llamas, the researchers argued that the engraved images were linked to their creators' belief about the growth of their herds (Van Kessel, 1976). The creation of these images were ancient ways of obtaining one's wishes: by figuratively representing llamas, these pre-Hispanic herders were able to literally reproduce them. As stated by the museum's researchers, this belief is relevant to the artists' choice of TAIRA eave, rather than other places. More than rock surfaces that were technically suitable for painting or engraving, those rocks were considered 'productive' rocks that, when used to properly re-enact the contract of reciprocity with the gods, would provide abundant harvests of livestock.

The desire to bring the space-time of TAIRA's eave to the museum, to transport visitors on a virtual trip to the north of Chile and explore TAIRA and its context, was challenging. The design team worked together to re-present the rock art as it appears on site, engraved in the stone walls of the valley and to frame it as a record of rituals linking the deities that govern the earth and the sky. The exhibition was meant to develop a concise, linear narrative out of archaeological objects and elucidate historical texts and studies. To provide context and gather material, the team travelled to the site to research site conditions and measure the wall components to be 're-installed' at the museum. We travelled with José Berenguer<sup>22</sup> and a team including another curator, a video ethnographer, a professional photographer, a drone video-specialist and an architect, to capture all the stories, images and data that we needed to grasp and shape later. This trip allowed us to gather day and night images and footage of environmental elements, which were useful to creating an immersive, experiential display back in the museum. We also gathered time-lapse footage of the rock-art wall that helped us build narratives (between day and night) of the site. As in *ROSTROS*, interviews were conducted to incorporate the stories of local people belonging to the current TAIRA community.

The site visit prompted us to consider the use of different media, including video projections, video animations and video mapping, immersive sounds, series of panoramic photographs and a 3D animation made with techniques of photogrammetry.<sup>23</sup> The immersive audio-visual display was conceived to perform a realistic experience, in 'high definition,' and as close as possible to what existed on site. This was crucial because mediated information sometimes constructs realities that are stronger than in 'real' life. We used these illusionistic effects to construct something as powerful as what a visit to the eave could be – although certainly different. The display provoked an intensive experience of the sight and sounds of the place while also providing contextual fragments to illuminate the meanings and value of the eave. This strategy made the exhibit more intriguing and dynamic, and framed the experience with intellectual perspectives and challenging questions via an open scripted narrative, provided at times by tours conducted by the museum team and at other times via unguided encounters (allowing for free interpretation and interaction with the display). Visitors thereby benefitted from both educational and experiential approaches.

The material aspects of the project and technological mechanisms used to communicate intangible values were key concerns throughout the design process, as they constituted the dimensions that shaped the performance. The team designed a journey in time and space via an interactive screen allowing visitors to navigate a 3D model of the site, which invited people to 'perform' a flight. The views of the desert site and the perceived panoramas were impossible images; although human eyes cannot fly that northern blue sky, a drone can. The views collected from the eyes of an electronic bird re-created the ecosystem around the rock art, provoking connections between the off-site viewers with the site itself. As stated by researchers, the sky, land, animals and local practices of the descendants are intrinsic to the engravings themselves; therefore, such a virtual tour (from the eyes of an improbable bird) is crucial to visitors' understanding of the art and its site (Sinclair & Martinez, 2018).

As in *ROSTROS*, the museography also constituted an occasion to explore different technological possibilities, devising new forms of communication between the exhibited content and the viewers (of different ages and diverse cultural origins). For this reason, the more universal languages of audio-visual representations were required. The display also considered a QR code that enabled visitors to download the 3D navigable animation of *TAIRA*.<sup>24</sup> The idea was to offer a version that the viewer could take home – a souvenir visualisation of the Loa river and its remote desert canyon. This digital representation extended the space of the exhibition beyond the museum and enabled a new experience of the site, of other spaces, on a context that emphasised the impossible.<sup>25</sup>

But an exhibition cannot be just a form of presentation and representation. It should also be understood in more complex dimensions, with an open, active approach to the public that absorbs the content while engaging with performative dimensions of the exhibition. In this sense, the project not only dealt with the organisation of objects and spatial elements but also used certain theatrical

communication and common language resources to act with/on space.<sup>26</sup> These design challenges lead the team to think of staging different moments throughout the exhibition path, for example, freezing some moments to encourage visitors to take personal photos (selfies) or to listen on headphones to local descendants whispering their stories about local legends. These digitally produced experiences blurred the edges of the museum by the means of different technological platforms. This actively participatory form of exhibition plus its dissemination via different social networks lead to various levels of performativity. The conscious design of all these characteristics constituted an act of performance, since there was implicit communication between certain images of the exhibition and museum visitors. Furthermore, the exhibition images evoked desires to visit the site or to learn more about it. The exhibition built a unique moment which was neither in TAIRA nor in the museum space where the representation of the eave was. Following its success, the local community of TAIRA made efforts to bring the exhibition to a new space for a permanent display near the eave. If this happens, the area will receive more visitors – not only scientists, academics or privileged tourists, but also more conventional people interested in exploring and engaging with the site and its rock art.

## Conclusion

The two experiments represented methodologies of working with collaborative design and technological challenges and became opportunities to explore performance design with respect to process as well as results. In both cases intense deliberation with the MCHAP team shaped and re-shaped design interests. The methodology established weekly meetings with the museum team and weekly meetings with the creative heads of the MESS team. In the first experiment these negotiations lasted for about four months, in the second, for about eight months. The process in each of the experiments influenced the initial curatorial vision, pushed for new ideas to articulate more sharply the content and narratives, and raised questions concerning appreciation of local heritages and lack of adequate preservation. Much research has been done, for instance, in terms of the archaeological findings of the *Atacameños* culture, but very little has been done to encourage awareness of this culture at a popular level and for younger generations. The design experiments generated consciousness and prompted change, because the exhibitions were installed several times and initiated new processes of establishing heritage awareness.

Because these exhibitions were made for a museum of pre-Columbian art, the design processes and their results pointed to issues of archaeological objects and art in the past. What is art, if we are thinking about it 3,000 years ago? Who were the people that made this art, and for what purposes? The answers that we offered combined deductive scientific findings with the intuitions of a creative process enabled by design practices of iterations. The experiments enabled participatory methodologies of a creative team (designers) and scientific team (museum

specialists) that integrated a conventional process with a more experimental and provocative approach. This led to unique experiences in the museum space as well as experiences in relation to audience participation (co-creation of heritage). The audiences were composed first, by families of native descendants and second, by tourists and younger generations. The results highlighted new questions about concrete objects and subjective information that can be orchestrated and guided by means of performance. Is it more relevant to see the originals – often lost or not transportable, or to perform an exhibition that will amplify meanings and values via impossible objects? Indeed, the absence of concrete elements for these exhibitions provided opportunities to shape the meanings and values of the original objects more powerfully. The presentation of carefully designed impossible objects allowed audiences to explore and learn in informal ways about things that were not present. They evoked a more slippery heritage – difficult to pin down, yet vitally present among native communities within Chilean culture.

These experiments played an important role for the museum at a time when cultural institutions in Chile are realising that new, more participatory forms of communication are key to re-establishing museums' relevance. The two experiments were strategic because the institution required a new level of performance, after the museum's restoration in 2014. Thus, these exhibitions constituted a timely update at a moment when the museum was deciding to engage a broader audience in new ways. With the use of digital technologies, MCHAP updated its communication formats to display materials in a fresher manner, incorporating more accessible, popular wording related to the aesthetics of contemporary culture. These efforts also sought to revalue local cultures, as well as furthering the museum's goal of developing a relationship with native peoples and their descendants. The two exhibitions thereby performed for this new museum to a broader, more diverse audience, at a historical moment when the institution literally opened its doors.

## Notes

- 1 Performance can be defined in the 'doing,' in the present and by means of presentation and representation of something, on an effective manner. Schechner (1998) establishes certain parameters to describe when something is performance (doing something) or when something could be understood as performance (something re-presents something else). Something is performance when the audience understands it and receives it as such (because of participation processes). If the audience manages to understand and engage the performance, that reception causes a favourable effect (sometimes memorable). For purposes of this article, that outcome is what should be understood as performance.
- 2 The notion of performance design first appeared in 1967 in an issue of *Progressive Architecture* which was focussed on the impact of new technologies on processes of architectural design. In 2008, Hannah and Harslof edited a book on performance design (resulting from a symposium in Rome). This book explores ideas that are more related to events and enactments that are propelled by temporality. Prior to this, I offered a definition for performance design: a creative practice located between the objective

- facts of the sciences and the subjective facts of the arts. Performance design offers a paradigm for designers (Tisi, 2006).
- 3 MESS is a collaborative platform launched in 2007, in Santiago de Chile. It works between possible and impossible projects. This platform assumes that each project is different and therefore the creative process is different each time and a different team is needed on each occasion. This platform works with artists, designers, architects, engineers, sociologists and other professionals. For more, visit <https://www.mess.cl/>
  - 4 The Chilean Museum of Pre-Columbian Art is focused on the pre-Hispanic art of native peoples of the Americas. The main exhibition is divided into different cultural areas using the concept of America without borders, to explore different cultures of the American continent through an exceptional collection of pre-Columbian artefacts donated by the institution's founder, Sergio Larrain García-Moreno. The museum opened in 1981 and went through a main restoration completed in 2014. This museum is significant in the cultural circuit of Santiago and has a broad international audience. During a strategic meeting in 2015, the museum board decided that the museum should connect with native people of indigenous descent. <http://www.precolombino.cl/en/museo/la-institucion/>
  - 5 As a paradigm of architecture, performance evaluates the efficiency of its ambitions. This definition of performance, associated to the construction of space, is relevant to my understanding of temporal exhibition design. As ambitious experiments, these designs can explore issues that the permanent condition of traditional architecture does not allow. In other words, performance gives a dimension of speculation to these spatial experiments conducted on the museum space (Ruby, 2010).
  - 6 From a visual (arts) perspective, impossible objects are defined by perspectives created through geometries that trick the eye. These objects are completed in the mind of the viewer after a process of de-codification. Technically, such objects cannot be constructed, as they are presented in a 2D rather than a 3D form, as for example in Marcel Duchamp's *Apolinère Enameled* from 1916.
  - 7 Michel Foucault (1967) offered the concept of heterotopias to describe worlds within worlds. These worlds can be constructed within institutional spaces and culture. He established them as parallel spaces, "other spaces". The notion of heterotopia is related to utopia, which also describes certain impossibilities.
  - 8 Kirshenblatt-Gimblett discusses the ethnographic object as something that is made and not only found. Such objects are of value not because they have a certain quality or appearance that might be of interest, but rather because they raise questions of their source and their destination.
  - 9 If we look at the cultural value of these objects, the Thing theory seems to be central for the argumentation of this text as it challenges the limits of the reading and understanding of objects. The Thing theory questions the relation subject-object to discern on the ideological and ideational effects of the material world rather than only the material effects of ideas and ideologies. This formulation searches for something else from the things that are presented around us. They become objects of value when cultures and societies incorporate them. Things become something when they do something, signify something, or represent something, and if they do, then they display certain reciprocity to a subject (one or multiple individuals or one or multiple objects). This thing theory describes a particular subject-object relation that in the case of museums is crucial as it establishes a space to appreciate and understand content but most fundamentally, nowadays, to experience it (Brown, 2004).
  - 10 The two exhibitions were meant for a temporary space at the museum and served to look at issues of our own local culture and its values. The design processes represented new opportunities to explore radical ideas with the use of technology, and to explore the ambition that the museum had, and that since 2014 has been worked out consistently, to reach wider audiences, with temporal exhibition projects that are more ambitious in their forms.

- 11 Since the museum started using popular social networks such as Instagram, Facebook, and Twitter, the number of visitors has increased exponentially.
- 12 The first exhibition of ROSTROS del Norte Grande was in Antofagasta, from September to October 2016. The second one in San Pedro de Atacama, from November 2016 to February 2017. The third one was in Santiago, from June to August 2017. The MESS team that worked on this exhibition was composed by this author that acted as the creative director and the performance designer strategist; Pedro Silva, assistant designer and manager; Simón Gallardo, audiovisual designer; and Antonieta López, graphic designer. See more information online: <http://www.precolombino.cl/exposiciones/exposicion-itinerante/rostros-del-norte-grande/>
- 13 Atacameños are also known as Likan Antai culture. These native people of the north of Chile lived around the Loa River amidst the Atacama Desert. They are part of a larger group of indigenous people that live in the North of Chile and the South of Perú and Bolivia. Their culture can be traced back to 500 AD. They were conquered by the Incas and later by Spaniards. Their culture does not represent a geopolitical division between countries as we are used now. Atacameños can be traced back about 2,500 years.
- 14 During 2016 the director of the Chilean Museum of pre-Columbian Art, Carlos Aldunate, stated in an interview that: 'These pre-Columbian cultures are not a thing of the past, they are a thing that lives in the present, lives in our miscegenation, in our language and customs and, above all, lives in the current pre-Columbian peoples, who are the legitimate descendants of these people, so that's why it's so important to demonstrate this link between past and present.' See <https://radio.uchile.cl/2016/11/10/jose-perez-de-arce-el-illustrador-de-los-pueblos-precolombinos/>
- 15 Schechner (2002) states that restored behavior is 'me behaving as if I were someone else.' For him, all behavior consists of recombining previously behaved behaviors. This article explores the notion of restored behavior in the world of objects because they also act within a frame of cultural agreements. Objects embody values and meanings that are repeated depending on the context that they are placed.
- 16 As described by Aldunate (2016), the exhibition '... was like a stage tour. A presentation of the period of the fishermen, the first to start making pottery and basketry. Then there is a period where all this territory was linked to the Tiahuanaco or Tiwanaku culture of Lake Titicaca and finally, there is a time when relations between all these peoples was very important and developed mainly in the markets.' See: <https://precolombino.cl/en/museo/noticias/rostros-del-norte-grande/>
- 17 The first exhibition of *TAIRA: el amanecer del arte en Atacama* was done in Santiago between November 2017 to May 2018 at Museo Chileno de Arte Precolombino (MCHAP). The second exhibition happened in Antofagasta, between September 2018 and November 2018 at Sala Fundación Minera Escondida. The MESS team that worked on this exhibition was: this author, as creative director and performance designer; Eduardo Perez, assistant designer and manager; Simón Gallardo, audiovisual designer; Marcelo Fica, audiovisual artist in charge of mapping projections; Antonieta López, graphic designer; Diego Sepúlveda, software programmer; Diego Pinochet, drone controller, photogrammetry and software programmer; Manuel Madariaga, illustrator and colorist designer; Piero Mangiamarchi, space constructor; Marcelo Zunino, assistant to technical construction.
- 18 TAIRA's rock-art is dated about 2,500–3,000 years ago.
- 19 Site-specific art is art done in close attention to the place where it is installed. Current trends incorporate the idea of environment to associate site-specific interventions to concerns that are related to environmental crises such as climate change. The artwork serves as a tool to see, study and criticise problems of the surroundings in which they are presented.
- 20 In talking about the local animals, Luisa Huanuco, one of the few persons that remain to TAIRA's community says that 'the purest and cleanest animal is the llama, because that



one salutes the sun every day. Soon as the sun touches the mountain it shines, and she is there ... mmm, the only animal that salutes the sun, that's the llama. I love that animal very much ... this little animal, if you know how to take advantage of it, provides a lot. But these days there are very few left. They're disappearing too.' Taken from one of the recordings presented in the audio-visual display.

- 21 For more, see the exhibition catalogue: TAIRA, *al amanecer del arte en Atacama*. <http://www.precolombino.cl/en/exposiciones/exposicion-itinerante/taira-el-amanecer-del-arte-en-atacama-2017/>
- 22 José Berenguer has been the author of several contributions about TAIRA's eave. His studies were very influential for many of the design ideas we explored. Berenguer's intellectual contribution has been recognised in Chile and abroad. His work with local Atacameños included in historical studies the contributions of the living community that are descendants of the roots of TAIRA's eave. In the catalogue of the exhibition, Berenguer (2017) expands ideas about heritage, landscape, animal reproduction and rock art of the north of Chile.
- 23 Photogrammetry determines geometric characteristics of objects using photography. The project used a drone camera to do an exhaustive survey of the hillside and the canyon of the Loa River, allowing it to re-construct the topological characteristics of the site. Using this technology together with special software, an accurate model of TAIRA's eave was built for the spectators. This contribution to the performance design was done by Diego Pinochet, a colleague that also teaches at the Design Lab – UAI in Santiago, Chile.
- 24 <http://www.precolombino.cl/exposiciones/exposicion-itinerante/taira-el-amanecer-del-arte-en-atacama-2017/el-vuelo-del-condor/fotogrametria-del-alero-taira/>
- 25 See ideas of 'experience' proposed by Dernie (2006). What stands out is to explore new ways of approaching material and content, to see, and literally feel, the message. The strategy of experience also relates to the operations that capture the attention of a less scholarly crowd in and out of the exhibition. In this sense, to bring a piece of the exhibition home, is also to bring the experience to a more private world that performs in different ways to different audiences.
- 26 For architecture, these elements are translated into materiality: light, program, time and other dimensions that involve the physical configuration of a space, whether temporary or permanent. To expand further in these ideas, see Tisi (2008).

## Bibliography

- Aldunate, C. (2019). Chile antes de Chile: Los nuevos tiempos del museo Chileno de Arte Precolombino. *Chungará, Revista de Antropología Chilena*, 51(2), 181–190.
- Berenguer, J. (2017). *TAIRA: The dawn of art in Atacama*. Museo Chileno de Arte Precolombino.
- Berenguer, J., & Martínez, J. L. (1989). Camelids in the Andes: Rock art, environment and myths. In H. Morphy (Ed.), *Animals into art (One world archaeology)*. Unwin Hyman.
- Bishop, C. (2006). Introduction: Viewers as producers. In C. Bishop (Ed.), *Participation* (pp. 10–17). MIT Press.
- Brook, P. (2008). *The empty space*. Penguin.
- Brown, B. (2004). Thing theory. In B. Brown (Ed.), *Things* (pp. 1–22). University of Chicago Press.
- Debord, G. (2000). *Society of the spectacle*. Black & Red.
- Dernie, D. (2006). *Exhibition design*. Laurence King Publishing.
- Foucault, M. (1967). Of other spaces: Utopias and heterotopias. In N. Leach (Ed.), *Rethinking architecture: A reader in cultural theory* (pp. 330–336). Routledge.

- Hannah, D., & Harslof, O. (Eds.). (2008). *Performance design*. Museum Tusulanum Press.
- Kirshenblatt-Gimblett, B. (1998). *Destination culture: Tourism, museum, and heritage*. University of California Press.
- Noordegraaf, J. (2004). *Strategies of display, museum presentation in nineteenth and twentieth century visual culture*. Nai Publishers.
- O'Doherty, B. (1986). *Inside the white cube: The ideology of the gallery space*. University of California Press.
- Ruby, A. (2010). Performance. In M. Gausa (Ed.), *The Metapolis dictionary for advanced architecture* (p. 476). Actar.
- Schechner, R. (1985). *Between theater & anthropology*. The University of Pennsylvania Press.
- Schechner, R. (1998). *Performance theory*. Routledge.
- Schechner, R. (2002). What is performance? In R. Schechner (Ed.), *Performance studies: An introduction* (pp. 28–51). Routledge.
- Sinclair, C., & Martínez, P. (Eds.). (2018). *La exposición de arte rupestre de TAIRA tras bambalinas: Seis ensayos y un guion*. Museo Chileno de Arte Precolombino.
- Tisi, R. (2006). Performance design: On the slippery combination of art and science. *Arts Fairs International* 2(5/6), 12–13.
- Tisi, R. (2008). B + S + P + T + PL + M: Six ways to approach architecture through the lens of performance. *JAE: Journal of Architecture Education*, 61(4), 69–75.
- Tisi, R. (2011). *Architecture and performance, the construction of display*. UMI Dissertation Publishing.
- Urry, J. (1995). How societies remember the past. *The Sociological Review*, 43(1), 45–65.
- Van Kessel, J. J. M. M. (1976). La pictografía rupestre como imagen votiva (Un intento de interpretación antropológica). In H. Niemeyer (Ed.), *Homenaje al Dr. Gustavo La Paige S. J.* (pp. 227–244). Universidad del Norte.

# 3

## REFLECTING ON EXPERIMENTAL MUSEOLOGY AT THE MUSEUM OF MEMORY OF COLOMBIA

*Jennifer Carter and Cristina Lleras*

*And we need these histories to affirm their plurality, because it is not a matter of constructing a model but of a practical experiment.*

*Isabelle Stengers, In catastrophic times (2009/2015), p. 132*

Our chapter invokes the concept of experimental museology in its most fundamental terms, namely as the ground of analysing how the staff and planning team of a national museum-in-the-making – as yet unconstrained by the realities of the everyday functioning of a bricks-and-mortar building – imagined a memorial museum’s coming-into-being by experimenting with the very idea of the ‘why’ and ‘how’ of a museum (and in which the former – the *why* – directly affects the latter – the *how*). Seeking to create a public space in which to present a multi-dimensional account of Colombia’s long-standing armed conflict – one that would escape the logic of a victim-perpetrator binary and involve visitors in an introspective and self-reflexive engagement toward a peaceful future – the team adopted an innovative approach to curation and design and tested this approach in the temporary exhibition it curated and produced, *Voces para transformar a Colombia* (Voices for the Transformation of Colombia, herein, *Voces*). It formed part of the visioning exercise inherent in the planning of the Museum of Memory in the Colombian capital, Bogotá.

In this chapter, we consider not only the how, why and to what ends of this ephemeral experiment within the context of an institution in which notions of conservation and permanence have historically constituted its key aims, we also ask what happens when process becomes praxis, as it did throughout the conception phase of the Museum of Memory. Our conviction is that by embracing concepts that have hitherto been considered antithetical to the museum’s wellbeing as a risk-adverse environment throughout the processes of curation and design, the museum team’s timely reconsideration of the conceptual foundations and

framework of museums may ultimately be of benefit to future thinking and praxis within the field.

The Museum of Memory is mandated by Law 1448, the 2011 Victims and Land Restitution Law, crafted as part of transitional justice measures taken by the Colombian government to address the history of the country's prolonged armed conflict and its violations that spanned the second half of the twentieth century. As such, the museum intends to be both a memorial museum and a museum of human rights. Colombia's near 60-year internal conflict has profoundly scarred the landscape and the Colombian people, irrespective of gender, age and political affiliation. Members of the government, the military, paramilitary and guerrillas have all played roles in this conflict as has a broader network of social actors who have gained profit by virtue of the conflict's shifting dynamics of power over time. The complexities of the conflict run deep, and its traumatic legacies on the country's psyche even deeper. While it is difficult to know for certain the number of those affected by such a lengthy armed conflict, some have estimated it has claimed as many as nine million victims through the diverse forms of violence that have been perpetrated, including displacement, homicide, massacres, kidnappings and disappearances (*Unidadvictimas*, n.d.).

Within the context of an evolving peace process initiated post-2005 (International Center of Transitional Justice, 2020) and in an attempt to overcome the profound social and political differences that have divided the country for many decades, Juan Manuel Santos's government foresaw a new national museum as a means to engage Colombians in 'social reconciliation' and 'symbolic repair.' These concepts – like many others derived from the transitional justice field – are abstract and signify different things to different people (Global Initiative for Justice, Truth and Reconciliation, 2017, p. 12), and the roles and possibilities of museums at large in transitional justice contexts are the subject of ongoing exploration and debate owing to the distinct political contexts in which these institutions have, or are, emerging (for example in Chile, Colombia, Paraguay, Taiwan and Canada). Yet, their importance in the development of this new national museum lies in the space of exchange that their invocation has opened up, allowing for Colombians to envision both a way of sharing and processing their diverse perspectives and experiences of the country's traumatic past and a collective formation of a way forward.

This chapter addresses the visioning process of the Museum of Memory through a description and theorisation of the planning, creation and inauguration of *Voces*. As a first temporary, off-site exhibition of the museum, it served as a platform of experimentation for the small museum team engaged in its development. We begin with a brief discussion of the research methodology used in our analysis of *Voces* and the presentation of a theoretical framework which contextualises the Museum of Memory and *Voces* in relation to the evolving genres of memorial museums (since the late 1940s) and human rights museums (since the mid-1980s) and the range of roles and responsibilities mandated to these museums. We then analyse how the concepts of narrative, metaphor and spatial trajectories –

informed by strategies of design thinking, in which parts are understood in intimate connection and interconnection with the whole – became the grounds for experimenting with modes of engagement with traumatic pasts and presents. The goal of the exhibition was to effect profound change in individual and collective behaviour by encouraging Colombians to question their own understanding and personal narrative of the armed conflict and their position within this narrative.

### **In search of a new way of doing: methods and approach**

Those who have lived through armed conflict and those who have studied it will recognise a now familiar trope within memorial museums' narrations of war: a deliberate recounting of the horrors of conflict punctuated by stories of solidarity, resistance, peace efforts and hope (Centro Nacional de Memoria Histórica, 2018; Thiemeyer, 2019). This museographical acknowledgement was one of the working premises of the research and historical memory initiatives carried out by the National Center for Historical Memory,<sup>1</sup> a public institution tasked with contributing to 'the comprehensive reparation and to the right to the truth for the victims of the Colombian armed conflict as well as society in general,' and which oversaw the creation of the Museum of Memory as one manifestation of this mandate (United Nations Victims of Terrorism Support Portal, 2020). The museum team assembled to develop the vision and working guidelines of the museum (still in planning) shared this conviction and sought the experimental as the means by which to think through its museological realisation. The development of this process is how a group of young curators, educators and designers came to challenge a more classical design for the memorial museum premised upon chronology and analogical museography as both an exercise in innovation and integrated planning.

The museum team's methodological approach, which we may qualify as an experimentation in curation and design-thinking enabled museum staff to place an emphasis on the process of development, and notably the concept of 'social construction' it espoused – rather than the ultimate product itself – as the guiding principle of their preliminary work and reflections. As discussed below, social construction entailed building relationships with communities in order to permit dialogic encounters during the conception phases of the museum. When coupled with the team's insistence on reflexivity on its own approach, this method also led to new forms of understanding and interpretation as the outcome of a professional practice that sought to provide Colombians with a visiting experience aimed at opening onto a different kind of understanding of the country's armed conflict: one that would reveal the structural dimensions of the conflict, while encouraging deeper personal introspection and interpretive responsibility in terms of the conflict.

One might also characterise the work as a form of participatory action research (even if not initially articulated as such) or as research-creation, insofar as the lead curator and co-author of this chapter, Cristina Lleras and the museology team, specifically sought the exhibition medium as a collaborative ground of exploration

for exhibit development and, in wider terms, as a resource for those communities of practice who would further imprint its potential with their own forms of engagement. Guided by the traumatic experience of Colombia's immediate past social history, the exhibition was intended as a venue to collectively seek social change by enhancing opportunities for human agency, multidisciplinary and a collaborative working framework amidst and across the contributions of community members both throughout conceptualisation and, once inaugurated, in response to the exhibition itself.

In our analysis of this exhibition experiment as a single case study, our focus was on the modalities of curatorial and design-thinking, and not a systematic evaluation of visitor impact. We sought to analyse this process within the larger purview of the emerging phenomenon of human rights museums and teamed up while the pilot exhibition project was underway. Our discussions continued throughout and after the closure of the *Voces* exhibition, as we further reflected on the theoretical implications of the design process as a means for facilitating meaningful social change. As lead curator of the Museum of Memory, Lleras coordinated the experimental *Voces* exhibition and oversaw the museology team at the Museum of Memory of Colombia between 2016 and 2018, and she was thus directly implicated in the very processes we discuss in this chapter. Lleras's work as a curator and scholar-practitioner focusses on institutional practices and representations of the past. Carter is an academic who has theorised the emerging phenomenon of human rights museums in different geo-political contexts. If the personal experience of the exhibition-making process and this exhibition's ultimate materialisation constituted the primary data in our investigation, further materials useful to our analysis included exchanges with Lleras's colleagues and on-site visitor evaluations conducted at *Voces* in Bogotá. Our analysis is thus grounded in a critical, summative reflection of the exhibition-making process and the key design concepts upon which this process was premised – narrative, metaphor and self-reflexivity – as the means for thinking through the potential of a process-as-praxis approach to curation and exhibition design.

With this dual methodological backdrop in mind (the experimental methodology of the museum team and the method of analysis deployed by Lleras and Carter), we recognise the importance of understanding the Museum of Memory as an environment constituted by the interplay of internal (staff) and external (communities) relationships from its very inception as the basis of the potential to rethink the nature of museological praxis and, ultimately, the experiences and agency of the communities museums intend to serve.

## **The rise of memorial and human rights museums: theory and concepts**

The desire to address and redress trauma and war in productive and conciliatory ways has led many museum professionals to consider how objects and texts, spaces and screens – as the grammar of exhibition design – might best communicate the

suffering fuelled by humanity's deep conflicts, the hope engendered by its resilience and the ways in which members of society might transform their own stereotypes about armed conflict in order to lead to broader societal transformation. Two types of museums have evolved in this respect: memorial museums beginning in the post-World War II era, and, since the late twentieth, and early twenty-first, centuries, human rights museums. In the former, exhibition design has historically assumed a canonical form, in which chronological narrative, evocative artifacts (including victims' belongings and instruments used in violence) and simulated settings and/or historic architecture provide the grounds for what is intended to enable empathetic encounters with the past. Holocaust museums all over the world have adopted variations of this conventional approach in their ongoing work to commemorate the Shoah's victims of past atrocities, and to fight intolerance, racism and injustices in the present. Some have evolved to include thematic structures in addition to strictly chronological ones in order to display curatorial content amidst evocative or emotive environments. Key examples of this kind include the U.S. Holocaust Memorial Museum in Washington, D.C., with its inclusion of temporary exhibitions about contemporary genocide; Israel's Yad Vashem in Jerusalem highlighting different 'chapters' rather than a linear trajectory in Holocaust history and a greater focus on relaying personal stories of individuals murdered in the *Shoah*; and, finally, the Sydney Jewish Museum in Australia, which now includes a Holocaust and Human Rights Exhibition that considers human rights issues in the contemporary. A growing literature exists on the subject of memorial museums (Williams, 2007).

Of the second type of museum, the human rights museum, there have been several different approaches within the genre's brief history, including hybrid variations combining both memorialising functions and the discourses and strategies of a larger human rights framework, such as in Chile's Museo de la Memoria y los Derechos Humanos (inaugurated in 2010) and Taiwan's National Human Rights Museum (inaugurated in 2018), both in response to post-dictatorship regimes. Born of transitional justice contexts,<sup>2</sup> these specific examples seek to commemorate the victims of past atrocities while locating these atrocities within the terms of the fundamental rights that their perpetrators violated. Much like recent developments in memorial museums, the collections and exhibitions of such museums contain historical artefacts combined with a narrative that provides the context of human rights violations and stories of resistance. Yet, while there is an increasing demand to create cultural institutions such as museums to respond to transitional justice measures and, more specifically, to the aims of symbolic reparation, the human rights museum as a museological genre may rightfully still be considered experimental because, no over-arching paradigm exists so far. Moreover, any museum developed under such conditions must respond to the specific requirements of the geopolitical context that gave rise to it, precluding a standard museological and design approach (Carter & Orange, 2012).

With these thoughts in mind, the founding staff of Colombia's Museum of Memory sought to rethink the precepts of memorial and human rights museums as

it developed the working guidelines of the museum between 2015 and 2017. There were many reasons for this: with no founding collection and no obvious material artefacts to put on display, the question as to whether to develop a collection for a museum dedicated to the Colombian armed conflict has elicited ongoing debate and remains unsettled. And even though the museum has been conceived to address the darkest of subject matters, staff agreed that they wanted to nurture a different type of response from visitors than that elicited by memorial museums with their use of analogical, and increasingly immersive, museographies that involve viewers in reconstructions of traumatic pasts.

In keeping with the human rights turn in many museums, museum staff sought to propose a range of different forms of engagement and interaction in order to involve visitors cognitively, emotively and reflexively in terms of their future individual and collective behaviour. The difference is of the order of engagement, from subjective identification (consider the use of identity cards) in the memorial museum to one of individual agency (in recognition of the capacity to elicit individual and collective behavioural change) in the human rights museum. This element of the Museum of Memory's philosophy is key: by illustrating the interlinking and structural dimensions of the conflict (drug trafficking, land dispossession, exploitation of natural resources and of Indigenous, Black and peasant communities) and thereby revealing the devastating extent of Colombia's armed conflict, the goals that the museum's staff set for themselves sought to change the way Colombians both individually and collectively understand the impact of war. The staff specifically aspired for the exhibition to appeal to individual and collective senses of responsibility toward politically intervening for the end of war as a consequence of this insight. But significantly, unlike the calls to action that increasingly characterise the approaches of both memorial and human rights museums, the staff felt that it was important to nurture and emphasise self-reflexivity and personal actions over generalised calls for change. Toward this end, they argued that the Museum of Memory:

strongly believes that a narrative of the past is insufficient if it does not lead its people (as a society) to – at the very least – *question the ways in which the war and the violation of human rights have been justified by numerous actors involved and, very often, by people who have not directly participated in conflict.*

*(Lleras et al., 2019, p. 141. Italics added)*

Developing the means to elicit self-reflexivity amidst *Voces'* visiting publics, be they individuals or groups, was thus a fundamental preoccupation of the planning team which sought societal transformation as one of the museum's overarching goals. How might Colombians develop a more complex understanding of the conflict's multiple and overlapping dimensions in order to find, if not political, at least social reconciliation after 60 years of profoundly divisive and devastating armed conflict? Memorial museums have traditionally incorporated analogical designs to immerse visitors into the experiences and subjectivities of others –



ostensibly asking these visitors to walk in the shoes of another as a way to gain better understanding of a traumatising past. Yet, the museum staff deliberately turned such a museographical technique upside down by asking questions directly of the visitors themselves, probing their individual thoughts about, and experience of, the armed conflict. Thus, at the entrance threshold of the exhibit-museum, visitors came face-to-face with the compelling interrogation: ‘What has war left me with?’ Diverse emotions ranging from vengeance to hope were plotted on to a wooden panel and visitors were invited to choose which of these emotions best represented their own personal feelings. This question was strategically placed at the beginning of the trajectory in order to highlight the fact that the museographical narrative recounted something that had happened to all Colombians and not, or not only, to ‘others.’ The exhibition’s exit threshold presented a further invitation for visitors to reflect on their role in contributing to positive societal transformation, inspired by what they had witnessed in the exhibit-museum.

Wilfully placing its own vulnerabilities on exhibit, the planning team also unveiled the challenges it too had faced throughout the development process, foregrounding these challenges with the most fundamental question of all: ‘Why is it difficult to narrate armed conflict?’ Together with a design that stressed the process of consultations throughout the museum’s conceptual development, the team chose to emphasise that the story and history of armed conflict – its impact and the ways communities and individuals have responded to it – is an ongoing process, leading the museum staff to stress that it ‘could be narrated in many ways’ (exhibition text). The manner in which the museum’s planning team conceived of the design programme in a flexible and open-ended way was a direct response to this condition, and it provided them with the space of experimentation that a chronological structure would have made difficult, if not incomprehensible.

### **Developing process for praxis in a new national museum: social construction**

There was no template to guide the thinking about how to design a national museum dedicated to addressing the complexities of the Colombian armed conflict. When the design contest for the building of the Museum of Memory of Colombia was won by a group of Colombian and Spanish architects (Pacheco Estudio de Arquitectura and Estudio Entresitio) in 2015, there was as yet little information on exhibition content for the architects to work with, and only an incipient idea of what the museum’s staff intended the visitor experience to be. Yet, while it is not unusual in projects of this magnitude to be conceived along parallel timelines in terms of form and content, architecture and museography, here the specific method devised by the planning team to develop the museum’s narrative and conceptual guidelines was a novel departure from conventional practice and was born out of a method coined ‘social construction’ (Centro Nacional de Memoria Histórica, 2017, p. 49).

The process of social construction was premised upon connecting with Colombian communities through a series of workshops, community gatherings and projects as well as public events and regional initiatives that were all designed to bring members of the public into contact with the museum's planning team. In addition to providing valuable opportunities to build trust and working relationships between different communities and a national museum, these diverse encounters provided civil society organisations and victims with the important opportunity to collectively imagine what the museum should be like. Over a period of almost four years, members of the museum's staff travelled to the communities of different territories and regions, participated in diverse memorial exercises and thereby gained a range of insights into, and first-hand knowledge of, the complexity characterising the armed conflict and the multiple forms of impact this conflict has inflicted on the Colombian nation and its people over time. The first expression of the museum's identity was thus shaped by social construction and its various outcomes.

As the museum staff worked to synthesise the material collected throughout this process, their goal was to translate the public's – and especially victims' – expectations into a vision of what the museum space itself might become, and to share this vision with Colombians. Thus, in an unusual and bold move, the museum team launched a pilot project in 2016 that would bring to the public the working ideas and proposed narrative of the museum before the institution's scheduled opening on its permanent site in Bogotá. The result was a temporary exhibition, *Voces para transformar a Colombia* (*Voices for the Transformation of Colombia*), inaugurated in a pavilion at Bogotá's annual book fair in 2018.

Although *Voces* has all of the elements of an exhibition, in recognition of its distinct role in the identity-making process of a new national museum, we will refer to it here as an 'exhibit-museum': it literally became a means to put (the ideas about) a new museum on display. This novel approach had several different intentions: presented within the context of a major annual cultural event in Colombia's capital, *Voces* was conceived in order to evaluate the way in which the museum sought to tell the story of the Colombian armed conflict, visitors' interactions and experiences with the different components of this story and what they took away from their visit. In order to do so, in addition to designing the exhibition itself, the team developed a visitor study which comprised two separate methodologies: the first was a quantitative survey which included demographic information and questions about the emotional impact of the exhibition on visitors. The second was an ethnographic study that included thick descriptions about visitors' behaviour and engagement with the exhibition content, researchers' observations and description of visitors' reactions in guided visits and events, as well as focus group interviews conducted after the event. In these ways, *Voces* functioned as a means to formulate research areas which the institution might further develop. Finally, it provided a way for the museum team to experience the more prosaic dimensions of a functioning museum, that is, the successes and failures of producing a large-scale project together.

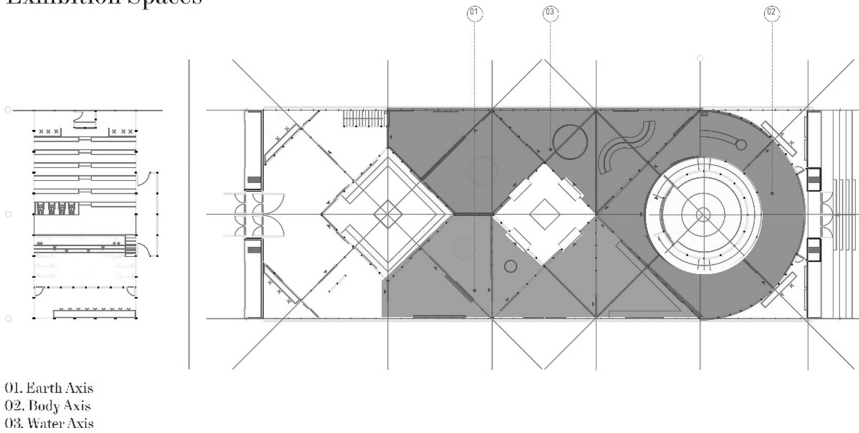
Given its manifold ambitions, it is not surprising that in the making of *Voces*, the very process of its development was as important as opening the exhibit-museum to the public. Ultimately, this process encompassed the diverse forms of research conducted by staff since the institution's founding, in terms of fieldwork, workshops and interviews, as well as the study visits made by planning team members to other memorial and human rights museums created in the post-conflict or transitional justice contexts of Chile, Argentina, Germany and Perú, and on the soil where memorial museums and human rights museums commemorate violations considered 'far' from such contexts, such as in Canada and the United States. The challenge for the museum team was to translate the wealth of this material and their own reflexive learning into a unique design within the Colombian context. To diversify their approach, the museum staff also took inspiration from the working methods of a wide range of disciplines such as anthropology, architecture and the visual arts, seeking to integrate interdisciplinary and creative processes into the museum's way of doing.

For these reasons, a curatorial storyline was not handed over to the educational and design teams to then work with for future programming and exhibition design as is often the case in traditional museological planning and practice. Narrative, content, form and programming were developed synchronously by staff working in close cooperation and communication with one another towards the common goal of developing a 'different' kind of museum and museum experience.

### **Innovating a narrative strategy: experimenting with metaphors in *Voces***

A major challenge for the museum staff was to overcome the traditional museological model of a linear, progressive narration of events that would support a chronological account of the past. One of the reasons for this decision was pragmatic: Colombians cannot agree on a date marking the beginning of the armed conflict because there have been different cycles of violence in Colombia's modern history. For the country's Indigenous and Black communities, for instance, the armed conflict is but another phase in the much longer history of violence perpetuated against these communities. Given that under the terms of Law 1448, the processes of symbolic reparation are not limited to recent victims of violence, the issue of assigning a time limit – of deciding when to begin the narration of events and where to end it – became problematic. Another challenge the museum staff faced was avoiding the trap of reproducing a moralising account of 'good and evil.' Although the Law defines who is considered a victim, it does so in an overly simplified and binary way. The Colombian armed conflict is especially complex in terms of who has been victimised and who is considered a perpetrator or responsible party. Paradoxically, these problematic terms have many times generated overlapping categories which are not recognised as yet by judiciary instruments. In one example that brings important nuance to these terms, the Colombian Constitutional Court ruled that a woman who had been recruited by the guerrilla as a minor, and

## Exhibition Spaces



**FIGURE 3.1** First-floor plan of the *Voces* exhibition in Bogotá. The exhibition was divided into three axes: land, body and water. The circular space represents the memorial, a ‘house’ occupied the centre square and the forum was located to the far left. Photo: Laura Cuervo.

who became a combatant as an adult, was declared a victim of forced recruitment, displacement and sexual violence (Corte Constitucional, 2019).

The team set out to find an avenue to explicitly incorporate not only themes, but specific messages that would provide a deeper analysis of the structure and enabling mechanisms of the conflict (see details in Centro Nacional de Memoria Histórica, 2017). The team ultimately determined three axes for the principal exhibition narrative based on the foundational and metaphorical concepts of body, water and land (Figure 3.1).

These axes emerged from team members’ synthesis of research, the information they had collectively gathered and from conversations with senior researchers at the National Center for Historical Memory. The team articulated the polyvalence of the themes in the following way:

- The body is a means to feel, experience and learn and can give a direct account of the damages of armed conflict. The body enunciates directly by silencing and indirectly by the scars it reveals on itself. It is understood as a social and cultural construction, a complex composition of materiality, spirituality, identity and thought which has an individual dimension and a social linkage. For *Voces*, this axis communicated stigmatisation, intolerance and the elimination of social, cultural and ethnic differences and political dissent that have characterised the armed conflict.
- Water connects and takes the shape of the vessel that contains it. Different bodies of water are the habitats and sites of cultures and communities around the country. Water sustains life and is present in quotidian activities as well as rituals. But in Colombia, these places of life have also been turned into sites of

death, thereby producing a fundamental tension between water as life-giver and life-taker. The message this axis conveyed was that the costs of armed conflict are too high, and damages are immeasurable. Nothing justifies the violation of human rights.

- Land is materiality, context and landscape. It has an identity linked to how people are rooted. It can be understood as territory in a political sense, and as frontier, control and defense, underscoring how its geopolitical dimension is crucial for all actors. It is also place, a means to understand the people's experiences in armed conflict, such as at sites of memory. Land has been fought over and local communities have been displaced and dispossessed of their land. The message to be conveyed was that armed conflict is intentional and responds to economic, military, political and institutional dynamics and interests.

By intertwining these metaphors, the team understood the museum visit as a unique social encounter for Colombians – with all of their diverse perspectives and experiences of territory and the armed conflict – in which to come together in a single space-time dimension, and consequently set out to narrate the armed conflict in this manner. Rather than a deliberate chronological unfolding with its event-specific structure that is premised upon a didactic appropriation of facts and dates, the planning team foresaw three metaphorical axes that would function as means of bringing people together in new and untested ways for a different kind of understanding: one that would encourage a deep sense of personal responsibility with respect to the exhibition's broader messages.

Thus, the thematic axes became multi-pronged conduits within the museological context, simultaneously serving as literal entries into the museum, as ways to narrate the past, as concepts leading to an expanded understanding of the armed conflict and as the premise of subjects that collectively tell a story. In their broad narrative potential, the axes were non-exclusive and complemented each other. Hence, the exhibit-museum was thought of as an integral narrative and as the sum of its parts, and, in the manner the axes referred to materiality, to the symbolic and the transcendental, but also to the senses, to cosmologies and to different ways of seeing the world, they permitted great curatorial and design latitude.

In order to develop the content for the three axes of the exhibit-museum, team members engaged with different constituents in both informal and group workshop settings. These constituents ranged from internal staff at the National Center for Historical Memory to external stakeholders such as groups of victims and non-victims already involved in memory processes with the Center, including Indigenous and Black communities, artists and peasant associations. The team posed three fundamental questions: What does the armed conflict do to the body, the land and the water? What do the body, land and water do in armed conflict? And, how do the body, land and water narrate armed conflict? This methodology enabled the team to construct an expansive inventory of documents, initiatives, objects, images, videos, practices, sites, people and archives that would later be

organised into a script for each axis. Yet the findings of this exercise were still far from ‘becoming’ an exhibition.

### **Metaphorical inscriptions, spatial articulations: experimenting with curatorial and design thinking**

The various layers of association each of *Voces*’ three axes evoked enabled a transversal approach to the narration of Colombia’s armed conflict. Furthering its ambition to develop an experimental method that could produce a unique curatorial design methodology, the museum team which had initially consisted of anthropologists, curators and educators, expanded to include architects and scenographers who had experience with the design of ephemeral pavilions and theatre sets. The objective of this stage was to determine how to spatialise the axes into museographical renderings and to design visitor experiences that would fully exploit the rich metaphoric, artistic and associative potential of the axes. With no founding collection, there was no list of documents or objects that ‘needed’ to be included in the exhibition. Rather, narrative dictated content, implying that exhibits could be found, created or produced to fit narrative needs. More broadly, the team imagined the visitor’s journey throughout the museum as the sum of a total experience – informed by the exhibition, programming and multimedia events. Each had to be thoughtfully considered and choreographed within a strong narrative construct.

In the design of the exhibit-museum, both individual and collective experiences were considered through the lens of the polyvalence of traditional museum spaces. Visitors were provided with simultaneous programming throughout their visit, woven into and outside of the exhibition as part of the broader exhibit-museum concept and the holistic experience it sought to offer. In other words, spatial planning was not limited to conventional or individual use: performances took place beyond the auditorium, commemorative practices expanded outside of the memorial setting. Spaces for collective gathering ranged from the forum intended to host conversations about literature, historical memory research, exhibition themes between victims, academics, artists and other members of the general public, to memorial and performance venues, a documentation centre, a radio station with live broadcasting and an educational space, as well as a metaphoric, two-storied house. These spaces were intended to enhance the social experience of the museum-exhibit by multiplying the opportunities to engage in dialogue. While exhibition areas and a physical space for the virtual dimensions of the museum (virtual-reality terminals where users could ‘visit’ other sites of memory in different parts of the country) were designed for individual visitors, educators and victims ultimately also used these spaces as opportunities to talk to visiting groups and individuals, blurring the distinction between programmed and spontaneous, individual and collective uses of space.

The pavilion of the museum-exhibit was designed, built and operated as a two-week and ten-day event, respectively, at each of two locations chosen to house it,

first in Bogotá and subsequently in Colombia's second-largest city, Medellín. Its overall form deliberately reflected this temporal impermanence through a physical appearance that shared greater affinity with the temporality of stage sets than the polished design of most permanent exhibitions: the use of materials, props and lighting and the importance of creating a range of atmospheres appropriate to the different zones of each axis were of paramount importance. These concerns, typical in theatre or performance venues, illuminate yet another experimental approach at play: incorporating the design strategies of other art forms so as to enhance the visitor's spatial rapport with each of the body, water and land axes, and thereby facilitating their understanding of the armed conflict's broad reach. This rapport was further reinforced through first-person narration of body, water and land in each of the axes' introductory texts. Accompanying visitors throughout *Voces* in this way, this form of anthropomorphism lent immediacy to the narration and served to overcome the distance of objectivity between visitor and the medium of the exhibition. Embodied in voice and articulated in space, each characterisation sought the individual visitor's engagement through the connection established between the cognitive realm and bodily senses. After experimenting with different forms of content organisation and display, it became evident that messages would be lost if the body, water and land axes were combined or mixed. Thus, each axis was given its own area, defined by colour and materiality: fibre for body, clay for land and light-infused projections evoking reflections for water. In this way, the choice of material was both a physical structuring device and a primary design element.

Designing for specific content also required particular techniques. Each axis was divided into case studies in separate rooms that responded to a wide range of criteria in order to ensure that a diversity of examples was represented. Case studies ranged from the dispossession of land of Indigenous communities in Colombia's North and Northeast to the Atrato River as the subject of rights, and they were comprised of a maximum of three exhibits. For example, one case study on urban land dispossession in Medellín consisted of an installation of posters with fragments of testimonies, a multi-projection video installation and life-size photographic portraits and texts with life stories (Figure 3.2).

Each exhibit was chosen or created for the museum according to a medium that would best convey the case study: interactive maps made by Indigenous communities, short documentary videos, graphic narratives, three-dimensional infographic materials, murals, illustrated timelines, photographs, reproductions of personal objects and life histories, audio components, large-scale illustrations, a coca plant. Except for a pair of rings, nothing was installed behind glass. Everything could be touched, and no distinction was made between pieces visitors could or could not interact with.

Objects evoking personal histories were made with the victims whose stories they accompanied. Most of these were copies of original possessions, not infrequently a reminder of one of the few precious things families kept from their lost loved ones. 'Authenticity' in this context was not conferred by the aura of an



**FIGURE 3.2** Life-sized portraits and life histories of female human right leaders in Medellín comprised exhibits in the case study dedicated to Comuna 13, a territory historically marked by displacement and other forms of violence within the city. Photo: María Camila Suárez.

object, as many of these were purpose-made and fabricated for the exhibition. Especially in the body axis, focus was rather on the nature of the experience the object installation and viewing evoked. For instance, one exhibit included a copy of the t-shirt a young Johann Stiven Martínez wore with the photograph of his kidnapped father when Martínez marched over 100 kilometres to demand his father's release. Johann Stiven became an icon and a symbol of the impact of the guerrilla's dehumanising practices because of the many times he appeared in the media. His father, a military man, died after more than 13 years of captivity by the FARC (*Fuerzas Armadas Revolucionarias de Colombia*). Using victims' belongings and personal objects in this way, whether originals or replicas, was only one of several strategies used by the planning team which deliberately expanded the focus on personal narratives to also include, for example, graphic novels as a means of diversifying ways of representing the past.

### **Conclusion: the Museum of Memory as a process-as-praxis**

Several testimonies collected throughout the museum's social construction phase referred to the potential of Colombia's new national Museum of Memory to be 'open,' a place for quotidian activities and daily life, a space for life with trees and not cement, with water that cleanses and gives way to rebirth and as 'festive.' Despite all the horror of the conflict, a place alive with people and sounds (Centro



Nacional de Memoria Histórica, 2017). Curators noted that Colombians seemed to associate the museum less with an idea of the sacred – although they did want it to serve the recognition of victims – and more as a space to inhabit (Centro de Investigación, 2015). Collectively, they imagined the museum as a place to contain different forms of memory, and for making memory as well. Moreover, the idea of the museum as a welcoming house emerged.

Wishing to honour these ideas, the planning team poignantly translated this view of the museum as a space for daily life into one aspect of the pavilion in the form of a two-story house that they symbolically located at the intersection of *Voces'* three axes. Its presence interjected evocations of exile, abandonment and communities forced to flee within the exhibition's foundational themes of body, water and land, just as it incarnated the symbol of the homes Colombians have built with their own hands and the communities they have nurtured into a cohesive social fabric. Its presence poignantly recalled how the house has been witness to violence, how it has been lost to the millions that have been displaced and dispossessed and – in a final statement epitomising the atrocities committed to the body, water and land in armed conflict – what has been fought for and what, for so many, has been irrevocably lost.

Perhaps this is where process-as-praxis, as one of the planning team's guiding tenets, fully materialised: in the manner the house, bearing the weight of these many associations, was nevertheless thought of as a place for visitors to build things together in an evolving and ongoing way. The result: a part of a larger whole, a narrative that is simultaneously in and about process, promising an always open-ended and by virtue of this, (productively) incomplete experience for visitors. This is how the planning team experimented with the museum's ontology, not with the intention of imposing a model, but rather to propose a process and praxis. This approach not only necessitated new working relationships amongst the museum staff and communities, but also a greater degree of polyvalence in the manner spaces could be used for *Voces'* multiple functions. *Voces'* fundamentally experimented with innovative curatorial and design strategies, the museum concept and the interconnection of Colombians and the museum planning team. The many levels of engagement afforded by this spatial flexibility and the holistic thinking that grounded the project were the outcome of this museological experiment.

While much more could be said about the house and about the pavilion, the *Voces'* project defies a conclusion. As such, it is indicative of experimental museology. After all, it is an experiment in something yet to come, where larger political implications loom large. The process coined as 'social construction' is not only the foundation of the museum's first design expression as it materialised in *Voces'*, it should also be incorporated into future developments as an ongoing practice. A change of government, shift in governance or new state priorities can, and may still, bring profound disruption to this highly innovative national museum-in-the-making. In its bid to reshape the terms of an institution that seeks to become both a memorial and a human rights museum, the planning team that put into motion the museum's social construction and engaged in a consultative

process with Colombians did so with the intention of experimenting the means to transcend traditional approaches to museographical representations of trauma toward something more holistic, and perhaps ultimately, more transformative in its aims and outcomes.

## Notes

- 1 According to the United Nations Victims of Terrorism Support Portal, ‘The Center accomplishes its purpose by reconstructing, through the testimony of victims, the serious human rights violations that occurred in the framework of the conflict, searching for truth, justice, reparation and the construction of a sustainable and lasting peace’ (United Nations Victims of Terrorism Support Portal, 2020, n.p.). <https://www.un.org/victimsofterrorism/en/node/568>.
- 2 The Global Initiative for Justice, Truth + Reconciliation defines transitional justice as ‘the set of measures and processes that aim to end impunity, redress victims of grave human rights violations, and re-establish the rule of law’ in a given country (Global Initiative for Justice, Truth and Reconciliation, 2017, p. 8).

## Bibliography

- Carter, J., & Orange, J. (2012). Contentious terrain: Developing a human rights museology. *Museum Management and Curatorship*, 27(2), 111–127.
- Centro de Investigación y Educación Popular, CINEP/Programa por la Paz. (2015). *Resultado de la sistematización y análisis sobre Perspectivas de las víctimas del conflicto armado frente a la creación del Museo Nacional de la Memoria: estrategia de inclusión y participación ciudadana para la creación del Museo Nacional de la Memoria* [Results of the systematization and analysis of perspectives of the victims of the armed conflict leading to the creation of the National Museum of Memory: Strategy of inclusion and citizen participation for the creation of the National Museum of Memory]. Internal report. Unpublished. Centro de Investigación y Educación Popular, CINEP/Programa por la Paz.
- Centro Nacional de Memoria Histórica. (2017). *Museo Nacional de la Memoria: Un lugar para el encuentro. Lineamientos conceptuales y guion museológico* [National Museum of Memory: A place for encounter. Conceptual guidelines and museological narrative]. Centro Nacional de Memoria Histórica. <http://www.centrodememoriahistorica.gov.co/informes-2017/museo-nacional-de-la-memoria-un-lugar-para-el-encuentro-lineamientos-conceptuales-y-guion-museologico>
- Centro Nacional de Memoria Histórica. (2018). *Los caminos de la memoria histórica* [The paths of historical memory]. Centro Nacional de Memoria Histórica. <http://www.centrodememoriahistorica.gov.co/micrositios/un-viaje-por-la-memoria-historica/pdf/los-caminos-de-la-memoria-historica.pdf>
- Corte Constitucional ordena reconocer como víctima a exguerrillera forzada a abortar [Constitutional Court orders the recognition of victim of a former guerrilla who was forced to abort]. (2019, 11 December). *El Espectador*. <https://www.elespectador.com/noticias/judicial/corte-constitucional-ordena-reconocer-como-victima-exguerrillera-forzada-abortar-articulo-895419>
- Global Initiative for Justice, Truth and Reconciliation. (2017). *Building a learning community: Lessons for a holistic and sustainable approach to transitional justice*. International Coalition of Sites of Conscience. <https://www.sitesofconscience.org/wp-content/uploads/2017/12/TJ-Toolkit-6x9-online.pdf>

- International Center of Transitional Justice. (2020). *Transitional justice mechanisms in Colombia*. [https://www.ictj.org/sites/default/files/subsites/colombia-timeline/index\\_eng.html](https://www.ictj.org/sites/default/files/subsites/colombia-timeline/index_eng.html)
- Lleras, C., Forero, M.A., Diaz, L., & Carter, J. (2019). Memory exercises: Activism, symbolic reparation, and non-repetition in Colombia's National Museum of Memory. In R. Janes & R. Sandell (Eds.), *Museum activism* (pp. 139–151). Routledge.
- Stengers, I. (2015). *In catastrophic times: Resisting the coming barbarism*. Open Humanities Press. Original work published in French in 2009.
- Thiemeyer, T. (2019). Multi-voiced and personal: Second World War remembrance in German museums. In J. Echterkamp & S. Jaeger (Eds.), *Views of violence: Representing the Second World War in German and European museums and memorials* (pp. 27–51). Berghahn.
- Unidad de Víctimas. (n.d.). <https://www.unidadvictimas.gov.co/en>
- United Nations Victims of Terrorism Support Portal. (2020). The National Center for Historical Memory's [sic]. <https://www.un.org/victimsofterrorism/en/node/568>
- Williams, P. (2007). *Memorial museums: The global rush to commemorate atrocities*. Berg.

# 4

## ACROSS THE DOORWAY: DEVELOPING POST-CRITICAL MUSEOLOGY FROM A CLOSED UNIVERSITY MUSEUM

*Erika Grasso and Gianluigi Mangiapane*

The Museum of Anthropology and Ethnography of the University of Turin (MAET) is dealing with two main challenges: the problematic nature of its cultural heritage and its closure to the public. This chapter presents two museological experiences that offered the opportunity to face these challenges by focusing on alterity and its exhibition. It is based on the reflections conducted by the museum staff in recent years regarding the accessibility of the MAET heritage and its representation of ‘otherness.’ The first section will retrace the MAET situation by pointing out that its closure made visible a concrete threshold between the heritage and the public. The doorway represents a challenge that connects the peculiar MAET experience to the recent theoretical approach in museology and cultural anthropology to material culture, museum and subjectivities. Therefore, the central sections of this contribution will address two case studies: *A Piece About Us* (2014) and *Gelede. Our Yoruba Mothers* (2018). They show how it is possible to open the doors of a closed museum and to exhibit its challenging cultural heritage. The case studies presented in this chapter are part of the Museum staff’s wider reflections initiated in preparation of the opening planned for 2026. While different in terms of design and results, the two experiments are grounded in a museum anthropology approach and were implemented by an ethnographic and participatory approach. The conclusions will underline how a closed museum can reinforce its relevance by taking into account the subjectivities that its heritage represents and by improving museological strategies grounded on the relationship between the institution and local agency and communities.

The MAET contains a cultural heritage consisting of both anthropological and ethnographic collections that represent humankind in its diversity and alterity (Grasso, 2020) and has been closed to the public since 1984. Its staff is involved both in research projects related to the history and meanings of collections and to new strategies to improve audience engagement and heritage enhancement. Given

the wide variety of finds preserved and the closure situation, the MAET is committed to reflections on how to expand its audience and, at the same time, initiate processes that may involve and give voice to the subjectivities represented by the collections, especially the ethnographic ones.

The closed doors of the museum rooms symbolise a threshold that has been waiting to be crossed for a long time. It is a physical boundary that divides the museum from the society of which it is a product and that prevents the museum from being relevant in its social context (Simon, 2016). In the last decade, the MAET experimented with strategies to unlock its doors and to cross the threshold in order to build new and deep connections with people who potentially could self-identify with its heritage. In order to better handle the peculiar challenges faced by the Museum, professionals' practices and academic discourse have been integrated and new strategies have been implemented. Today the Museum faces the urgency to make its heritage accessible and to attract new audiences and, at the same time, to improve the most equitable and participatory strategies of representation of alterity and 'otherness.' Recently the doors of the MAET were opened for special events during which visitors were able to enter the rooms of the museum or, conversely, the MAET heritage was able to reach them outside the museum. During these occasions we explored how to find a balance between institutional and conservation requirements and the social role of a museum that holds multifaceted collections.

If the doorway divides the museum from its society and its public, is it possible to cross it? Can experimental strategies and design bring to light memories concealed by the heritage, sharing it with audiences who can identify with it? In answering these questions, this chapter addresses some fundamental issues related to the role of museums as places of heritage conservation and enhancement and as sites where identities and memories come into contact (Amselle, 2016). Moving from the present condition of a university anthropological museum (MAET), our chapter will show how academic discourse can enter into dialogue with museological practices so as to better handle the challenge of moving across the museum doorway and to overcome barriers that prevent it from being relevant and from improving public engagement. Although museums have often been understood as merely engaged in tradition and heritage preservation, it is essential to look at them as distributive networks in order to foster their social role (Hooper-Greenhill, 1992; Vergo, 1989). As highlighted by the seminal work *Post-critical museology: Theory and practice in the art museum* (Dewdney et al., 2013), museums are part of wide processes and relationships in which value travels along transmedial and transcultural lines. This approach fits the cultural anthropology efforts to question the one-way relationship between museums and cultures and to acknowledge how museums can be a 'contact zone' (Clifford, 1997). In this sense, as Jean Loup Amselle pointed out, museums are related to essential political issues and to the processes of re-appropriation of values by the different subjects involved in its activities, both recruited professionals and the public (Amselle, 2016).

## The 'otherness' behind the door

As for many museums (Ames, 1992; Coombes, 1994; Gosden & Larson, 2007; O'Hanlon & Welsch, 2000; Penny, 2002; Shelton, 2001a, 2001b; Stocking, 1985), the MAET holds ethnographic and anthropological collections which, due to their origins, are challenging and can be acknowledged as 'sensitive heritage' (Schorch, 2020, p. 1). Finds and artefacts are from social contexts and cultures that, due to the colonial trauma, have been impoverished in terms of historical memory and heritage. Ethnographic objects have been collected and often stolen from European colonies in Africa and South America, but also from Asia and Oceania. Like the anthropological finds from archaeological excavations in Egypt, they were not entrusted to local museums, but brought to Italy when this practise was still widespread. This *corpus* was formed between the 1910s and 1930s according to a racist approach and with political and ideological motivations. The scientific discourse was in fact committed as a support to the racial laws enacted in 1938 during the fascist dictatorship in Italy (Mangiapane & Grasso, 2019). Therefore, the corpus was 'regarded, in turn, as laboratories for anthropological theorising, showcases of empire, and halls for the edification of the public' and the ethnographic museum 'fulfilled multiple functions and became the chief site through which knowledge of colonised peoples was both constructed and displayed' (Basu, 2012, pp. 371–372) as underlined also by Bernard Cohn in his seminal work *Colonialism and its forms of knowledge* (1996). Furthermore:

Within the dominant cultural-evolutionist paradigm late in the nineteenth century, for example, ethnographic artefacts acted as indices of the evolutionary status of different societies and provided a tantalising glimpse into Western society's own 'prehistoric' past [...]. A result of this was a continuing contiguity between ethnographic and archaeological collections in Western museums at a time when anthropology and archaeology were, as yet, indistinguishable academic disciplines

*(Basu, 2012, p. 372).*

When material culture represents 'otherness' it may be important to recognise these intrinsic problems and to narrate the present and past power relationships between 'cultures.' In fact, the processes of collection and exposure (or non-exposure) of the extra-European artistic and ethnographic heritage are never neutral (Karp & Lavine, 1991). They are a symptom of the colonial relationship between Western society with what has been called the Global South. In this sense, MAET collections deserve to be viewed according to a biographical approach (Appadurai, 1986) and to be considered knowledge in a museum decolonisation process (Chambers et al., 2014). This involves a deep reflection on the relationships between the society of which the museum institution is a fruit and 'otherness' (Grasso, 2019). It also allows acknowledgement of the colonial

memory and the power relations crystallised in the materiality of cultural heritage and latent in the museum institution and its deposits.

It is therefore necessary to face MAET history through reflections that are supported by a large and diverse literature that deals with assets and decolonisation (Chambers et al., 2014). The result of these analyses should then be translated into processes, activities and good practices. Considering that ‘in museum studies and related fields, our sense is that the now-classic postcolonial critique of colonial museums and collecting is near exhaustion, and scholarship requires fresh frameworks and approaches in order to move beyond a reductionist analysis of this topic and to open up new angles on the two-way encounter of coloniser and colonised, objects and subjects, human and non-human’ (Cameron & McCarthy, 2015, p. 2), there is still a lot to do.

The objects included in the museum context are part of acquisition processes that often need to be reconstructed. In this sense, the research work is leading to a deeper awareness of the nature of the artefacts stored in the deposits. The trajectories undertaken by each object from the moment of its production to current time cross spaces and geographies. They have survived journeys, cultural and social upheavals that have charged them with dense and changeable meanings, dictated by imaginary and shared memories both in the production context and in the one in which they were first collected and then put into museums. Recognising the value, in some ways ambiguous, of artefacts and their immeasurable ‘inbetween’ nature (Basu, 2017, p. 2), entails a necessary review of the role of the museum institution as a space for preservation and enhancement of cultural heritage, but also as a space and place of representation of society in which it is inserted and those of which it preserves the material culture.

## Crossing the doorway

A pivotal moment in the history of ethnological and anthropological collections was the transformation that has affected the international museum world from the 1980s onwards, starting with the *Nouvelle museologie* up to the most recent post-critical museology movements. According to these approaches, the museum must be an open space (Vergo, 1989) dedicated to the re-elaboration of memories and narratives that allows a better and more aware understanding of the present society and of the relations of power and inequality that characterise it. Post-critical museology considers museums ‘as distributive networks in which value travels along transmedial and transcultural lines’ (Dewdney et al., 2013, p. 1). It encourages museum professionals to move to a wider audience engagement in institutional life. It has allowed the public to cross the physical and cultural thresholds – the doorway. In this sense, the museum acquires a new social role in terms of social inclusion and/or exclusion (Sandell, 2003, p. 45), in the belief that art, like cultural heritage, is not neutral but can have a strong political and social role (Benjamin, 1936).

The MAET is waiting for a permanent display accessible to the public that allows it to express new ways of thinking and ‘showing’ ‘otherness’ and the European society that has ‘accumulated’ objects and documents of the ‘other worlds.’ Meanwhile, it must necessarily face the challenge of making a ‘closed’ heritage accessible, through alternative ways to those of an ‘open’ museum. The museum, hidden behind closed doors, is trying to cross the threshold and reach the public in spaces and contexts in which a quite unknown heritage can finally be ‘seen.’ As we will see, a first step in this direction is the narration of ‘otherness’ through multiple forms. A further step across the thresholds is the reconstruction of the production contexts and collecting practices that involved everyday objects and artefacts produced by ‘other’ cultures. In this sense, the ethnographic collections offer a space for dialogue and reflection that is not only interesting, but in some ways necessary in order to recognise the memory of contacts with ‘otherness’ that for Italian society are not a novelty of the present. They have roots that stretch back in time and that are the foundation of the very constitution of the Italian national community.

The approach of cultural anthropology to heritage has allowed taking this path by introducing not only new ideas for theoretical reflection, but also new investigative tools. In particular, the ethnographic and participative method has put in the spotlight the ethnographic collections and the role of the museum that preserves the subjectivities (individual and collective) producing and accumulating ‘other’ material culture and giving them a voice. The reconstruction of the history of the collections makes it possible to trace the individual trajectories of the protagonists of the collection processes that include objects of affection, travel souvenirs and tangible documents of scientific research. A step towards restoring light and space to the layered memory on the objects is to enter into dialogue with the societies from which they themselves come.

### **The first study case: the threshold and the project** ***A Piece About Us***

Between 2008 and 2015, one of the priorities of the MAET projects was to involve those subjectivities that usually were not taken into account by MAET activities (Mangiapane et al., 2013; Pecci, 2019; Pecci & Mangiapane, 2010). Of particular relevance was the project *APAU: A piece about us* (2014–2015), written by the museum anthropologist Anna Maria Pecci and created by two associations involved in cultural and cultural heritage enhancement initiatives: *Associazione culturale Passages* (Passages Association) and *Giovani Musulmani d’Italia* (Young Italian Muslims Association, GMI). The two partners chose to invite museum institutions, archives and libraries to collaborate in the project in order to involve the Library, Archive, Museum Circuit (LAM). This was a pivotal step since these institutions have ‘commonalities of collecting in the creation and maintenance of the knowledge communities’ (Hedstrom & King, 2004), but totally different audiences. The Museum of Oriental Art (MAO), Palazzo Madama Civic



Museum of Ancient Art, the MAET and the Historical Archive of the City of Turin and Turin Public Libraries were part of the partnership, chosen for the diversity of their heritage. The *A Piece About Us* project was funded by the banking foundation Compagnia San Paolo and by the CRT Banking Foundation.

The project aimed to facilitate audience engagement. The activities involved young people, including second-generation Italians, through participatory practices that moved from an initial analysis of the different partners' needs. Furthermore, 30 informants were selected through a public call and interview. The announcement was made in the youth centres of the city (e.g., the TYC: Turin Youth Centre, University halls, on notice boards and websites, and in libraries and bookshops). Due to the aims of the project, the selection of intended audiences was based on varied criteria: the interviews made it possible to select people from diversified backgrounds. The key informants were between the ages of 23 and 30 with different social and educational backgrounds and interests (e.g., theatre and art world, humanities education, etc.) but unified by the interest in cultural heritage, even when not occupied in cultural activities. Among the 28 participants, there were 8 men and 20 women, and 4 were second-generation Italians. Only one was a student; the others had finished their studies.

A training course enabled the participants to know the history and the cultural heritage held in the museums, archive and libraries and to re-interpret it according to a performative approach that could lead to a social action or to have a change of effect. This approach emerged as most effective in reaching and involving the young 'non-public' of the partner institutions. The results of the project and what was conceived and realised were presented as a tool of mediation that can connect museum collections and the public during exhibitions, meetings and a YouTube channel and social networks as well. More generally, the products were multiple and involved different expressive languages (theatrical performances, readings, dances and videos). This initiative acknowledged the cultural heritage as a creative inspiration: it showed how it can enable to conceive and realise theatrical performances and videos in a 'perspective of cultural empowerment and favoring the museum's social agency' (Pecci, 2019, p. 210).

Among the projects carried out in recent years by the MAET, *A Piece About Us* is the one most oriented to audience engagement (Bollo et al., 2017). Being grounded in a process of involvement of the public, it had a subsequent phase of achievement in which different methods were used to get in touch with the public and with young people under age 30. *APAU* has in fact included a great variety of tools and approaches: expressive languages as a mediation instrument, active involvement through theatre workshops, participation in the planning of activities and the creation of expressive, artistic and creative contents (Da Milano & Gariboldi, 2019).

During the course of the project, the various partners responded favourably to some participants' requests who explicitly showed interest in LGBTQ (Lesbian, Gay, Bisexual, Transgender, Queer) issues. Despite the important steps forward, in

fact it seems that most of the cultural institutions still do very little to represent this community and tell its stories (Kendall, 2011), while in reality they might try to answer the question ‘You can’t tell LGBTQ stories where they don’t exist. Or can you?’ (Goodman, 2018, p. 71). Therefore, the participants devised new initiatives, called ‘New paths,’ where objects, books and documents involved did not necessarily belong to the LGBTQ world, yet they were useful for the purpose since they were able to talk about ‘other’ worlds. As the museologist Sian Goodman pointed out:

I feel strongly that those of us who work in heritage and arts have a responsibility to disrupt the biased narratives of the past and include more diverse stories which more people can connect with. History has been very kind to the straight, white male, and he has done pretty well off the back of it! But by repeating his account, we’re never going to grasp the opportunity we have to be a part of broader cultural, political and social change.

(Goodman, 2018, p. 71)

Therefore, the MAET collections have been used in an inclusive way as a pretext to deal with these aspects. The fruits of this was a theatrical performance called *Looking for Marilyn*, staged at Casa Arcobaleno (Rainbow House) in Turin, and in the video performance *Tribute to Marlene Dietrich* by the actor Lorenzo Beatrice. This monologue was conceived by starting from some photographs of Marlene Dietrich conserved in the Historical Archive of the City of Turin. The life of this LGBTQ icon became the pretext to talk differently about the heritage through a queer point of view. Simultaneously, the reading of copies of medical records kept in the MAET archive (Beatrice, 2015) made it possible to denounce how in the 1930s, during the fascist period, homosexuals were considered mentally ill and interned in a mental hospital (Romano, 2020) The theatrical performance, using a comedy director and in the form of a ‘murder mystery dinner,’ staged and re-interpreted the heritage with a look that was far from institutional.

At the end of the performance, an evaluation was carried out through random interviews (six people per two shows and open-answer interviews). The public expressed enthusiasm seeing how these institutions, which are often perceived to be distant from their civil claims, had given full support to a clearly oriented path. To the question ‘What are the strengths and weaknesses of the networking attitude initiative?’ most replied that they appreciated the willingness of the museums to seek community issues in their heritage from an inclusive perspective but all interviewees suggested to propose the show beyond the LGBTQ+ circuit in order to share the community stories and points of reference to a wider public. Finally, it should be emphasised that there were no difficulties from the members of the Young Italian Muslims Association participating in the project in supporting these initiatives.

## The second study case: the *Our Yoruba Mothers* exhibit

A more recent attempt to cross the threshold of the museum's doors was made with the exhibition *Gelede. Our Yoruba Mothers* (2018), designed and set up as part of the event Turin. Towards an accessible city, and within the context of the European Year of Heritage. The exhibition project involved the museum staff, an anthropologist and video maker, a private collector and some informants belonging to the Yoruba community in Turin (Yoruba people are a broad ethnic community that historically inhabits the southwestern regions of Nigeria, Benin and Northern Togo). The choice of Gelede masks was dictated by the intuition that they could represent the MAET African heritage thanks to a display that enhanced its value of documenting the complexity of an 'other' culture and avoiding traps of exoticism and reification of 'otherness.' These aims were achieved by giving space and voice to subjects that recognised themselves as part of the culture the artefacts are from.

The collaboration with the Piedmont Centre of African Studies and with the Intercultural Centre of the City of Turin allowed the initiation of an intense dialogue with the Panafricando Association and, therefore, with some members of the Turin Yoruba community. The MAET staff coordinated all the activities related to the project, including the informants' recruitment and the process of data elaboration through visual material and texts. The encounter with the associations and with the Yoruba community allowed, in the first analysis, to introduce the museum to local African diasporic associations and, after long years of silence, to present the museum institution as an open meeting space, social agency and – more generally – a place for dialogue. Renato Capra was involved as a private collector and African art expert.

The design process moved from the need to deepen the knowledge on the MAET African ethnographic collection to which Gelede masks belong. The private collector and MAET experts' theoretical knowledge was integrated with the cultural and emic point of view of Yoruba informants. The result was a temporary exhibition in the main hall of the Luigi Einaudi Campus (C.L.E.) of the University of Turin. Display cases were positioned in the very core of the university campus. They showcased ten African masks accompanied by short captions and a couple of explanatory panels. Each showcase was accompanied by a QR code thanks to which visitors could access further information given by descriptive texts and videos uploaded on the MAET website.

The path that led to the inauguration of the exhibition developed through three fundamental hubs: the choice of the objects to display, the identification of the research methodology underlying the exhibition itinerary and, finally, the design of the expositive path. The project involved a dialogue between the museum institution and the Turin diasporic community. The subjects involved reflected on their own culture, both the one that produced the masks on display, and the one that collected them and transformed them into museum objects. On the one hand, heritage revealed its nature as a medium, helping to bring together

different and distant sectors of society and, on the other, the museum revealed its nature of 'contact zone' (Clifford, 1997). Thanks to the collaboration between different subjects, the museum opened its doors and its ground became the site where different voices and different points of view came together. The display was the first step on the way to better mutual understanding between the subjects which are represented in the museum rooms.

The exhibition displayed the MAET's helmet masks that belong to the Yoruba ritual complex and that were collected in Nigeria as travel souvenirs in the first half of the twentieth century according to ways that are waiting to be clarified. Gelede masks are worn by male performers during festivals which honour the women of the community (living and dead) and have the function to educate and entertain at the same time (Lawal, 1996). In order to enrich the narrative and expository path, MAET artefacts and the masks from the private collection made it possible to connect different acquisition trajectories and practices of collecting.

The project involved different subjects who collaborated with the museum staff in the research and in the production of textual and multimedia contents. The method chosen to achieve the project's goals was that of participatory ethnography and involved some Turin Yoruba residents who proved to be open to dialogue. They were selected with help from the diasporic association Panafricano. In particular, among the Yoruba community five informants were involved and accepted to be interviewed. They contributed to the process of knowledge production regarding the artefacts and to compile the captions, which later took the form of videos shared with the public. Anthropological knowledge was integrated with the informants' emic point of view, that is, the gaze on heritage from their way of perceiving and categorising the world according to their cultural background. The 'participatory' research on the heritage influenced the way in which the project participants imagined the exhibition path. The informants were free to give their own explanation and meanings to the objects, while data and information conveyed by the display panels and captions were limited to a minimum. The result was a simple setup that did not require structured design and the intervention of architects or designers. The voices of the diasporic community, in fact, had a central and sufficient role in the enhancement of the heritage and in making its multiple meanings emerge.

The dialogue with Renato Capra was interesting and fruitful. Often, private collectors have an exotic insight into African material culture that transcends the cultural and emic meanings of artefacts. This type of gaze is grounded in the Western perception of alterity – and in particular of Africa (Mudimbe, 1988) – and focusses on the alleged originality of the objects and their value on the ethnic art market. In fact, as highlighted by Ivan Bargna:

[...] today the consumption of *exotica* receives a boost from ethno-tourism on the one hand, with its search of 'authenticity' that bears traces of our ambiguous attraction to the 'dark continent', and on the other hand the

vintage trend that has brought back into fashion, among other veins of nostalgia, a sanitised version of colonialism.

*(Bargna & Parodi da Passano, 2010, p. 29)*

The involvement of a private collector made it possible to question the motivations of the practice of collecting 'ethnic' artefacts that are related to collectors' individual trajectories, to their feelings of memory and forgetting (Bargna & Parodi da Passano, 2010, p. 23) and to their experiences of identification with the object (Derlon & Jeudy-Ballini, 2008, p. 192). In particular, the evolution of the relation between Renato Capra, the museum staff and the anthropologist video maker was exemplary. Initially, in fact, the dialogue between these three subjects was far from easy and was affected by different and apparently irreconcilable positions.

The researchers and anthropologists' approach focussed on a diachronic and synchronic contextualisation, aimed at bringing out the present artefacts' meanings and not only their 'traditional' or artistic value. They applied a biographical approach to the material culture (Kopytoff, 1986) that takes into account the social (Appadurai, 1986) and relational nature of objects (Miller, 2005). The anthropologists wished to give space and voice to the Yoruba interviewed who spoke of active objects, rich in meanings that go beyond the masks' artistic quality. In a very interesting way, they expressed surprise seeing African artefacts in an Italian museum. Seeing the masks, active and meaningful objects that refer to the social and spiritual experience of today's Yorubas, aroused their amazement: 'Why are there these objects here? What do these Europeans do with them?' exclaimed a young Yoruba shortly before an interview. The act of collecting artefacts of artistic value met the emic feelings of Yorubas who see the masks as documents of their heritage and, in a much stronger way, as objects of daily use and, above all, of value because ritually 'active.'

One summer afternoon, the staff and the video maker were ready to shoot the first interview with a young Yoruba lady, and the MAET masks were placed on a table. The idea was to frame them or to use them as an evocative background to the video. The young woman, however, was visibly uncomfortable. After a few hesitations she said: 'I won't say anything if the masks are there. In their presence I don't speak. They are powerful objects, I don't want to joke about these things.' The negotiation between the subjects involved was related to two different types of identification with the objects. The first, that of the collector, had to do with the very reasons why the masks are thoughtful pieces of art and with the personal commitment of Renato Capra himself in the study and care of the objects. The second was proper to the comprehension of the objects as 'active' elements of Yoruba culture and, therefore, bearers of complex meanings. The aim of giving voice to both of these visions was achieved through the involvement of Renato Capra in the composition of short guides to the exhibition which offered the public a 'formal' knowledge of Gelede masks. The guide was integrated with short videos in which Yoruba informants offered their own comprehension of the masks

and of their cultural heritage. Therefore, two different tools were available to visitors offering two ways of 'reading' the exhibition path: on the one hand, the short guide and, on the other, the videos uploaded on the MAET YouTube channel which could be accessed via a QR code located under each showcase.

The participatory approach and the methods offered by visual anthropology allowed the subjects involved to cross the museum doorway. The MAET became a set for video interviews during which the informants offered a definition and a narrative of the masks and their own culture. Through the words of the Yoruba, different points of view emerged regarding the masks. These artefacts are far from works of 'primitive art' or dumb documents of another culture, but rather living elements of the contemporaneity of the community, even in its own diasporic dimension. Gelede masks emerged from the museum showcases and from the rooms of the private house in which they have been preserved for years, not only in a physical sense but also in a wider metaphorical sense. The present time, used by the interviewees, brought to life intelligible meanings of the Yoruba. The narrative from an emic point of view, therefore, allowed presenting the heritage by giving a voice to those who it represents. This involved, on the one hand, the overcoming of reifying definitions of the culture of others, and on the other, the connection of scientific and anthropological knowledge with the Yoruba view of their own culture and of Gelede masquerades. If the panels accompanying the display offered an overview of these themes, the videos to which the public had access through a QR code allowed them to go deeper into some elements thanks to the interviewees' voices. Through real multimedia captions, the video interviews gave an opportunity to relocate the masks in a context where different subjectivities could be recognised.

Two events linked to the exhibition allowed the academic world to meet some collectors of African art, the Yoruba and some exponents of the Turin African cultural associations. In fact, the inauguration saw the participation of numerous members of the Nigerian community, which appears to be very numerous in the city and is composed of both those present in Italy for some time and those who came more recently and are currently involved in the processes of seeking political asylum. The Main Hall of the university campus that hosted the exhibition was the scene of unexpected interactions and a real meeting place between students, researchers and the migrant population. The feedbacks collected in this regard document an interest for other cultures that before had rarely been expressed. Actually, 'otherness' populates the streets of the city and of the country and too often are the subject of reified and exotic narratives. During the inauguration, the representatives of the 'other' culture had the opportunity to talk, offering a different, positive and open look concerning Nigeria and its cultures.

The attention to European and non-European ethnographic collections preserved by the MAET has meant gaining awareness, on the one hand, of the need to bring out cultural heritage and make this heritage accessible, and on the other, the urgency of a profound reflection on the contexts of production of the objects and the events that led to the formation of the museum collections. This need for

further investigation became indispensable also because of the report on the restitution that was published in France by Sarr and Savoy (2018) almost simultaneously with the exhibition.

## Conclusion

The particular situation of the MAET invites a rethinking of museum practices into more experimental modes and a reconceptualisation of the dialogue between academic discourse and museology. Thanks to targeted projects, the heritage had the opportunity to cross the doors and the museum could widen its audience. The two cases made it possible to reach an audience otherwise difficult to involve and to overcome the idea that the museum institution is only a site for the conservation of a heritage. The social role of the museum was thus somehow addressed and sustained, and the physical and symbolic thresholds that divide the museum rooms from the outside world were at least partly overcome.

The establishment of relationships and dialogues between different institutions and between institutions and civil society allowed the opening of the museum's doors and gave an opportunity to not only rethink heritage in a more shared way, but also to lay the foundations for their future. In this sense, the museum's legacy is to have found an institutional network to work with in the future. It is made up of institutions, but above all it connects experts and academics with the subjectivities that the museum represents through its heritage. In particular, the collaboration between different professional figures emerged fruitful and allowed the achievement of the museum's mission.

The priority now is to systematise what has been achieved and to integrate practices already tested with participatory and dialogical ones: it appears essential to activate good practices of sharing and further research regarding the heritage and a possible audience. Therefore, these experiences like *APAU* and *Gelede. Our Yoruba Mothers* can be a good basis to foresee exhibitions that take into account recent theoretical reflections on ethnographic collections. According to the MAET experience, they will have a certain weight in its future choices and will lead the MAET to imagine, with the help of the scientific committee but also of architects and designers, a display that takes into account three fundamental points that can be useful to go beyond its doors. First, the approach offered by museum anthropology and participatory ethnography methods will make it possible to recognise the power relations and the need for decolonisation typical of the nature of the museum institution as it has been thought up to now. In this case, the doors would finally open to subjectivities which are often excluded from the museum's world and which, however, are often the subject of narratives within it. Second, it will be essential to remember the problematic nature of MAET collections which are bearers of critical memories and unfair relationships between cultures. In this case, crossing the threshold will mean finding the opportunity of turning the critical nature of collections into an opportunity to make them more inclusive. Third, we need to remember that the museum is a political space linked to

memories, a diachronic and synchronic gaze on the history and present of the MAET, will be essential to open the doors and reread the heritage according to contemporary contexts and aims.

## Bibliography

- Ames, M. M. (1992). *Cannibal tours and glass boxes*. University of British Columbia Press.
- Amselle, J. L. (2016). *Le musée exposé*. Editions Ligne.
- Appadurai, A. (Ed.). (1986). *The social life of things: Commodities in cultural perspective*. Cambridge University Press.
- Bargna, I., & Parodi da Passano, G. (2010). Introduction: The wonders of Africa. In I. Bargna & G. Parodi da Passano (Eds.), *The wonders of Africa: African arts in Italian collections* (pp. 23–42). Silvana Editoriale.
- Basu, P. (2012). Material culture: Ancestries and trajectories in material culture studies. In J. G. Carrier & D. B. Gewertz (Eds.), *Handbook of sociocultural anthropology* (pp. 370–390). Bloomsbury.
- Basu, P. (Ed.). (2017). *The inbetweenness of things: Materializing, mediation and movement between Worlds*. Bloomsbury Academic.
- Beatrice, L. (2015, May 18). *Omaggio a Marlene Dietrich (Tribute to Marlene Dietrich)*. [video]. <https://www.youtube.com/watch?v=6ig3ywKP250>
- Benjamin, W. (1936). *Das Kunstwerk im Zeitalter seiner technischen Reproduzierbarkeit*. Suhrkamp.
- Bollo, A., Da Milano, C., Gariboldi, A., & Torch, C. (2017). *Study on audience development: How to place audiences at the centre of cultural organisations*. European Commission.
- Cameron, F., & McCarthy, C. (2015). Museum and Society special issue: Museum, field, colony: Collecting, displaying and governing people and things. *Museum & Society*, 13(1), 1–6.
- Chambers, I., De Angelis, A., Ianniciello, C., & Oranona, M. (2014). *The postcolonial museum: The arts of memory and the pressures of history*. Ashgate Publishing Limited.
- Clifford, J. (1997). *Routes: Travel and translation in the late twentieth century*. Harvard University Press.
- Cohn, B. S. (1996). *Colonialism and its forms of knowledge*. Princeton University Press.
- Coombes, A. E. (1994). *Reinventing Africa*. Yale University Press.
- Da Milano, C., & Gariboldi, A. (2019). *Audience development*. Franco Angeli Ed.
- Derlon, B., & Jeudy-Ballini, M. (2008). *La passion de l'art primitif: Enquête sur les collectionneurs*. Gallimard.
- Dewdney, A., Dibosa, D., & Walsh, V. (2013). *Post-critical museology. Theory and practice in the art museum*. Routledge.
- Goodman, S. (2018). You can't tell LGBTQ stories where they don't exist: Or can you? In R. Sandell, R. Lennon, & M. Smith (Eds.), *Prejudice and pride: LGBTQ heritage and its contemporary implications* (pp. 71–75). School of Museum Studies, University of Leicester.
- Gosden, C., & Larson, F. (2007). *Knowing things*. Oxford University Press.
- Grasso, E. (2019). Strade, sguardi, voci: Fondi fotografici inediti e memoria coloniali dall'archivio del Museo di Antropologia ed Etnografia dell'Università di Torino. *Roots&Routes. Research on Visual Cultures*, 9(29). <https://www.roots-routes.org/strade-sguardi-voci-fondi-fotografici-inediti-memoria-coloniale-dallarchivio-del-maet-erika-grasso/>
- Grasso, E. (2020). Cultura materiale e alterità: Il caso del Museo di Antropologia ed Etnografia di Torino, *Voci* (in press).



- Hedstrom, M., & King, J. L. (2004). On the LAM: Library, archive, and museum collections in the creation and maintenance of knowledge communities. *Mapping innovation: Six depth studies*. <http://www.oecd.org/dataoecd/59/63/32126054.pdf>
- Hooper-Greenhill, E. (1992). *Museums and the shaping of knowledge*. Routledge.
- Karp, I., & Lavine, S. D. (Eds.). (1991). *Exhibiting cultures: The poetics and politics of museum display*. Smithsonian Institution Press.
- Kendall, G. (2011). Why are museums so scared of LGBT stories? *Museum Association*. <http://www.museumsassociation.org/news/04102011-why-are-museums-scared-of-lgbt-stories>
- Kopytoff, I. (1986). The cultural biography of things: Commoditization as process. In A. Appadurai (Ed.), *The social life of things: Commodities in cultural perspective* (pp. 64–91). Cambridge University Press.
- Lawal, B. (1996). *The Gèlèdè spectacle: Art, gender, and social harmony in an African culture*. University of Washington Press.
- Mangiapane, G., & Grasso E. (2019). Il patrimonio, i non detti e il silenzio: le storie del MAET. *Roots&Routes: Research on Visual Cultures*, 9(30). <https://www.roots-routes.org/patrimonio-non-detti-silenzio-le-storie-del-maet-gianluigi-mangiapane-erika-grasso/>
- Mangiapane, G., Pecci, A. M., & Porcellana, V. (Eds.). (2013). *Arte dei margini: Collezioni di Art Brut, creatività relazionale, educazione alla differenza*. Franco Angeli.
- Miller, D. (2005). Materiality: An introduction. In D. Miller (Ed.), *Materiality* (pp. 1–50). Duke University Press.
- Mudimbe, V. Y. (1988). *The invention of Africa: Philosophy and the order of knowledge*. Indiana University Press.
- O’Hanlon, M., & Welsch, R. L. (Eds.). (2000). *Hunting the gatherers*. Berghahn Books.
- Pecci, A. M. (2019). Sharing authority: The art of making a difference. In V. Golding & J. Walklate (Eds.), *Museums and communities: Diversity, dialogue and collaboration in an age of migration* (pp. 204–215). Scholars Publishing.
- Pecci, A. M., & Mangiapane, G. (2010). Expographic storytelling: The Museum of Anthropology and Ethnography of the University of Turin as a field of dialogic representation. *The International Journal of the Inclusive Museum*, 3(1), 141–153.
- Penny, H. G. (2002). *Objects of culture*. University of North Carolina Press.
- Romano, G. (2020). *Il caso di G: La patologizzazione dell’omosessualità nell’Italia fascista*. Edizioni ETS.
- Sandell, R. (2003). Social inclusion, the museum and the dynamics of sectoral change. *Museum and Society*, 1(1), 45–62.
- Sarr, F., & Savoy, B. (2018). *Restituer le patrimoine africain: Vers une nouvelle éthique relationnelle*. Seuil Ed.
- Schorch, P. (2020). Sensitive heritage: Ethnographic museums, provenance research, and the potentialities of restitutions. *Museum & Society*, 18(1), 1–5. <https://epub.ub.uni-muenchen.de/72084/1/3459-9133-1-PB.pdf>.
- Shelton, A. (Ed.). (2001a). *Collectors: Expressions of self and other*. Horniman Museum and Gardens.
- Shelton, A. (Ed.). (2001b). *Collectors: Individuals and institutions*. Horniman Museum and Gardens.
- Simon, N. (2016). *The art of relevance*. Museum 2.0.
- Stocking, G. W. (Ed.). (1985). *Objects and others*. University of Wisconsin Press.
- Vergo, P. (1989). *The new museology*. Reaktion Books.

## **PART II**

# Representations



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# 5

## COLONIAL HETEROTROPICS AND GLOBAL HERITAGE AESTHETICS IN ROUNDHAY'S TROPICAL WORLD, LEEDS

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Can we move things out of their context under the imperative to educate the world in profitable ways? In what follows, the present book's key question – how museums can enhance their 'art of relevance' in post-Enlightenment contexts overlaid by the necessity to attract visitors in consumerist environments – acquires new poignant extensions. I explore the intentional acclimatisation of atmospheric, floral and faunal forms originating in remote, tropical systems in Leeds, North Yorkshire, UK. I refer to the more recent commercial operation of Tropical World (heretofore TW) as a living establishment of physical environments belonging to other parts of the world. TW is based in Coronation House (built 1939), a building named after George V's year of coronation (1911), which was refurbished in 1983 as Tropical World. Financially relaunched as The Arnold and Marjorie Ziff Tropical World in 2008, it includes a group of temperature-controlled greenhouses. Since 2015, these greenhouses have been operating in sustainable, energy-saving ways. TW is also one of the UK's popular garden tourist attractions and home to the largest collection of tropical plants outside Kew Gardens in London.

### **The experiment**

The 'human right' to enjoy the outdoors and collect impressions continues to guide the contemporary enterprise of knowing about nature as an objectified 'thing.' However, we live in a 'posthuman era,' in which prioritising human interests goes against the project of non-hierarchical coexistence of different species in an ecology embracing animals, plants and humans. 'Posthumanism' calls for critical re-evaluations of 'the basic unit of common reference for our species, our polity and our relationship to the other inhabitants of this planet' (Braidotti, 2013, p. 2): the human subject, earth's main ruler and destructive force. Still, even

where humans enter local lifeworlds as strangers to enjoy their environments as objects (Fletcher & Neves, 2012) as is very much the case with Kew Gardens, nature produces spheres of experience, challenging their objectification of surroundings and occasionally making them reconsider their thoughtlessness (MacCannell, 2011). The power of humans to beautify the natural world is stronger now that post-industrial development threatens it with annihilation. In the form of banal activities (a walk in a natural park or a museum), the natural world continues to assert itself as one of late modernity's principal actors. This paradox recurs in all instances of human progress written from a privileged Western European standpoint: the hurt or eliminated populations begin to haunt such scripts, even though they may not be physically present in this world anymore (Herzfeld, 2002). This issue of who is qualified to be recognised as the rightful custodian in Leeds exceeds the limits of the present study, and merits unpacking on its own. For the purposes of this chapter, I will be talking about 'atmospheres' to refer to such hauntings, which incorporate both physical manifestations (TW's preserved climates, plants and animals), and ethereal experiences (the inducement of cognitive and emotional work in visitors through TW's staging of environments).

The atmospheres visitors encounter in the TW are physically portable, materially malleable (they can be staged) and, though experientially nuanced (humans feel them in varied ways), in terms of messages, easily stabilised (someone fixes their aesthetic and moral content). With this in mind I stress that TW is not just a tourist attraction – this popular presentation of its function is justified only by its geographical proximity to a leisure complex in one of Leeds' more affluent areas. Instead, we should see it as an experiment in physically relocating *alien forms of life* (flora, fauna and the atmospheric environments necessary for these forms to survive) in what used to be both the cradle of the Industrial Revolution (Yorkshire) and part of the British Empire. Such experiments were constitutive of the colonial machine's attempt to classify, catalogue and symbolically appropriate subjugated people's inheritances and heritages – an experiment with various extensions in the contemporary tourist business (Hollinshead, 2009). What contemporary visitors experience from visitations to the TW and the adjacent Roundhay Park is not just nature but the coexistence of different forms of heritage, some of which are human and some environmental, turned into commoditised objects in the tradition of dark tourism. Involving the commercialisation of sites of both environmental and man-made calamities, such as war events, slavery, terrorist tragedies and climate-induced disasters such as flooding, 'dark tourism' often centres on specific places enclosing human memory (Dann & Seaton, 2001). The portability of 'tropical' environmental imaginaries hosted in the TW revises such set definitions, allowing TW's custodians to move other cultural heritages to different temporal, geographical and digital domains.

TW's mission to educate about foreign climates and species is produced in a variety of virtual and textual forms, including brochures and two different websites. However, there are still problems with its programmatic statement: on the

one hand, displays of plants, animals and recreated natural atmospheres suggest that the mission is to protect life, not dead objects. This challenges traditional understandings of the museum as a space to display things that do not interact with visitors, and have identities *assigned* to them by humans. In a posthuman context, animals and plants do have agency, in that they communicate their inheritances with some immediacy and intimacy that we associate with human narratives, through their contextual presence. However, TW's experts seem to place its technologically controlled reproduction of alien environments in a new context of emergency, which overrides that of (post)colonial violence. This is known as the Anthropocene, the era of human domination over the earth's life course. Thus, currently, TW's experiment focusses on teaching through science that all humans are at risk of extinction because of their uncontrolled activities of pollution or thoughtless and unsustainable consumption (Beck, 2009). This posits the abstract 'Human' as the new self-destructive coloniser, who must be alerted to the consequences their activities have on ecological diversity as global natural heritage.

### The proposition

Admittedly, this alleged global heritage bears the potential to produce new hybrid worlds of cultural synergy, for future global, rather than British, generations (Aravamudan, 1999; Delanty, 2009). Such synergies between local and international museum experts and local governmental authorities from the Parks and Countryside division could remake the script on which TW stages its exhibits in just ways. But this is my proposition and not what really happens. Framed as a critical museological intervention, my proposition points to gaps and potentialities in TW's design. Through an analysis of the ways TW's living collections are currently staged, I highlight problems that stand in the way of such fusions of horizons. Many speak today about nature's suppressed voice or rights (Badmington, 2003), so museological narratives of custodianship must address 'natural inheritance' in a revised posthuman-cosmopolitan fashion.

It helps remembering that colonial destruction of native cultures and instillations of master narratives of Western civilisation in colonised regions outside Europe went hand in hand with the modification of their physical environments. Blaming the natives for environmental degradation induced by colonists was often followed by the transportation of species and plants to the colonial metropolis as objects of science, curiosity or trade (MacKenzie, 1997, p. 45). The 1993 United Nations Convention on Biodiversity challenged the assumption that the earth's biological and genetic resources are part of the 'global commons,' by giving property rights over these resources to the nation-state. Colonists and scientists often used the principle of a commons 'when, in reality, the expansion of European property laws to the colonies meant the appropriation of lands and resources commonly held and used by aboriginal communities' (Merson, 2000, p. 286). In contemporary posthuman contexts, relocations of tropical heritage postulate questions of biopiracy, because they are based on considerations of the

environment as an object to be used, and thus lacking this kind of citizenship with which it is endowed by place. The Anthropocenic argument framing the British right to educate the world is, in fact, rooted in the ways all human *and* posthuman lifeworlds have been colonised by specific ways of doing things. One of them involves tourism as a consumerist journey rather than a pilgrimage. As much as TW's educational project would merit from a more explicit audio-visual or embodied-performative projection of its contents' real biographies and journeys through time and space, its portable tourist-like imaginaries of adventure remove any notion of agency from its gazed 'objects,' placing it in the hands of capitalist networks (Moore, 2016; Salazar & Graburn, 2016).

This erasure is embedded in juxtapositions of two different types of gazing, currently coexisting in the staging of TW's collections: that of the tourist as an objective expert and the pilgrim as a subjective/existential, caring savant. It must be stressed that subjective patterns of perception of the TW's exhibits and the objective properties of perceived objects originate in different places and times – they are, what is known as 'heterotopias.' Put simply, the social and cultural lives and environments of the living collections never or rarely meet without some form of forced engineering (Foucault, 1986). Consequently, this meeting and merging of other (*heteroi*) places (*topoi*) into a single 'tropical' narrative in Leeds can participate in processes of diversity elimination. In addition to recognising biodiversity, this encompasses the recognition of the diversity of the cultures (and their geographic coordinates) from which these climates were transported. 'Tropical' signifies a unity that overrides the real diversity of all the places/countries/cultures (*topoi*) from which TW's displayed plants and animals came.

We arrive at an ethical crossroads, with a twin aesthetic potential: what does it mean to have the TW as a tourist and schooling establishment in Britain with such a political background, barely acknowledged? Should we ignore this background so that we allow its current British custodians to educate visitors about 'global' environmental heritages? Given the frequent school excursions to TW, the establishment's 'globalised natural heritage' has acquired schooling potential for those who start their lives as earth's systemic-natural equilibrium may be approaching its end. I propose that TW's practices of display and global, digitised now, communication of exhibits, should address a moral conflict between different experiential perspectives in custodianship and display of alien tropical species to diverse audiences. To address this, I explore clashes between the establishment's pragmatic objectives (to attract visitors and educate them) and phenomenal-moral calls (acknowledging what it means to host alien climates and tropical species without recognising their journey to the erstwhile imperial metropolis, so as to transform them into educational-touristic objects). This brings to the fore questions of design and public access of TW's narratives, as well as strategies of marketing with respect for forms of cultural difference.

Without ignoring questions of colonial violence in such symbolic appropriations of inheritances, I follow TW's in-progress narrative and treat the establishment's predicament in posthuman ways. I argue that TW's experiment can do more than

‘educate’ in science – the institution’s current priority: it can enlarge planetary consciousness by adopting the very ‘confessional’ styles the imperial machine once imposed on indigenous populations. Such styles were used to blame environmental destruction on the natives, ignoring who started this process while simultaneously depriving them of the means to prevent it or the resources to achieve flourishing in a healthy physical and social environment. As explained later, the experiment’s institutional manager, the Leeds City Council, already attempts to bring together some of the phenomenal and pragmatic aspects of these atmospheric backgrounds in ways approximating the praxeological rationale of museum studies (Shelton, 2013), but the attempts clash with commercial imperatives.

In the tradition of such praxeological museology, I borrow from the gaze of the expert to enact processes of ‘deep seeing’ (Azcarate, 2018, p. 12) of TW’s collections. Such depth is enacted through reflecting on photographic diaries of the collections produced by myself, but also by my embodied and digital journeys (scrutinising TW’s presentations online) to them in the style of pilgrimage. I visited the TW and its gardens twice, and produced a photographic diary of my visits, which allowed me to reflect on the experience at a later stage. My first visit was in the context of an international family reunion, which posited me as a family photographer; the second visit involved a more focussed tour associated with the gaze of the researcher, rather than the tourist. Thus, ‘deep seeing’ was produced in stages: first, through combinations of my experience of walking the TW in two different modes and roles that I discuss in this chapter, its re-evaluation through two digital tours at a later stage, and finally the educational statement provided by TW in its brochure. However, such a ‘truth test’ is not enough to validate the TW’s project. In the last part of the chapter I perform a ‘reality test,’ in which I re-evaluate my own experience from a social perspective. This coerces me to set both my ways of apprehension and the official atmospheric stagings or representations of ‘tropical collections’ against the conditions under which they are constructed (Boltanski & Thévenot, 2006, p. 62) – something actualised through a political now pilgrimage. The politics of such material and ideal mobilities thrive on a global hierarchy of value, which apportions rights and privileges to the subjects and objects that move (Cresswell, 2010). Thus, a political pilgrimage to the TW aims to counter cultures of thoughtlessness instilled in visitors by consumerist fascination and objective science. In the following section I provide a ‘tour’ to TW’s key collections to initiate discussions on visitor experience. This is examined from the perspective of atmospheric staging in TW’s various rooms and the building’s aesthetic-structural design. The discussion of ‘tacit,’ multi-sensory visitor experience is followed by some observations on TW’s digital tours, which, as exercises in mono-sensory apprehension (vision), do more than introduce viewers to the collections. In section three I examine connections of the leisure complex to which the TW is adjacent, to consumption regimes and touristic activities (Soper, 2007). I connect institutional-museological arguments to a critique of new capitalism, which promotes entrepreneurialism and individualist innovation as blueprints of social agency in urban areas, with consequences for TW’s project.



## Educational journeys, on and offline

Coronation House is an imposing structure, whose incorporation of glass produces a secondary protective structure (sun can penetrate glass and assist in the preservation of life) (Figure 5.1).



**FIGURE 5.1** The main TW building includes a ground and an upper level that communicate through elevated walkways.

Within it, we experience a contraction of space, which stands in opposition to the expansion of time, as all TW rooms open up millennia of natural evolution to visitors. The contraction of space is unavoidable: the building has a Butterfly House, a Desert House and a Jungle, in which birds, reptiles and other animals (including meerkats, a species facing extinction due to climate change) live free in enclosures. A nocturnal house hosts bats, whereas a recently refurbished 'Aztec Zone' has merged with an Amazon-themed area, in which one finds salamanders and piranhas. Passages to other rooms are mostly decorated with signposting and information on different species, in ways approximating the display of conventional museum collections (Figure 5.2).

The upper level hosts the atmospheric collections together with re-created environments for the species, whereas insects and some reptiles are stored in glass enclosures embedded in the walls of that level. The 'tropical' exhibits commence on ground level via the establishment's café, through which one reaches the area where reptiles are preserved in glass compartments on the walls. From this area, visitors reach the spaces in which recreated environments and flora and fauna are displayed. While walking on an elevated from the ground bridge, which splits into different directions, visitors can experience tropical environments at less than a metre's distance, as these are separated from them. The lower level, where butterflies and exotic fish in ponds are, is connected to an upper level, which is progressively elevated, with more plants, varieties of birds and animals. Enclosures on this level host meerkats and turtles. Through these areas, visitors are directed to another dark area, where they can see nocturnal animals, such as bats, in more glass enclosures. These areas are designed as tropical environments complete with their atmospheres, which are characterised by high levels of humidity. The experience of walking through these natural habitats is enhanced by their staging on natural soil and wood, rather than boards and concrete. This acts in unison with technology, which helps to produce appropriate micro-climates. There is a feeling of containment that, together with the omnipresence of excessive humidity, suggests to visitors that they entered a tropical world of adventure. The most appropriate term to describe this structural atmosphere is 'imaginarium': a copy (Latin root *ima*) of forms of life (Latin suffix *ago*) that have morphed into objects of speculation or amazement as finished images. This sort of engineering draws on the free faculty of imagination, enabling visitors to experience their own tailor-made journeys in delimited spaces. Comparable to tourist markers, such signposts expand the temporal dimensions of the journey/visit, feeding back to ad hoc visitor perceptions of the actual displays and the designed environments.

The visitors' apprehensions of the exhibits are supposed to enable an awareness of, and reflection on the power humans hold in the production of life and time (Caton, 2013). This is achieved pragmatically through immediate encounters with their staged conservation in TW's rooms: our earth's (and Leeds') master climate, which follows the non-linearity of the earth's climate system in episodic, abrupt and multi-equilibrium ways (Urry, 2005) through flooding and other disasters currently plaguing the region, is erased. Instead, the visitors' minds and bodies are



**FIGURE 5.2** Each quarter of the walkways includes signposting that discusses the species of the room/area.

immersed in the natural audio-visual and ethereal atmosphere of the tropics from which plant and animal species came. In other words, a utopian equilibrium we do not really enjoy any more is restored in TW's rooms: silence is disrupted by the birds and the artificial ponds' surface is rippled by its underwater inhabitants. Because the environment is alive with creatures, it imparts the feeling of magic:

the perception of movements and the actual movements of creatures merge with what the visitor's eye, ear and body learn about these alien worlds. This atmospheric staging recalls Benjamin's ([1935] 1969) discussion of the 'aura's' dual quality as a perceptual pattern (the visitor experiences and perceives of environments) and the perceived object's (animals, birds and plants) inherent property.

Despite its constructive dialogical *modus vivendi*, TW's use of science in the domestication of otherness calls for a critical re-evaluation of the place's institutional design, as consuming beautiful and valuable things without considering their mobility histories has been one of the pitfalls of Enlightenment and colonial rationalisation. Brockway (2002, p. 7) sees in the British botanic garden network in the period 1841–1941 the consolidation of plant transfers from the former colonies to the European core and scientific plant development in Western metropolises, 'which altered the patterns of world trade and increasing the plant energy, and human energy ... extracted from the tropical peripheries of the world system.' She proceeds to compare as famous botanical gardens as the Kew Gardens with the exploitative function of rubber plantations of Malaya, developed from seeds of wild Brazilian rubber, also noting how Latin American states, such as Brazil, Mexico, Colombia, Peru, Ecuador and Bolivia, 'each lost a native industry as a result of these transfers' of species from indigenous lands to the British colonial centre (Brockway, 2002, p. 451). Admittedly, currently, there is no display of such institutional reflexivity in TW's narratives, but the experiment is still fairly recent. The production of a reflexive script would expose what Sahr (2011, p. 111) discusses as the 'cutting out [of] a life form from the relational world' to which it naturally belongs. Sharing these lifeworld relationalities as part of a global temporal movement from colonialism to industrialisation that culminated in the age of capitalist eco-destruction, has been at the heart of other similar experimental projects, such as that of the Museum of Tomorrow (*Museu do Amanhã*) in Rio de Janeiro (Tzanelli, 2018b). Conceptualised as an open-ended narrative on climate change and the future of humanity through artistic artefacts and audio-visual displays to engage visitors in decision-making scenarios about collective futures, as well as aspiring to act as a global hub for natural science and ecological art, the Museum of Tomorrow is a step ahead from the less well-networked TW.

The imaginarium's containment of species in corners plunged in natural darkness turns the living collections into sites of intimacy, which are nevertheless intended for onlookers. 'Visual prying' in these areas affords learning about phenomena inaccessible to most humans, but the act of gazing produces tourist imaginaries, ways of conceptualising tropical worlds as tourist objects and concepts (Salazar, 2012; Salazar & Graburn, 2016). Naturally dark enclosures coexist with illuminated areas on the upper level of the building, enabling the visitors' mobility and highlighting areas worthy of inspection. As a result, tropical life becomes designated as a precious form of darkness, standing now in opposition to colonial violence. This reframing of tropical life challenges traditional oppositions of darkness (the colonised subject) and light (*lumen*), as the Cartesian source of outer, Western scientific knowledge (Ingold, 2011, p. 256). Instead, the staging invites

holistic engagement with tropical natures. The subjective conditions of this atmospheric experience involve the kinetic training of the visitor, who must learn to follow plants' and animals' routines in their natural environments, while not just looking at, but also *breathing* their natural atmospheres. The training turns an unconscious physiological activity (oxygen inhalation) into a metaphorical 'inhalation' of the perceptible: climate (Rauch, 2018, pp. 67–68).

As much as there is an effort to treat tropical species and atmospheres as subjects, their scientific objectification persists in print and digital narrations of the project. This is particularly prevalent in the educational pack addressed to young visitors. The pack's invitation to explore different exhibits will be followed by actual guided tours in very narrow spaces and corridors that remove disinterested play from the adventure. In other words, the invitation to young pupils to engage in exploring 'this and that' (Barthes, 1981, pp. 4–5) is overridden by uses of scientific language, to represent, rather than present reality (Danston & Galison, 2007; Jasanoff et al., 1995; Latour, 1987). Alongside a revision of amnesiac presentations of the collections as 'things out of time' at the service of their current custodians, the project would benefit from introducing more embodied, performative ways of learning for its young visitors, which do not remove play from the act of learning. The absence of such embodied rituals conforms to treatments of climate and alien forms of life as objects of scientific fascination, in contradistinction with children's disinterested captivation by the natural world.

Although digital presentations of TW's contents to its prospective adult visitors are fully developed, there is space to re-evaluate representations of visitor profiles, as currently, images suggest that they are exclusively white and middle-class. Digital presentations of TW's contents appear in two different websites, one managed by the city council, and another independently published website (not funded by public bodies, including the Leeds City Council) by Red Door VR Limited, which produced digital tours to its exhibits. Unlike Red Door VR's tourist gaze (Urry & Larsen, 2011), the official website's presentation of the exhibits places the digital gaze at an intimate proximity to tropical nature. Species close-ups framed with narratives of TW's re-created tropical spaces give the impression that we deal with de-mediated lifeworlds. The technique is that of a 'popular-cultural journey' (Gyimóthy et al., 2015), which is suitable for families. It is based on the logic of impression-collecting, which we associate with family photography (taken by family members), hence human belonging and leisurely eco-tourism (Haldrup & Larsen, 2003, 2010; Larsen, 2005; Larsen et al., 2006).

Generally, embodied peripatetic visitors are more certain that they experience realities without mediations tarnished by centuries of First-World politics and industrial ecological deterioration. Contrariwise, digital visitors are confronted with the possibility that they are estranged from earth as a multispecies 'home' (Braidotti, 2013). In contradistinction to the official website's static images, Red Door VR presents a free online Tour of TW, which is worth comparing to TW's official website's ways of seeing. Red Door VR's tour employs a centric perspective that guides visitors through TW's rooms, including one (Australasia

House), which ‘has been used as a set for film and television, even for a pop group video!’ (Tropical World, Virtual Tour, 2019). Red Door VR’s centrism is actualised by placing the tour’s gaze at the centre and then gyrating to capture digital surroundings, like seeing from a carousel. This panoramic presentation of space emplaces the visitor’s gaze at the centre of the room (hence, the recreated tropical ecosystem), promoting an anthropocentric narrative haunted by a particular understanding of unattainable ‘homecoming’: pristine natural environments can only be staged, re-created in the era of Anthropocenic destruction, not physically felt/experienced.

The digital conception of an irretrievable ‘home,’ which is under attack by forces beyond individual human control, transforms the cybergazer’s cognitive and emotional journey into an end in itself: a pilgrimage of sorts into the unknown future. The feeling of loss is emblematic of what Bauman (1996) recognises in the post-modern tourist’s endless search for belonging and Augé (2008) as the disorientating feeling induced by the non-places of contemporary capitalism, which can be anywhere and anything, as they are stripped of their original identity (Tzanelli, 2018a, p. 103). Where panorama theatre views often connect to the political staging of national memory and identity from an omniscient point of view (Taussig, 1997, pp. 79–80). The Red Door VR’s panoramic gaze questions whether and how humans are part of a larger-than-them whole. The tour enables them to visually retrieve and apprehend a pristine master ecosystem before its incremental and ongoing destruction. There is ambivalence in this design, which is supposed to act as a mirror image of TW’s room designs: the webpage in which Red Door VR’s moving digital tours are organised hosts mundane tourist and consumption practices, explicitly promoting the system of local tourist services through various advertising vignettes of eateries, cafes, hotels and activities. In this respect, the idea of slow pilgrimage is annulled before it reaches its embodied, offline phase.

The heavy commercialisation of digital tours suggests that focusing on colonial violence alone may sideline the root of current pressures. The dedicated investigator’s old saying ‘follow the money to find the criminal’ merits considerable adaptation here: part of the problem is that capitalism’s latest neoliberal mutation makes sure that there is no money to spend wisely, so all of us, including state institutions, must make ends meet. Thus, for example, we deal with a paradox both in TW’s physical and virtual stagings: on the one hand, the project’s experimental education through retrievals of the ‘slow pace’ of the ‘good life’ that has come under threat with the advent of the Anthropocene, generates the pre-conditions for a dialogue between erstwhile centres of colonial power and tropical peripheries. On the other, the institutions/organisations partaking in this dialogue are caught in the cogwheels of capitalism’s latest mutation. This mutation demands that TW’s current owners generate profit to fund an impoverished urban administration. It also demands to stage spectacles for tourists to enhance the city’s global cultural reputation, while simultaneously educating young generations about nature and ecological values. The difficulty in reconciling these is reflected in TW’s official (digital) introduction of a Young Brand Ambassador, who enacts

physical journeys in the region, gets to know TW and its staff, cooperates with local councillors and participates in the organisation of local events and activities (Tropical World, Young Brand Ambassador, 2019).

From the perspective of museological theory, public visitations to museums have always contributed to what is known as ‘silent pedagogy,’ the provision of non-spoken information by the exhibited objects, followed by ‘cues’ as to how one can perceive and appreciate particular works (Eisner & Dobbs, 1988; Usherwood et al., 2005). For young visitors, this is more complicated. Directed play for children has been a major concern among museum theorists, who also advocate the uses of new technologies in the pedagogical communication of museum ideas (Isa, 2017, pp. 80–83). These debates conform to the Western emphasis on goal-oriented play supplanting childhood innocence with adult-determined developmental achievement, so in museum visits the protection of ‘creative play’ is framed in rational terms (Nilsson & Ferholt, 2014). There is a separate, but crucial question to address concerning the ways other world societies treat children: because in non-Western contexts children are regarded as adults from a very early developmental stage, they are left to their own devices to comprehend their environs (Lancy, 2017) – a difference, nevertheless, also applying to the societies of the tropics. I will set this question aside to examine the Young Brand Ambassador initiative in the context of Western pedagogical rationalisation: this young human type emerges on TW’s website as a miniature model of the Western adult subject, who organises capitalist mobilities, while slowly side-lining child play from their everyday routines. The Young Ambassador’s digital presentation rests on the *logos* or reason of capitalist economy, branding (Lury, 2004), thus framing the TW’s contents as British property.

## Heterotropic praxis and capitalism

We have arrived at the crossroads I discussed the introduction: in it groups of alien non-human but living species, are stripped of their original properties, homogenised as ‘tropical collections’ and placed between the institutional desire to educate and the pressure to commercialise. The tension is constitutive of the potential fortunes of the entire physical complex in which TW belongs: Roundhay Park. A brief look into this will feed back into our original question regarding heterotropic praxis: an action on representation of other places and cultures in the context of late capitalism and climate crisis. This praxis cannot be excised from debates on how museums experiment within wider design ecologies. It could be argued that experimenting from within capitalist complexities such as the ones outlined here, may unlock new possibilities for reflexive interpretation of Roundhay Park’s futures, but this would also merit testing.

A central theme in discourses of climate change/crisis is the reconfiguration of societal habits and economic practices around multiple mobilities (travel, tourism, technology) and ‘constructed environments’ (Urry, 2007, p. 89; Urry, 2011b, p. 213). Branding human (Young Ambassador) and environmental (Tropical, not

Brazilian or otherwise nature and climate) groups becomes complicit in the production of a 'TW experience economy,' as an extension of the city's phantasmagoric portfolio. Often, this extension heralds the transformation of educational or activist projects into a 'variation on theme parks' (Sorkin, 1992) – not necessarily the most environmentally sustainable form of action. Indeed, the ways TW's micro-economy and micro-habitual socialisations are currently structured point to precisely such a 'mobility complex,' with all its accompanying risks (Elliott & Urry, 2010).

This mobility complex displays all the usual contradictions of capitalism (Bell, 1976): on the one hand, it is discursively regulated by modulations of preservation (of living forms) and conservation (of cultures) in the Anthropocenic context, but on the other, it is materially embedded in capitalist practices. Ironically, for example, the Leeds City Council generates revenue by letting designated parts of the Park's areas to external business networks, which organise events such as concerts and festivals. While this secures much-needed revenues, it contributes to the littering of the Park, when organised cleaning services may be insufficient to deal with so much litter. This mission is often undertaken by the 'Friends of Roundhay Park,' a local charity, whose members organise monthly volunteer littering sessions, despite personal health risks, to collect the garbage left behind by insensitive visitors. The charity is not actively involved in the TW's activities, although its council includes Dr Marjorie Ziff, one of the institution's new title namesakes in TW's 2008 relaunching.

Unfortunately, neither the area's beneficiaries nor positive action stemming from the city's administration can hold back the rapid neoliberal restructuring of Leeds' space and culture (Lash & Urry, 1994). Pragmatically, one may claim that TW's 'cultural enterprise' is operationalised effectively thanks to its geographic proximity to Roundhay Park, a significant leisure node for the city. However, treating the 'Roundhay Park Complex' only in terms of business and capital generation would silence the ways multiple social and cultural realities are embedded in critical conceptions of *complexity* as more than a property of climate change loops and risks. This complexity entangles three distinct ethico-practical issues: first, Roundhay Park guests' motivations, experiences of nature and culture and on-site performances can be more diverse than those encapsulated by organised conceptions of leisure, tourism or even environmental education (indeed, this may be the reason why no uniform brand/identity has been ascribed institutionally to the complex). Second, the Park itself hosts multiple heritages. By this I refer to both its original landscaping and launching as a working-class leisure ground and the fact that its Arena, which serves as a cricket pitch and a concert ground, overlooks 'Hill 60,' a mount commemorating Leeds' soldiers who died in First World War battles around Hill 60 near Ypres (Friends of Roundhay Park, 2006). Third, the Park snuggles amidst a collection of localities and ethno-cultural groups: historically, Leeds has been a major destination of multiple human migrations, leading to local settlements of different Asian, South American, European and African ethno-cultural groups. Together with Roundhay, these established



diasporic communities may be affected by unregulated visitor expansion or even excluded from the physical multi-site's use.

Such a historical complexity hosts memories overlaid by lighter forms of consumption, which serve current hospitality needs (Reijnders, 2009). As a result, the multiplicity of the TW's inheritances and histories, are silenced (Jamal, 2019, pp. 175–180). Bringing the bioproperties of TW's collection to an ethically conscious discourse would speak museology's 'third wave' language, allowing for a re-evaluation of the exhibitions' design and practice (Macdonald, 2007; Macdonald & Basu, 2007), so it considers questions of indigenous justice (Caton, 2013). To stress the plight's cosmopolitan justice, behind generic discussions of 'capitalist contradictions' induced by consumption, lies what museum studies scholars debate as the discursive 'essentialisation' and, ultimately homogenisation of epistemologically distinct 'systems of knowledge and ethical interdictions' (Shelton, 2013, p. 8). In practical terms, this calls for a fusion of British educational curricula on natural science with pedagogical (performative and conceptual) journeys into the lifeworlds and ecosystems from which the TW's collections came, as well as *an explicit relational narration* of both in the current global environmental crisis. The same phenomenon is considered praxeologically by tourism theorists as a form of 'worldmaking,' a constant making of social environments as liveable, inclusive environments, traditionally assigned to the state but now increasingly capitalist networks (Hollinshead, 2009).

## Conclusion

I performed a reality test on the city council's truth-claiming that through the TW's collections, it provides full proof and disinterested scientific education on the challenges of the Anthropocene. It did that by situating the institution in the wider leisure complex of Roundhay Park and by examining the logic behind the staging of its tropical collections. My experiment on the institutional experiment suggests a number of improvements in its current presentation to visitors. TW is physically connected to a narrative node based on diverse human histories of suffering (from slavery to war), which human actions have now replaced with the prospect of more suffering or even complete human extinction: climate change. However, such reflexive narrating and presenting, can promote global connectivity only under certain conditions. A more collaborative staging in TW's collections could extend to the generation of transnational knowledge networks (e.g., the generation of links between TW and *Museu do Amanhã*), which take forgotten or subjugated native wisdom seriously in the design of living knowledge, and not artefacts stored in museums so as to venerate inactive inheritances. A collaborative staging of TW's living natural collections can 'untoken' (López et al., 2018) them as bioproperties that belong to someone else.

The possibility to untoken tropical natures-cultures, which can turn the TW into an exemplary fusion of horizons, is implicit in its exhibits, but in relation to its commercial promotion, it is underdeveloped. Their staging as a multisensory form of

apprehending environmental diversity, which is rooted in multisensory world cultures could challenge the old triptych ‘protection – authenticity – learning’ that has served as the Western ontological base of modern museums for too long (Chourmouziadi, 2017, p. 47). Alien nature should be mapped as an alien bioproperty appropriated by Western science. To achieve this in museological terms, the TW may have to consider the adoption of rhizomatic engagement: a clear statement that the cultural/natural spaces (*heterotopias*) it currently hosts are places with their own cultural routes and roots, which the whims of colonialism entangled with world centres. It would also involve placing this acknowledgement within a narrative of collective human futures at risk from climate crisis. Enhancing multisensory apprehension in TW’s premises would construct a new pedagogy of feeling that focusses on ‘empathy rather than simply tolerance toward difference’ and consequently ‘dialogue and political responsibility’ toward shared posthuman futures (Witcomb, 2015, p. 327).

## Bibliography

- Aravamudan, S. (1999). *Tropicopolitans*. Duke University Press.
- Azcárate, M. C. (2018). Fueling ecological neglect in a manufactured tourist city: Planning, disaster mapping, and environmental art in Cancun, Mexico. *Journal of Sustainable Tourism*. 10.1080/09669582.2018.1478839
- Augé, M. (2008). *Non-places*. Verso.
- Badmington, N. (2003). Theorizing posthumanism. *Culture Critique*, 53(1), 10–27.
- Bauman, Z. (1996). From pilgrim to tourist: Or a short history of identity. In S. Hall & P. Du Gay (Eds.), *Questions of cultural identity* (pp. 18–36). SAGE.
- Barthes, R. (1981). *Camera lucida*, translated by R. Howard. Hill and Wang.
- Beck, U. (2009). *World at risk*. Polity.
- Bell, D. (1976). *The cultural contradictions of capitalism*. Basic Books.
- Boltanski, L., & Thévenot, L. (2006). *On justification*. Princeton University Press.
- Braidotti, R. (2013). *The posthuman*. Polity Press.
- Brockway, L. H. (2002). *Science and colonial expansion: The role of the British Royal Botanic Gardens*. Yale University Press.
- Caton, K. (2013). The risky business of understanding: Philosophical hermeneutics and the knowing subject in worldmaking. *Tourism Analysis*, 18(3), 341–351.
- Chourmouziadi, A. (2017). The deadlock of museum images and multisensoriality. *Punctum*, 3(1), 45–56.
- Cresswell, T. (2010). Towards a politics of mobility. *Environment and Planning D*, 28(1), 17–31.
- Dann, G. M. S., & Seaton, A. V. (2001). Slavery, contested heritage and thanatourism. In G. M. S. Dann & A. V. Seaton (Eds.), *Slavery, contested heritage and thanatourism*. Haworth Hospitality Press.
- Danston, L., & Galison, P. (2007). *Objectivity*. Zone Books.
- Delanty, G. (2009). *The cosmopolitan imagination*. Cambridge University Press.
- Eisner, E. W., & Dobbs, S. M. (1988). Silent pedagogy: How museums help visitors experience exhibitions. *Art Education*, 41(4), 6–15.
- Elliott, A., & Urry, J. (2010). *Mobile lives*. Routledge.
- Fletcher, R., & Neves, K. (2012). Contradictions in tourism: The promise and pitfalls of ecotourism as a manifold capitalist fix. *Environment and Society*, 3(1), 60–77.

- Foucault, M. (1986). Of other spaces. *Diacritics*, 16(1), 22–27.
- Friends of Roundhay Park. (2006, July). Newsletter. [www.forp.co.uk](http://www.forp.co.uk)
- Gyimóthy, S., Lundberg, C., Lindström, K. N., Hexhagen, M., & Larson, M. (2015). Popculture tourism: A research manifesto. In D. Chambers & T. Rakic (Eds.), *Tourism research frontiers* (pp. 13–26). Emerald.
- Haldrup, M., & Larsen, J. (2003). The family gaze. *Tourist Studies*, 3(1), 23–46.
- Haldrup, M., & Larsen, J. (2010). *Tourism, performance and the everyday*. Routledge.
- Herzfeld, M. (2002). The absent presence: Discourses of crypto-colonialism. *South Atlantic Quarterly*, 101(4), 899–926.
- Hollinshead, K. (2009). The ‘worldmaking’ prodigy of tourism: The reach and power of tourism in the dynamics of change and transformation. *Tourism Analysis*, 14(1), 139–152.
- Ingold, T. (2011). *The perception of the environment* (2nd ed.). Routledge.
- Isa, B. (2017). *Museum pedagogy and learning experiences* [Unpublished PhD thesis, School of Education, College of Design and Social Context, RMIT].
- Jamal, T. (2019). *Justice and ethics in tourism*. Routledge/Earthscan.
- Jasanoff, S., Markle, G., Petersen, J., & Pinch, T. (1995). *Handbook of science and technology studies*. SAGE.
- Lancy, D. (2017). *Raising children*. Cambridge University Press.
- Larsen, J. (2005). Families seen photographing: The performativity of tourist photography. *Space and Culture*, 8(4), 416–434.
- Larsen, J., Urry, J., & Axhausen, K. W. (2006). Networks and tourism: Mobile social life. *Annals of Tourism Research*, 34(1), 244–462.
- Lash, S., & Urry, J. (1994). *Economies of signs and space*. SAGE.
- Latour, B. (1987). *Science in action*. Oxford University Press.
- López, M., Lugo, A., & Vargas, O. (2018). Counternarratives of community-based advocacy as sources of knowledge for urban planning. *eJournal of Public Affairs*, 7(2). <http://www.ejournalofpublicaffairs.org/wp-content/uploads/2018/08/206-1354-1-GalleyRevision.pdf>
- Lury, C. (2004). *Brands*. Routledge.
- MacCannell, D. (2011). *The ethics of sightseeing*. University of California Press.
- Macdonald, S. (2007). Interconnecting: Museum visiting and exhibition design. *CoDesign*, 3, 149–162.
- Macdonald, S., & Basu, P. (2007). *Exhibition experiments*. Blackwell.
- MacKenzie, J. M. (1997). *Empires of nature and the nature of empires*. Tuckwell Press.
- Merson, J. (2000). Bio-prospecting or bio-piracy: Intellectual property rights and biodiversity in a colonial and postcolonial context. *Osiris*, 15, 282–296.
- Moore, J. W. (2016). *Anthropocene or capitalocene?* PM Press.
- Nilsson, M., & Ferholt, B. (2014). Vygotsky’s theories of play, imagination and creativity in current practice: Gunilla Lindqvist’s ‘creative pedagogy of play’ in U.S. kindergartens and Swedish Reggio-Emilia inspired preschools. *brPERSPECTIVA, Florianópolis*, 32(3), 919–950.
- Noblet-Ducoudré, N., Prinn, R., Reynolds, J. F., & Salas, J. D. (2004). Nonlinearities, feedbacks and critical thresholds within the earth’s climate system. *Climate Change*, 65(1–2), 11–38.
- Rauch, A. (2018). *Concerning astonishing atmospheres*. Mimesis International.
- Reijnders, S. (2009). Watching the detectives. Inside the guilty landscapes of Inspector Morse, Baantjer and Wallander. *European Journal of Communication*, 24(2), 165–181.
- Sahr, W. D. (2011). The urban staging of politics: Life worlds, aesthetics, and planning – and an example from Brazil. In H. Schmid, W.-D. Sahr, & J. Urry (Eds.), *Cities and fascination* (pp. 107–128). Routledge.

- Salazar, N. B. (2012). Tourism imaginaries: A conceptual approach. *Annals of Tourism Research*, 39(2), 863–882.
- Salazar, N. B., & Graburn, N. H. H. (2016). Towards an anthropology of tourism imaginaries. In N. B. Salazar & N. H. H. Graburn (Eds.), *Tourism imaginaries* (pp. 1–30). Berghahn.
- Shelton, A. (2013). Critical museology: A manifesto. *Museum Worlds: Advances in Research*, 1(1), 7–23.
- Soper, K. (2007). Re-thinking the ‘good life’: The citizenship dimension of consumer disaffection with consumerism. *Journal of Consumer Culture*, 7(2), 205–229.
- Sorkin, M. (1992). *Variations on a theme park*. Noonday.
- Sorkin, M. (2008). Back to zero: Mourning in America. In M. Sorkin (Ed.), *Indefensible space* (pp. 213–232). Routledge.
- Taussig, M. (1997). *The magic of the state*. Routledge.
- Tropical World, Virtual Tour. (2019). Australasia House. <https://www.roundhaypark.org.uk/tropical-world-leeds/tropical-world-tour/Australasia-House.html>
- Tropical World, Young Brand Ambassador. (2019). Read all about Thomas’s experience as Tropical Worlds first young brand ambassador with his regular updates. <https://tropicalworld.leeds.gov.uk/tropical-world-brand-ambassador-competition>
- Tzanelli, R. (2018a). *Cinematic tourist mobilities and the plight of development*. Routledge.
- Tzanelli, R. (2018b). The ‘mangle’ of human practice: Museu do Amanhã’s artistic staging as a socio-scientific narrative on climate change. *Transfers*, 18(2), 138–141.
- Urry, J. (2005). The complexity turn. *Theory, Culture & Society*, 22(5), 1–14.
- Urry, J. (2007). *Mobilities*. Polity.
- Urry, J. (2011a). *Climate change and society*. Polity.
- Urry, J. (2011b). Excess, fascination and climates. In H. Schmid, W.-D. Sahr, & J. Urry (Eds.), *Cities and fascination* (pp. 209–224). Routledge.
- Urry, J., & Larsen, J. (2011). *The tourist gaze 3.0*. SAGE.
- Usherwood, B., Wilson, K., & Bryson, J. (2005). Relevant repositories of public knowledge? Libraries, museums and archives in ‘the information age’. *Journal of Librarianship and Information Science*, 37(2), 89–98.
- Witcomb, A. (2015). Toward a pedagogy of feeling: Understanding how museums create a space for cross-cultural encounters. In A. Witcomb & K. Message (Eds.), *The international handbooks of museum studies* (pp. 321–344). Wiley.

# 6

## ADVOCACY OF SHOCK: HOW TO BRING ART TO LIFE (AND ITS VISITORS WITH IT)

*Mieke Bal*

Curating is a delicate job; it is the mediation between artworks or other objects, and a public that tends to navigate on routine expectations. Rather than providing surveys, for information, the key moment when artworks ‘work’ is when they are juxtaposed, combined, with one another. As also argued by Nina Simon and Claire Bishop (Bishop, 2014; Simon, 2016), and in my 1996 book *Double Exposures* on this subject (Bal, 1996), meanings and effects, affects and appreciation are not inherent in artworks but are *events* that occur, in the present, when visitors engage with the art on display. Shaking visitors up, shocking them into an active engagement with artworks, is in my view the most important aspect of curating.

Shocking them out of the ‘consumerist’ attitude currently promoted by managerial anxieties over subsidies is the curators’ task. I am aware of the need of museums to attract new audiences, especially younger ones. To pre-empt this, the most frequently advanced argument: in the case presented below, shaking up and even shocking did not diminish but increase the visitors’ numbers. In this contribution I aim to make the case for countering conservative tendencies while shedding consumerism, both. And since art can also be seen as something that ‘shocks people into thought’ (Massumi, 2002), the distinction between making art and making an exhibition with it, in other words, between the work of artists and the work of curators, is relative. An effective exhibition produces the shock of unexpected visions that renews complacency in the face of repeated traditional ways of working. As does high-quality art.

Museums are almost by definition conservative, literally, in charge of conservation. That is their primary task, without which art would disappear and the past dissolve into dust. And what is more traditional than a one-artist museum, founded as the legacy of a great national artist? So, as a practice-based case-study, I will analyse precisely such a museum experience in the face of its inherently conservative task. The description of the experiment below is addressed to

(prospective) curators, especially those who, on a freelance basis, will be dealing each time anew with established museum staff, habits and collections I am talking about the Munch Museum in Oslo. The city got lucky when, upon his death in 1944, the artist left over 1,200 paintings and thousands of drawings and graphics to the city of Oslo. Another luck was that this collection contained some of the most emblematic works of this artist who deserves to be honoured as one of the founders of modern art. How can such a museum do the shaking up and shocking that, I will advocate in this chapter, can innovate, attract, but most importantly, transform the attitude and experience of visitors from consumerist passivity and obedient docility, into engaged, dialogic enticement to enjoy and think, at the same time?

Although art is not, and must not be, confined to museums, such institutions are still a safe harbour for precarious objects such as artworks. Moreover, the expertise of their staff accumulates and opens up knowledge of the artworks and their history. And for the public, museums provide an equally safe environment where they can slow down, immerse themselves in fictional universes, enjoy something that is useless to their careers but useful for their quality of life, hence for the social fabric in which they participate. For some time now, the Munch museum, under the guidance of the director of Collections and Exhibitions, Dr. Jon-Ove Steihaug, has made attempts to innovate. In 2015 he asked me if I was interested in curating an exhibition from the collection that would include my video installations *Madame B* and be accompanied by a book publication. The entire museum was put at my disposal, and the complete 19-channel video work including a large number of photographs, was welcomed. This was the first time that I was invited for my triple activities, as scholar, curator and artist – a first step in the ‘mixing’ that, as I argue below, is a major aspect of innovation within, and respecting, the tradition that this museum stands for.

For me, this integration began in 2002, incited by incidents in my scholarship and life, and continues to this day. To put it exceedingly briefly: wishing to understand the social tensions around immigration better and not learning this ‘about’ but ‘with’ the people concerned (my scholarly motivation), and witnessing the arbitrary treatment of an ‘undocumented’ neighbour (my social motivation), I used the opportunity of working with residents of an art centre where I did tutorials (my artistic motivation). With a small group I made a documentary. Then, a bit later a colleague invited me to lecture in Spain and show that film, an occasion I used to propose including films by others around the same issues. This became my curatorial motivation – something I had more or less accidentally gotten involved with a few years earlier and enjoyed enormously. In all three areas, the joy of doing it came from the sense of exerting creativity around a cause.<sup>1</sup>

All three activities are related, in my view, and not only because I happen to practice them all. I am seriously convinced of the added gain coming from integrating them. So, Steihaug’s invitation was most welcome and came as the beginning of the most rewarding experiment of my working life. Eighteen months later, the exhibition happened. In order to shake up any tendency, on the part of

audience and staff, to get comfortable with routine, I wanted to refresh the page and cause some shocks that would help create a new view of this great artist's work. My goal was to make a museum experiment. The exhibition on which I base my arguments here, *Emma & Edvard: Love in the Time of Loneliness* ran from January 27 to April 17, 2017. The title was proposed by Steihaug and the in-house curator, Ute Kuhlemann Falck. The title I had in mind, which became the title of the accompanying book, was in their view too theoretical: *Emma & Edvard Looking Sideways: Loneliness and the Cinematic*. This was one of a good number of discussions where practice and theory were productively brought together.<sup>2</sup>

I was aware that this prestigious museum had a tradition that its staff was keen to forcefully shake up. Yet, if only for the sake of a productive collaboration, a basic acceptance of how this museum worked was an unspoken condition of possibility for my project. Hence, while I was reflecting on how to transform it, an equally deep reflection on what it was they were committed to was just as indispensable. Talking with the museum workers was the obvious route to mutual understanding and respect, not as a chore but as a practice of collective creativity. The basis for this was my admiration and fondness for the commitment they all had to do the best possible for Munch's art, and an awareness of my own limited knowledge of it, hence my need to learn. At the same time, I was eager to intervene in the traditional modes of exhibiting.

I had been critically studying these traditions at least since the 1990s, when there was a flurry of publications in museum studies, in the wake of Douglas Crimp's fiercely critical study from 1980. As in particular in my book *Double Exposures* (all based on case studies) I had argued, the understandable conservatism of museums leads to exclusions, as *per* Crimp, but also to modes of display that can be offensive to actual visitors, or just reconfirm what they expect to see. I knew that the Munch Museum staff, or the 'Munchies' (pron. Munkies) as I affectionately called them, were interested in change. This seemed an ideal case study for this chapter. The experimental museum: I seek to propose some constructive interventions that, according to my experience, make a difference in the relationship between art and the public, and are within the possibilities of most, if not all museums (Crimp, 1993).

## Wishes for an updated museum

Through the experience of this experimental curation, I have three wishes for a museum that does better justice to the art it houses, preserves and shows than the traditional display in genre- or medium-based categories, and chronological sequencing. All three are attempts to innovate from within, to produce a kind of shock effect through what might be perceived as inappropriate mixing. Mixing up chronology, mixing artists and media and changing museum practice: height of hanging, wall texts and captions and most crucially, seating. Mixing modes of being with art, that is. In Figure 6.1, you see them all three implemented. The two video screens facing each other are dated 2013. The novel of which they stage



**FIGURE 6.1** Section of room 3, 'Fantasy.' Photo: Ove Kvavik.

passages dates back to 1856. And the paintings by Munch are from the 1890s. The benches, constructed for the exhibition, are from 2017.

I have no principled objections to chronological shows nor to monographic ones – a good one-artist exhibition can give surplus value to what we know, or think we know, from scattered encounters with individual works. Two other models are quite frequent, the 'movement' exhibition – such as impressionism – and the two-artists exhibition, where influence and similarity is foregrounded: *Picasso & Toulouse Lautrec* in 2017–18 in the Thyssen Museum in Madrid; *Velázquez & Manet*, The French Taste for Spanish Painting, among other places in the Musée d'Orsay in Paris in 2002, *Van Gogh+Munch*, in 2015 in the Van Gogh Museum in Amsterdam and in the Munch Museum in Oslo. And then there is, of course, the collection-based exhibition. All these genres can work well – and can be boring. I propose other ways of combining artworks in the museum and thereby offering different experiences to viewers.

When I was invited to do a curation at the Munch Museum, Steihaug suggested including our videos because, for him, the theme of romantic love (I added: gone fatally wrong) of Flaubert's novel, on which our video work was based, offered a relevant link to Munch. This suddenly made the one-artist museum a three-ways combination: (1) in time – Flaubert, mid-nineteenth century, Munch, from late nineteenth to mid-twentieth, and our contemporary work; (2) in medium – painting, literature, video – and (3) in curatorial concept, where a theme such as love compelled a drastically anachronistic sequence. These were bound to cause a shock effect. And I decided, from day one, to design the hanging primarily in function of the desire to slow down visits. My official argument was simple: if video



requires time, since it is a time-based medium, Munch's paintings require similar durational looking. But for me it was more generally the need of artworks to be given time, no matter the combination with video. This intervention, it turned out, was the key to the success of the exhibition. The first review titled: 'The best Munch exhibition I have ever seen!' by Kjetil Røed, *Aftenposten* 28 January, sent almost 50% more visitors than expected to the museum. It may sound paradoxical, but slowing down, demanding time, concentration and contemplation, it turned out, was not an elitist, not only an aesthetic issue, but a popular one.

I would like to argue for the three *shocks* to be produced more often, in many different museums. With 'shocks' I mean ways of going against the grain of expectations. The first principle is that looking at art requires time; the second, mixing is stimulating; the third, chronology makes lazy, whereas 'temporal turbulence' activates. Why is the time of looking so important? In current museum practice, where, with luck, one bench stands in the middle of a large gallery for a bit of rest (far) from the artworks, this factor is neglected. Either you stand or walk, or you sit and talk. In order to see you must stand. No wonder that visitors spend barely 30 minutes on average in an exhibition, and 8 seconds with each artwork. This undermines what art can be and do for the people for whose benefit, in whose name, with whose tax money museums work. Instead, I had requested the construction of benches and hung the paintings extremely low, so that sitting in front of them was more comfortable than standing. The convention is to put one bench in the middle of a large gallery. You can sit there and rest from the tiring walk along the walls, but while you sit you cannot see the paintings, surely not close enough to appreciate brush strokes and nuances of colour. And usually, paintings are hung high, even higher than standing height, which also makes them hard to see up close. In contrast, I requested the construction of benches and an extremely low hanging of the paintings in order to promote, almost compel, durational looking.

### From 'how to?' to 'why?': intership

Now, what is the museological vision behind all this? The *mixing* as such yields connections that were emerging in the process of visitors' looking. Connections across the borders of the fields, specialisations and disciplines inevitably invoke the term 'interdisciplinary.' I prefer the preposition 'inter-' to the frequently used 'trans-', which supposes that you can just traverse other areas without being affected by it; and even more to 'multi-', which denotes simply an assembly of different things. 'Inter-', in contrast, indicates *relationship*. I call this 'inter-ship,' a term wilfully alluding to 'internship,' denoting learning through practice. I include in the great variety of interships the one between analysing and making art – perhaps best called 'intermedial analysis.' Interships occurs in many different frameworks and guises:

Inter-ship  
Inter-national

Inter-cultural  
 Inter-disciplinary  
 Inter-medial  
 inter-active  
 Inter-temporal  
 Inter-scale  
 Inter-medial analysis...  
 all leading to the most wholesome social awareness:  
 Inter-dependence

According to Roland Barthes's brief description of it, interdisciplinarity produces a *new* object, and this object belongs to no one (Parker et al., 2010). No turf policing, then; 'Munch' as I consider and had construed him, or it, for this occasion, belongs to no one. This also holds for the temporal dimension of the connections. Whatever the time and place it was made, art belongs to, and functions, in the present; the here-and-now where we consider it worth considering. Commonplace as this view may seem by now, I seek to draw out its consequences for the practice of curating. An exhibition is a meeting ground for that here-and-now of art with the people who come to see and ponder it. And to the connections already mentioned, exhibitions add the relationship among works themselves. Curating does not consist of providing surveys; the information it inevitably also conveys is not its first priority. Rather, it is bringing works in one another's proximity, so that they can mutually speak to one another, thus modifying the sense and effect of each. As I wrote in the book *Emma & Edvard Looking Sideways*, curating is a medium in its own right – a medium that produces what Munch called 'resonances.' And like all mediums, the subject of the act of curating must therefore take responsibility for the way she frames the artworks. In this exhibition, the primary framing was the suggestion of mutual connections, or resonances, between Munch and Flaubert, or rather, the fictional figures of Emma & Edvard. The groupings I have made follow in the wake of that primary framing.<sup>3</sup>

One of the 'shocking' interventions was also, to the delight of Steihaug, the introduction of literature in the museum. This was, of course, oblique, via the videos; but these extensively quote directly from Flaubert's novel, so that the resounding dialogues – I insisted on putting the sound as loud as possible without becoming disturbing – evoked the sentences from this world-famous prose. This semi-recognition, along with the sense of high-quality prose, and helped by beautiful actors' voices, was one of the elements that encouraged slowness: sitting on the benches installed rather close to the painting so as to prevent other visitors from walking in front of the seated ones, people sat keenly listening as well as looking. Sound is also, always, part of an exhibition, if only the murmurs of visitors walking and talking.

Underlying the three principles I had pursued is the conviction that art is performative but must be given the chance to perform: that makes the boundary between art making and curating porous. We tend to think that performativity came into being with the proposition of the concept by John Austin (1975). But in

fact, the age-old institution of censorship demonstrates the presence of the awareness of art's performativity in the entire history of art and literature. It is only after Austin's intervention that we have learned to take the consequences also in a positive sense. If, soon after the publication and smashing success of his novel *Madame Bovary*, Gustave Flaubert was taken to court, the prosecution was motivated by the sense that the novel was doing something to the culture of the day – it was addressing the present (Haynes, 2005; LaCapra, 1982). They seemed to panic about the moral welfare of that culture. So, the half-sentence that reversed the generally accepted morality and became a key target for the prosecution, was considered dangerous because it was taken to entice people, especially women, to indulge in adultery. This sentence, 'Oh yes, if only ... before the *filth* of marriage and the *disillusions* of adultery ...' (II, 15) uttered by the narrator and clearly – but perhaps, dangerously, not exclusively – focalised by Emma, hurt the not-yet-quite-modern sensibility of the prosecutor and his motivators.<sup>4</sup>

Moralistic as this view is, let's not yet laugh too loudly, because it does broach the question of art and its relationship to society. The implication is that it combined an idea for consideration – that marriage is 'filthy,' even if adultery also disappoints – with an effect that we can consider sensuous – people would actually be enticed to desire and – heaven forbid! – act upon that desire, with the demise of standard morality as a consequence. It would be performative, and given the topic, it would function almost as pornography, which is addictive. But Flaubert won his case and was acquitted. This was due to his cheeky argument that his novel was art, not reality, which reassured the judges. This defence was successful because the judges fell for a false binary opposition between 'art' and 'life.' But what that meant was not so clear. For art could be said to be more, not less dangerous, in the sense of enticing; more performative and this, sensuously, than, say, journalism. At least, art such as Flaubert's and Munch's. And both artists knew this only too well.

To convey this, in our video making we were compelled to do literary as well as visual analysis, in that inter-ship between studying and making, both as forms of analysis – now mostly called 'artistic research.' What we sought to do was integrate the three groups of artworks on the basis of the senses. To bind the three bodies of work together, I borrowed from a Danish museum director the phrase 'conceptual art of the senses.' He wrote: 'Can we allow ourselves to call Munch a conceptual artist of the senses – that is, an artist who works with ideas, but [...] one who realises them?' (Tøjner, 2001: 43).<sup>5</sup>

Rather than a specific characterisation of Munch's work, however, I take that phrase to be a description of all art worthy of exhibiting and made available to the public for sense-based perception and reflection. The conceptual side of both the paintings and the novel concerns such aspects as the relationship to the viewer or reader, the time and environment of encountering, and the sensuous, tactile aspect as an idea on art. This is the concept, and the art – the paint, the surface, the sounds, metaphors, descriptions – makes that concept 'of the senses' – affectively effective and impacting, perhaps changing or confirming and implicating the position of the viewer or reader. And the senses cannot function in another than the present tense.

## Curating as inter-ship

At this point, it seems most helpful to give an example. Not to 'illustrate' my argument, but in order to demonstrate it. In Room 4 'Loneliness,' the situation staged in Room 3, on which more later, deteriorates when fantasising is checked by a harsh reality. Visitors could either turn right and enter the chapel-like installation of the video of the wedding, a large projection in front of which a few rows of church-like benches are placed. Or, they can cross the room where, obliquely from the wedding video, the poster painting of the exhibition is resonating with it. Emma is already unhappy at her wedding, which ought to be a moment of happiness. She is ostracised and gossiped about by her own guests, and the day is full of rituals and thus relentlessly impersonal. Small incidents enhance the ambiguity of the wedding: an uninvited guest makes a disturbing appearance. Emma is lonely and her girlhood dreams begin to waver. Looking at herself in the mirror, she begins to doubt her requisite beauty.

The wedding scene as Munch depicted it, like the other paintings in this gallery, emanates an overpowering sense of loneliness, too. They all depict the main figures isolated from other persons and their surroundings. *The Wedding of the Bohemian*, a devastating portrayal of loneliness, manifests a deep sympathy with the woman's plight, and resonating with Emma's isolation at her wedding, it, too, questions the solidity of both artists' reputation of misogyny. And in the corner, in the video installation *Boredom Sets In*, an eerie atmosphere in an empty house contrasts with a loud party where Emma is again not socially accepted. More fantasy leads to more loneliness.

*The Wedding of the Bohemian*, here on the right, was chosen as the poster image, and installed low, alone on a wall, with a bench near it. This did attract not only sitting and contemplating this indictment of social ostracism, but also people who got to talk with one another, whether or not they had come together or were total strangers. I often saw visitors are clearly discussing the painting, some of them pointing out a detail, others responding. In the painting *Red Virginia Creeper*, a man, cropped below the face, seems to run away from a house on fire – or otherwise scary. His cropped face, which looks straight at the viewer, emanates a sense of horror – a horror pursuing him from behind – the house that seems to either be on fire or bleeding. This hung across from another painting, in Figure 6.2, the second on the left, where a woman, cropped even more violently mid-way her face, runs away from the depicted *Kissing Couples in the Park*, because, I imagined when making these paintings face each other, she has no one to kiss. In this painting, we see a green landscape, penguin-like couples and the fleeing woman with a yellow straw hat. These two acts of facing, from the two wedding scenes lengthwise to these two lonelines over the width of the gallery, were my 'acts of curating' that the artists when making the works, would not at all been aware of. Yet, as contributions to the ensemble that curating is meant to create, they gave added artistic meanings to the works that, seen individually, would be more limited, because alone in their performative effects.<sup>6</sup>



**FIGURE 6.2** The left side of room 4, 'Loneliness.' Photo: Ove Kvavik.

This plea for meaning making on the spot, as acts of curating, does not mean, not at all, that the history, the past is irrelevant. But the past travels along with the sensuousness of the works and is constantly transformed by it. Sensuousness itself is in ongoing transformation, hence, an object of history. Thus, the culture of distraction that emerged in the mid-nineteenth century had a huge impact on the sense-experience in the period from where the artworks of Munch and Flaubert stem. And the consequences of the transformation, or crisis, of the senses as a tool for experience are still with us, in the ever-increasing 'distractive' culture that is fatal for sociability in which the slowed-down exhibition attempts to intervene. This connection between the nineteenth century and today is not at all the logic of chronology but an accumulative and dialogic conception of time; an intertemporality. Here lies the 'conceptual art of the senses' (Tøjner) of our video work; which refrains from either reconstructing the past as a remote 'foreign country' as David Lowenthal wrote it in 1985; the past is not foreign but belongs to the present. Nor does the work position Emma's sad story exclusively in the present, as if trying to forget the continuity of duration, with ups and downs; or the resurfacing of the mid- and late-nineteenth century and its obsessions in our present, which considers itself so superior to it.<sup>7</sup>

Instead, in our videos, Michelle and I have merged, in blatant anachronism, two eras, and the space in-between. The respective eras of Flaubert and Munch are not the 'source' nor the 'cause' of the situation today, but neither are they disconnected. Among the elements of the earlier time that resurface later is the idea of 'love' – an obsession Emma and Edvard share. The astounding intensity of the prose in which Flaubert described Emma's sexual experience and its aftermath matches what binds the 'philosophy of love' to the creative, fictional works. This is a different understanding of 'conceptual art of the senses.' Regretfully I have to limit my examples and hence, the tentacles of the concept of the exhibition.

### **An aesthetic that binds: the cinematic**

The following is an example that resonates due to the concept of the specific aesthetic underlying the exhibition, 'the cinematic.' This became a curatorial strategy, binding the painting and writing of Munch and Flaubert, and the more

obvious cinematic nature of our videos. I explain this concept visually, and with Munch and Flaubert as the ‘theorists’ of it. The three paintings in the back of the first room are the site of an ambiguity that leads beyond figuration-only. It moves in a direction that makes their art so different as to be qualified as ‘modern.’ The word *cinematic* does not directly refer to the cinema as a technology or art form but is derived from the Greek verb for ‘to move,’ *kinein*. Obviously, Munch’s painting often represents movement, both bodily and emotional. It also proposes, in its wayward seriality, a possibility to look at different paintings as if they were frames or photograms, together animating a situation of movement and transformation. Also, the material paint itself seems in movement, with hasty brushstrokes, leaving the canvas visible, and at other times with thick strokes that leave the movement of the brush visible; a surface that seems uneven, unstable, quivering. And ‘quivering’ (*frémissant*) is the qualifier Flaubert used to explain the demand he placed upon his writing.

The term ‘cinematic’ derives from filmmaking and – in the context of paintings – is conventionally understood as conveying the illusion of movement. The concept can be widened, however. Paintings that show cut-off figures remind us of a camera frame, caused by the physical restriction of the lens. As a result, the figures appear to be moving out of the frame. Once paintings are considered as frames, it is easy to view them together as a sequence, animating a situation of movement. Munch’s figures also convey movement in their allusive eyes and facial expression, their vagueness suggesting that they can change at any moment. The onlooker is compelled to imagine what will happen next or what has just happened, as if watching a movie. Consider, also, Munch’s deployment of the sideways look. Looking is an act in the social domain. By avoiding looking someone in the eyes, one escapes from the dialogic nature of looking. This is typical of cinema. The sideways look can also be understood as a physical act: a move away from the other person. Due to this cinematic quality, the mode of ‘looking sideways’ can be understood as an expression of self-inflicted loneliness. Paintings that exemplify different aspects of the cinematic, are to be found throughout the exhibition, where I dispersed them to avoid a stylistic grouping or survey. The three paintings in the first gallery are visual representations of movement. But they also emphasise ‘camera framing through cropping, are edited through montage of different ‘takes’ within one painting and are strongly perspectival. Colour effects, blurs and other ‘camera mistakes’ add to the cinematic effect (see E&E 24–41).

The moving quality, obviously, is in the intimation of movement. The second meaning of movement comes from the act of perception. Perception is a selection by the perceiving subject and that subject’s memories; and thus, move between present and past sensations. The third meaning of movement is affective. This is supported by the synaesthetic nature of seeing, and the importance especially of tactility and hearing. The last meaning is the result of this: the potential to move us to action in the social-political domain. But even more precisely, in Munch’s work the allusive hints in eyes and facial expressions of figures suggest they can change at any moment, the figures play-acting rather than posing, and the scenes

fugitive moments in a longer process. In this sense – due to the play with layering, perspective and flickering light – even the skin of the works evokes the cinematic. The format of the canvases that cuts figures in half suggests a camera that is limited in what it can frame, as well as figures who are moving out of the frame. Viewers are compelled to make up what will happen next or what has just happened, as if watching a movie.

Of the monumental painting *Workers on their Way Home* from 1913–14 (Bal, 2017, p. 27), I find the montage of different ‘takes’ most remarkable in this respect. The three main figures seem to have been ‘shot’ from different angles. The man on the left from the front, and he arrests his movement. The middle one is taken from above, and still walks but may be considering stopping (for the camera?). And the right-hand one, shot slightly from the side, carries on pushing whatever it is he is pushing. This makes the image a montage of three takes, and individualises the workers, which is a political aspect. This, in addition to the steep, elongated perspective characteristic of many Munch paintings. Munch’s play with perspective is another way of suggesting a camera, of trying out different angles. Sometimes the elongation is the most remarkable element; sometimes the exaggerated height is what makes the perspective seem longer. This is Munch’s way of drawing attention to the dilemma of painting: as an image, it is flat; as a picture, in the sense of staging, it attempts to achieve the illusion of three-dimensionality. Exaggerating this is a way of checking our tendency to be taken in by the realistic illusion. In this sense, a certain self-reflexivity hints at a postmodern aesthetic. What we see here connects the painting both to Flaubert’s notoriously cinematic writing and to the medium of video’s moving quality.

Perhaps the most emphatically cinematic detail is the cropped and shadowy, semi-transparent left-over of a figure on the far left. It took sitting on the bench frontally contemplating the low-hung painting to see it – when the figure’s shoe almost hit me. And now that I have seen it I cannot un-see it. I cannot take lightly this thing – not a figure but a trace of a figure, who was present before the ‘take’ but now already gone. An after-image within the image. This happens in film, not in painting, one would expect. Munch thus visually theorises the kind of exhibition where the shock of the other medium helps the images linger. But the curatorial act of the low hanging, in a central position, and a bench near it, made the sighting of that shadow and the understanding of all it entails, possible. The artwork does need the curator as a subject that is, in a sense, a co-maker of the image in the present.

With Munch’s help, I have also attempted to bring a cinematic aspect in for the exhibition itself, in space, not only by integrating the moving images of our videos. Let me return for a moment to Room 4. As I suggested previously, here, an oblique line goes from the video of Emma’s wedding to the painting *The Wedding of the Bohemian*. In both wedding scenes, we see a woman who is lonely in company, on what is supposed to be the happiest day of her life. The wedding becomes a death sentence, the day the beginning of a relentlessly ongoing social isolation. This is an example of the mutual framing I mentioned earlier, but it also

literally *moves* the visitor, both to bodily traverse the room, and to have compassion. Moreover, this line was crossed by another one, between three eminently cinematic paintings, an effect due to steep perspective and, especially for the two most clearly opposite each other, to cropping. The man on the right of the room runs into our arms, or toward the other side of the room, into the arms of the woman who is likewise frontally leaving the frame. Little is left of her after the cropping, which suggests an even faster pace. She also seems to run for her dear life, under the curatorially produced influence of the man across from her.

Another example of curatorial ‘cinematicity’ is the way I undercut the star status of the famous *Madonna* to liberate the work from its reputation by making its cinematic quality stand out, when it is part of a row of paintings in the gallery titled ‘fantasy.’ It is now simply one of four paintings. The sequence or ‘film’ I have construed, is installed counterclockwise because visitors just exit a corridor of two floating video screens. This is also an encouragement to first consider the idealising painting at the end of the corridor, and then to realise that looking from left to right is not the only way in the world people read and look and construct stories.

This is an erotic film, but not a merely semi-pornographic appeal to taking possession. The narrative is more ambiguous than that. Increasingly naked, the first with a transparent top, the second is *Madonna* (Bal, 2017, p. 94). Framed between the woman in red and the one with one sore nipple and her skirt pulled down by, supposedly, hands that try to grab her, the woman in *Madonna* appears to be at least ambiguous. The sequence ends on a weeping woman, with the same blue skirt, so, potentially identifiable as the one being harassed (Bal, 2017, p. 98). And after a ‘fade-to-black,’ in the form of a gap, the larger painting *Kiss* (Bal, 2017, p. 99) culminates the ambiguity: a happy ending, or a warning that the consequence of ‘love’ can well be losing your face, your personality? All this is, of course, a curatorial fiction, the building blocks of which are ‘images of women’ bound together by the fictitious focaliser Edvard (Bal, 2017, pp. 91–99).

Another example of cinematic curating (Figure 6.3) is the sideways-looking older Edvard, whose slight squint suggests he is witness to the tragedies unfolding in the world outside, on his right (for the visitor) or left (for the figure). In these scenes of tragedy, I have attempted to insert a view of Edvard, the older Edvard, as compassionate (Bal, 2017, p. 178).

In the *Drowning Child* (E&E 179), the other people don’t bother to see the event, so that she dies. Edvard is not simply the inveterate misogynist he has often been taken to be, as we saw in my construction of a sequence of fantasies that could harbour a measure of sadism but also compassion, for the woman who is assaulted, in *The Hands*, and then weeps in the aftermath, due to the juxtaposition with the other painting of a semi-denuded woman in a blue skirt who seems to be weeping. And the most compassionate expressions of empathy are the ones I have mentioned regarding my curatorial cinematic constructions, *The Wedding of the Bohemian*, with *Kissing Couples in the Park* where the main figure has no one to kiss. This resonates with Flaubert’s empathy with Emma, all through the novel but





**FIGURE 6.3** Older Munch (self-portrait in the back) looks concerned about three tragic events (on the right). Photo: Ove Kvavik.

relevant here, at the party which was her last hope, when, in the merry crowd of the party, she is so alone that her gestures predict her suicide.

### **The political between beautiful art and social life: 'emotional capitalism'**

The social relevance of these three shock effects – mixing up chronology, mixing artists and media and changing museum practice – is not limited to providing people an intense and durational experience of art. In the best of cases, the art has *something to say* that touches more directly on the lives of people in the present. Without overtly proclaiming political ideas, which would turn it into propaganda, art can be curated in a way that will also point to a content, an idea, that visitors then take home to think about. Curating towards this effect is a viable alternative to both conservative historicism and opportunistic appeal to consumerist desire. In *Emma & Edvard* there was also such a thematic centre, diffused throughout the show. This central thematic cluster where past and present join, when addiction and love enter in tension and start to merge, is prominent both in Flaubert and in Munch, and thus demonstrates the inter-temporal mutual relevance of past and present. This we have called 'emotional capitalism,' retrospectively borrowing the term from sociologist Eva Illouz (2007).

The video work foregrounds Flaubert's prophetic political insight in the way emotions and the economy are put to work for the benefit of the latter. The political aspect is totally entwined with the psychology of 'love.' I am interested in the aspect of addiction – to love, sex, drink, food; and to buying to what is so

horribly callously called ‘fun shopping.’ Addiction as a false mediator, or merger, between excitement and routine, and between such seemingly different sense domains as sex and (other forms of) consumerism. Addictions make *lonely*. But more profoundly as well as generally, the underlying syndrome is a *confusion between domains*, the translation of desire from one domain to another, in response to frustration. This is as much of today as it is of the 1850s. This syndrome comes from a societal, ideological pressure. As Illouz writes:

... modern identity has become increasingly publicly performed in a variety of social sites through a narrative which combines the aspiration to self-realisation with a claim to emotional suffering.

(Illouz, 2007, p. 4)

Decades before Marx and half a century before Freud, Flaubert had seen it coming; he had also seen its deadly quality. Emma’s feverish overspending and excessive desire for excitement exhausted her long before she killed herself. The responsibility is collective and systemic as well as individual. This is where Spinoza’s concept of responsibility becomes deeply relevant. We, as we live now, are not guilty of the capitalist madness. But we are responsible for living in and with its consequences, not only for ourselves but also for others. Illouz defines the concept as follows:

Emotional capitalism is a culture in which emotional and economic discourses and practices mutually shape each other, thus producing what I view as a broad, sweeping movement in which affect is made an essential aspect of economic behaviour and in which emotional life – especially that of the middle classes – follows the logic of economic relations and exchange.

(Illouz, 2007, p. 5)

Flaubert’s art theorises this. According to his novel, people are especially vulnerable to this peculiar, powerful and still rampant social contrivance of emotional capitalism when they find themselves in slow time, or *duration*: the time of routine, of waiting, of boredom. It describes the state of waiting between the seduction and the routine-to-come. During this transitional time her dependency on the usurer Lheureux (‘She could no longer do without his services’ [Elle ne pouvait plus se passer de ses services] (III, 4) increases. She literally shops and buys out of boredom, horniness and despair. Seduction lures on all fronts. And although the extensive body of Flaubert criticism has noticed this, the centrality of this syndrome for modern life has been somewhat underestimated:

Then the desires of the flesh, the longing for money, and the melancholy of passion all blended into one suffering, and instead of putting it out of her mind, she made her thoughts cling to it, urging herself to pain and seeking everywhere the opportunity to revive it.

(Part II, Chapter 5)

The result is loneliness, disorientation, self-doubt, even a form of autism, or schizophrenia; in whatever form, a social incapacitation. Two photographs in *Emma and Edward looking sideways* (Bal, 2017, pp. 153–154) show the syndrome of emotional capitalism very forcefully.

## Conclusion

In this exhibition, as in my account of the experimental curation that underlaid it, and by way of ending this chapter, emotional capitalism is both a political theme to think about after the museum visit, and an occasion to reflect on the museum as such, and what a contemporary curator can do to get out of the hopeless dilemma of conservation and a subsequently conservative curating, on the one hand, and attempts to attract more visitors and especially younger crowds to make budgetary ends meet, on the other. To get rid of the binary opposition, which is itself the most conservative form of thinking, hence, to exit the dilemma, it is worth realising that the goal of attracting more visitors need not be geared to consumerism; at least not towards the consumerism Flaubert's and our critique of emotional capitalism address as a theme, in inter-temporal reflection of the social syndrome's durability, present.

One key aspect is, again, *time*. The museum staff was a bit afraid that the encouragement of durational looking would enhance the quality of the visitors' experience but reduce the numbers of visitors. In fact, the opposite happened. Two anecdotes. When I saw a teenager, probably 14 or 15 years old, sit in front of a painting for at least ten minutes, I was very happy. Then I was called for a meeting. An hour later I came back, and there she was, two benches further. And then, at 4.30 p.m. on the Saturday I got to talk with a French couple who had come to Oslo for a weekend trip, and had planned to visit the Munch Museum for half an hour. You have to be quick, if you have only one weekend! But they got stuck, stayed for two hours, then the museum closed. They said, with a sigh: too bad; now we have to come back tomorrow.

The combination of the themes brought up in the exhibition is so close to our lives that it is worth thinking about, with the help of the art presented for durational looking. Only then will we notice the similarities between Emma's men, in spite of their social differences. The three men were played by the same actor, Thomas Germaine, and as the photo on page 145 in the book shows, the three characters look the same as well as different, thanks to the brilliance of the actor and the great work of the hair- and make-up artist Milja Corpela. Those resemblances point to an indifference in the emotional incapacity of distinction, which is perhaps the most devastating consequence of emotional capitalism. It is that heart-wrenching isolation, manifest in so many different ways in the exhibited objects and the spatially produced shudders, that is characteristic of modern life. If there is a political thrust to this exhibition, it can only work if the art can work; that is, when shock at surprising, jolting interventions in the expected traditional modes of presentation, happens, activating the visitors. In the exhibition at the Munch Museum, I have

done that through mixing. If emotional capitalism can infect us with its merging effects, the remedy with which I have experimented was also made out of mergings: of media, of artists, of times and of modes of being in the museum.

## Notes

- 1 For more on these projects, see Miekebal (n.d.a). That first documentary is presented at Bal et al. (n.d.) and the curatorial project in Spain, which travelled to three other countries, at Miekebal (n.d.b). Madame B – the film and the installation pieces – were made by me and Michelle Williams Gamaker.
- 2 For the book, see Bal (2017). For the exhibition, see Miekebal (n.d.c) which includes a video tour, a ‘re-performance’ video, a video of the labour of installing, and many photographs. The gallery of photographs by Ove Kvavik (2nd column) amply show the descriptions in this chapter for which it was not possible to include them.
- 3 The difference between the titles of exhibition and book was due to the wish of the museum staff for the inclusion of the theme of love, hoping it would interest younger people, whereas I was keen on explaining the ‘cinematicity’ as also occurring in literature and painting. The exhibition title facilitated the presentation of the two figures as both fictitious, going through the stages of life. I refer to this book in brackets when discussing elements further developed in it, and with many images in colour, but no installation shots.
- 4 In order to facilitate finding the passages in whichever of the many editions and translations one uses, I refer not to pages but to parts and chapters. The chapters are short. I have consulted the most reliable edition, Flaubert (1971).
- 5 This book is brilliantly sensitive to the inter-ship between words and images, a relationality that Munch himself practised all the time.
- 6 More on this room: *E&E* 114–17 and 121–135.
- 7 On the inter-temporal changes of sense-experience, see Alphen (2017). The same issue of the journal *Text Matters* contains a substantial dossier devoted to the Emma & Edvard exhibition, edited by Dorota Filipczak. The allusion is to the Lowenthal’s book title (Lowenthal, 1985).

## Bibliography

- Alphen, Ernst van (2017). Attention for distraction: Modernity, modernism and perception. *Text Matters*, 7, 87–97.
- Austin, J. L. (1975). *How to do things with words*. Harvard University Press. Original work published 1962.
- Bal, M. (1996). *Double exposures: The subject of cultural analysis*. Routledge.
- Bal, M. (2017). *Emma & Edvard looking sideways: Loneliness and the cinematic*. Yale University Press.
- Bal, M., Zen, M., Sykora, T., Ward, G., & Gamaker, M. W. (n.d.) *Artworks films*. <http://www.miekebal.org/artworks/films/mille-et-un-jours/>
- Bishop, C. (2014). *Radical museology*. Walther König.
- Crimp, D. (1993). *On the museum’s ruins*. MIT Press.
- Flaubert, G. (1971). *Madame Bovary*, vol. 1 [des Oeuvres complètes de Gustave Flaubert, Tome 1. Édition nouvelle établie, d’après les manuscrits inédits de Flaubert, par la Société des Études littéraires françaises, contenant les scénarios et plans des divers romans, la collection complète des Carnets, les notes et documents de Flaubert, avec les notices historiques et critiques, et illustrée d’images contemporaines]. Club de l’Honnête Homme. Original work published 1857.

- Haynes, C. (2005). The politics of publishing during the Second Empire: The trial of Madame Bovary revisited. *French Politics, Culture & Society*, 23(2), 1–27.
- Illouz, E. (2007). *Cold intimacies: The making of emotional capitalism*. Polity Press.
- LaCapra, D. (1982). *Madame Bovary on trial*. Cornell University Press.
- Lowenthal, D. (1985). *The past is a foreign country*. Cambridge University Press.
- Massumi, B. (2002). *A shock to thought: Expression after Deleuze and Guattari*. Routledge.
- Miekebal. (n.d.a). <http://www.miekebal.org/>
- Miekebal. (n.d.b). *2MOVE*. <http://www.miekebal.org/research/curating/2move/>
- Miekebal. (n.d.c). *ArtworksExhibitions*. <http://www.miekebal.org/artworks/exhibitions/emma-edvard-love-in-the-time-of-loneliness/>
- Parker, J., Samantrai, R., & Romero, M. (Eds.). (2010). *Interdisciplinarity and social justice: Revisioning academic accountability*. SUNY Press.
- Simon, N. (2016). *The art of relevance*. Museum 2.0.
- Tojner, P. E. (2001). *Munch in his own words*. Prestel.

# 7

## MUSEOLOGICAL ORGANISATIONS IN BRAZIL: BETWEEN DOORS AND GRIDS

*Wesley Xavier, Diana Castro, and Vanessa Brulon*

In 2016, *Globo.com*, the main Brazilian news portal, published a study conducted by the São Paulo City Council, revealing that more than 70% of the residents of the biggest city in Brazil had never attended an art exhibition or theatrical play. Two years later, the Communication Science News Agency of the University of Buenos Aires described how the Argentinian government shut down the dance company *Ballet Nacional de Danzas*, which had performed in several cities where residents had never seen a dance performance before. These cases exemplify the elitist character of culture in Brazil and Latin America, where access to the production and consumption of culture is associated with economic power and formal education, both of which enable an understanding and appreciation of artistic-cultural elaborations. Indeed, museums are not well-visited even when admission fees are very low, since a significant part of the population feels that they do not have the necessary knowledge to engage in such experiences (Goulding, 2013).

However, museums can be a locus of emancipation when public access is improved (Castro, 2013, 2016). Our perspective is based on the notion of museums' educational purpose (ICOM, 2015) and Alderoqui and Pedersoli's (2011) application of John Dewey's experimental pedagogy of learning and knowledge construction in the museum. We use Paulo Freire's perspective on the contributions from Dewey (and others), thereby prioritising the critical or political aspects of education and the goal of human emancipation. Alderoqui and Pedersoli (2011, p. 65) discuss how museums specifically offer visitors *interactions*, and that the difference between collections-based and experimental museums is that the latter often have well-defined pedagogical goals. However, the role of the experimental museum as a locus of emancipation, i.e., a museum that allows for experimentation that goes beyond the exhibition, needs deeper investigation.

Space and material features shape human actions, reactions and social relations (Dale, 2005; Carlile et al., 2013; Orlikowski, 2007). Thus, a museum's architecture

and physical features can prompt social relations. As we discuss, the notion of 'boundary zones' (cf. Castro, 2016) challenges the idea that museums promote emancipation only through their exhibitions or activities. Boundary zones arise when the relationships between people create a social locus: a form of parallel space-time in which meaningful experiences can take place for the individual and ultimately, society (Castro, 2016). They can appear in the queue to an exhibition, at cafés, in souvenir shops or other spaces suitable for talking or contemplating; they do not necessarily coincide with museum spaces. In the following, we refer to these permeable spaces, rather than specifically to museums and their material or immaterial holdings. We claim that human emancipation is nurtured when museums facilitate experimental experiences in boundary zones, and our case studies document this claim.

We pose three key questions: why are Brazilian museums still almost exclusive to the upper classes? Why do museums not attract the general public, even when they are free of charge? Are experimental museological experiences alternatives to traditional, passive museum experiences because they activate audiences, thereby promoting emancipation? Based on three Brazilian museum cases (two in Ouro Preto and one in Rio de Janeiro), we answer these questions by discussing processes of estrangement or familiarity between individuals and museums, as well as how these relationships are affected by the spatial dynamics of the museums in question. Finally, we explore the opportunities for emancipation from the perspective of how people experience museums in the boundary zones.

Brazilian museums are shaped by contradictions. They are places of cultural reinforcement because they function as mechanisms of distinction, legitimacy and maintenance of consensus and appropriation of the city. Conversely, museums can raise awareness about the presence of those contradictions in public cultural spaces and everyday life and illuminate how experimental experiences can mediate this cultural alienation process. The notion of experimental experience does not refer exclusively to experiences that are deliberately designed as experimental, but also to non-planned experimental experiences that take place within boundary zones.

## **Culture as a mechanism of distinction**

The relationship between culture and social structures can be understood through Pierre Bourdieu's theoretical framework in which social relations are established in fields that are configured as networks of objective relationships between positions (Bourdieu & Wacquant, 2012). To climb positions in the field, agents seek to accumulate power resources, or 'types of capital' (Bourdieu, 2011). Different types of capital can change their relative value according to the game in question (Bourdieu & Wacquant, 2012). Certain types of capital are regarded as paramount and, therefore, are present in several fields (Sallaz & Zavisca, 2007).

Here, we emphasise cultural capital: a set of intellectual qualifications, e.g., knowledge or information, that can be transmitted by family or school institutions (Thiry-Cherques, 2006). Because the dominant classes generally have a higher

level of education, diplomas and degrees are associated with the bourgeois way of existence (Bourdieu, 2011). For someone to become part of the universe of legitimate culture, i.e., the universe of culture elements recognised by all agents, a bourgeois background or existence becomes necessary (Bourdieu, 2011). Thus, Bourdieu understands culture as a mechanism for distinction between classes. What distinguishes the different classes is the disposition demanded by the legitimate consumption of legitimate things, the aptitude to make a specifically aesthetic point of view on objects already constituted aesthetically – thus getting admiration from peers – and the even rarer capacity to constitute aesthetically what is ordinary (Bourdieu, 2011).

Although schools themselves reinforce the distinctive character of culture in the view of Bourdieu, Vieira and Vieira (2004) argue that education and culture can also challenge cultural distinction by nurturing a more inclusive development of individuals and society. Institutions that promote culture – particularly museums – can promote development through civic consciousness and social inclusion (Canclini, 2009; Castro, 2016; Vergara, 2008). However, the social performance of museums is often criticised for serving market interests (Bruno, 2002), and museums may reinforce class divisions because their configuration, aesthetic character and degree of formalism repel those without cultural capital.

Education for emancipation, following the pedagogy of Freire (2001), generates a transforming action for freedom (Freire, 2007) and aims to overcome what Bourdieu calls the differentiating character of culture. For Freire, emancipation is built by education in a humane, dialectical and love-mediated process. Love in this perspective includes an individual disposition to respecting differences, listening, engaging in dialogue, aiming to ‘be a better person’ and changing the world. Human emancipation is a revolutionary act because it must change the way we perceive ourselves in the world (to a more critical and realistic view) and start new actions to make the world a better place, which means a fairer and more humane environment.

In Freire’s view, the mission of underdeveloped countries towards their people is ‘to overcome the limiting situation of being dependent societies and become beings-for-themselves’ (2001, p. 73). Furthermore, Freire compares underdevelopment to maintaining a culture of silence that supports the structure of oppression. Breaking this silence can be an emancipatory function of museums, especially experimental museums, as they can provoke what Freire calls ‘utopia,’ i.e., the glimpse of a better world as a possibility and a value to be attained.

## Shaping museum spaces

Culture can be understood as a conflictual spatial force. It is a powerful mechanism of city control, defining whether someone belongs in a given space by operationalising images and memories. As noted, despite their free admission programmes, the aesthetics of Brazilian museums discourage members of lower social classes from visiting. Moreover, the institutionalisation of culture reinforces its



potential of 'constructing social relation identities in a multidimensional culture of everyday life' (Rectanus, 2002, p. 5).

The relationship between tangible and intangible cultural heritage directly creates exclusion zones where the aesthetics and functionalities of the building determine symbolically who are insiders or outsiders, for instance when a building and its surroundings are used as a reference for urban redesign that aims to preserve local history and heritage (Zukin, 2010). To counter these spatial exclusion mechanisms, museum professionals recognise the importance of transforming museums into more inclusive spaces by focusing on physical features such as architecture and spatial forms and their capacity to create meaning (Macleod, 2005). Simon (2010), Pruulmann-Vengerfeldt and Aljas (2011) and others have recently discussed how the 'participatory museum' institutionalises citizen participation along similar lines. Thus, museums have recently undergone severe reshaping, with massive investments in infrastructure (Macleod et al., 2012). Indeed, architecture has become a critical factor in engaging people physically, symbolically, functionally and experientially (Rectanus, 2006). Museum architecture can create a distinctive sense of local space, promoting stronger ties with communities, because it involves people in creating new forms of locality and ownership (Rectanus, 2006).

The concept of boundary zones is based on Freire's idea of human emancipation. Castro (2013) synthesised Freire's pedagogy by adapting it to museums and dividing it into four moments that take place dialectically and procedurally within individuals and in society. These moments are simultaneous and mediated by love. They are: (i) 'the unveiling of knowledge about himself [sic] and his reality through exhibitions and research' [which can happen in the museum]; (ii) 'the critique of the unveiled knowledge' [which happens to the individual living in society]; (iii) 'the transformation of the object into a subject or praxis' [which happens to the individual living in society]; (iv) 'the exhibition of the denunciation or announcement of a better world' [which can happen in the museum] (Castro, 2013, p. 199; comments added).

Boundary zones only exist as long as they are not institutionalised or modelled by the organisation; thus, they serve purposes that are beyond the control of the museum. They only occur in museums that welcome a diversity of audiences and objects, and present inclusive exhibitions that become free spaces for socialising. Boundary zones can result from the stimulus of museum exhibitions and content, empty spaces and the interaction between individuals there. Human emancipation, according to this perspective, can be fostered in museums. However, it depends on what happens to individuals and their relationships and communications within society, where love has a central place as fostered through dialogue. Therefore, emancipation is the action that surpasses awareness, translating into a transformative action that completes critical thinking in favour of a new social reality (Castro, 2016).

## Methodology

The analysis we present here is based on a multiple-case study focussing on cross-data synthesis. Cases were selected according to the predictability of results, which may be similar or inverse (Yin, 2009). We selected three Brazilian museums located in two important touristic cities. From Rio de Janeiro, the analysed case was the Rio de Janeiro Museum of Art (MAR); from Ouro Preto, we analysed the Casa dos Contos Museum and the Inconfidência Museum.

Data were collected and analysed using a mix of quantitative and qualitative methods. We used descriptive statistics to describe the results of a survey with visitors ( $N = 180$  in Rio de Janeiro and  $N = 74$  in Ouro Preto) in which boundary zones were explored in order to understand how museums strengthen human emancipation. Then, we carried out interviews and participant observations. The interviewed subjects were selected according to data saturation. In Ouro Preto we carried out 28 interviews and in Rio de Janeiro, 41. These interviews were carried out with the local population, visitors and representatives of organisations (museums, the city council and others). The interviews were analysed using categorial analysis, in which interview content is organised by pre-existing theoretical categories and those emerging from the analysis.

Rio de Janeiro is the second-largest city in Brazil and the country's most important tourist destination. It receives approximately 8 million tourists each year, including 1.3 million foreigners. Despite its cultural relevance, the principal tourist attractions are natural; museum directors in Rio de Janeiro lament that museums are only visited when it rains in the city (Castro, 2016). The MAR was inaugurated in 2013 as part of a project for the revitalisation of the Rio de Janeiro harbour area. It promotes the history and culture of the city through permanent and temporary exhibitions and cultural events.

Ouro Preto is a small town and stands out for its historical and cultural tourism. The city has been declared a UNESCO World Heritage Site, and it receives an average of 500,000 tourists every year who visit to enjoy the city museums and churches and to stroll through important historical sites. The Casa dos Contos preserves and promotes the history of the gold cycle,<sup>1</sup> as well as national art and culture. Housed in a historic building, the museum was founded in 1973. The Inconfidência Museum, inaugurated in 1944, preserves and displays aspects of the Minas Gerais Conspiracy<sup>2</sup> by relating it to the political, social and artistic scene of the city of Ouro Preto in the eighteenth and nineteenth centuries.

## Museums as axes of cultural segregation

The cases demonstrate how cultural spaces play a key role in the process of cultural differentiation. Our interviews suggest that residents are not able to grasp how the exhibitions represent their own history. The production of the exhibitions seems to be a crucial element of this shortcoming, because the feeling of estrangement is triggered when residents realise that the exhibitions are made for, and offered to,

tourists. This is true also of several festivals held in the city, particularly the local film festival held in Ouro Preto's main square. According to the locals, the festival is made 'for the sake of appearance,' because its programme does not reach the peripheral neighbourhoods. Local audiences often feel uncomfortable in the town centre, as they find its entire structure to be designed for tourists:

[As for] that film festival ... Imagine if you chose five neighbourhoods in Ouro Preto and had the festival reach those places too, [if you] took it to the neighbourhoods, away [from the city centre], you know? There was a jazz festival, but it was only held in the city centre. Take it to the communities! Let's teach people what jazz is. Take it to the community, have the community get involved with things. (R9)

They [residents] feel that things here are made to serve external interests, especially tourism. For instance, tourists are treated well, and many events are targeted at tourists. But most young people here feel neglected, abandoned. They don't feel that things are made for them, they don't see it that way. (R19)

The aesthetics of the local film festival have a degree of formalism that residents cannot access. Therefore, locals perceive the museums as extensions of the cultural offers targeted at tourists. Conversely, confronting local residents' sense of estrangement could prompt a sense of belonging to the cultural spaces and the historical centre of Ouro Preto. In addition to breaking through the symbolic and concrete barriers of museum spaces, it is also necessary to break the detachment between museums and audiences, the rest of society, and the ordinary life of individuals (Hanquinet & Savage, 2012). The connection between art and what is real can be seen here as a starting and finishing point, and an unbreakable link between the artist and the beholder.

An apparently paradoxical detail shown by our data is the absence of places for visitors. Our data shows that the beaches in Rio de Janeiro compete for visitors from the museums. Furthermore, in MAR, where 78% of surveyed visitors lived in Rio de Janeiro city, we noted that 42% came from wealthier neighbourhoods, against 5% of visitors who came from the neighbourhoods surrounding the museum. The absence of visitors from the surrounding areas, which is compounded by the high degree of social inequality in Brazil, explain why locals fail to identify with or altogether relate to the museum content, as illustrated in the following utterance from an Ouro Preto resident: 'Residents have little interest in getting to know Ouro Preto. This is a fact, it's true. If you say, "Let's go to the museum on Sunday!" they won't go! They won't go because there is a lack of interest' (R7).

Our results indicate that an excess of content (in the form of objects) may be more detrimental to learning and human emancipation than the ways this content is displayed. This study emphasises the importance of creating empty spaces inside

and around the museum, so visitors have enough time to reflect on the content displayed in the exhibitions. It is important to have a pleasant and adequately furnished place to pause, think and connect. In contrast to MAR, Ouro Preto museums do not have these pleasant spaces, such as cafés or squares, but only exhibition rooms.

When the teacher gets to the museum with a group of students to pay a simple visit, they behave like students who are visiting any given place. It's like a walk or a game. For some of them, the visit is somewhat significant, but for most, it's just a [mere] walk (R1).

So, this kind of relation [between residents and museums] does not exist. Despite schools' engagement, stimulating museum education projects in the last five years.... Because I do not value such things that I do not know its meaning. So, I have to understand downtown places. I have to recognise the relevance of the Inconfidência Museum, why the Tiradentes statue is inside, how everything has been formed. Otherwise, I will walk through downtown staring at such places as beautiful buildings, but not being part of it. (R8)

Museum education projects may play a role in bringing the Ouro Preto local audiences and museums closer together. We refer specifically to how history is narrated, reconstituted by the 'winners' and passed on to the 'losers.' This phenomenon can be characterised as the vertical transmission of knowledge, where something that is known by someone is taught to those who know nothing. This is the task of museum curators, as they seek to stimulate responses and encounters between the public and the artworks. They must also invoke the political and social content in these artworks (e.g., painting, sculpture, audio-visual displays), which is, in turn, activated by emotional components, similar to how contemporary artists have so skilfully done (Franklin & Papastergiadis, 2017; Smith, 2009).

### **Turn the table? The boundary zones as alternatives**

In Ouro Preto, the key explanation for the museums' low rates of attendance by locals seems to be their historical detachment from cultural spaces. Local residents' low attendance rate is not caused just by lack of interest in the exhibitions, it also stems from a sense of estrangement from the spaces in the historic centre, which, in the eyes of the residents, are designed for tourists only:

I think that the people of Ouro Preto don't have a sense of belonging to the historic centre, or to this city which is a heritage site. The city centre is a commercial centre. (R1)

[Most] people living on the outskirts have never visited a museum, there are people from Ouro Preto who have never ... They don't feel they belong in there. Many think that Ouro Preto is a city *for* tourists, that is, for tourist exploration and nothing else. There's really no sense of belonging, the city needs to work hard [to achieve that]. (R17)

This means that only tourists are able to benefit from the hypothetical transformation or emancipation allowed by museums. If locals do not visit their museums, they cannot interact, experience or construct a better place or way of being in the world. As for the MAR, two local women lamented the lack of human warmth in the museum, while another visitor claimed to feel lost in the exhibitions. Indeed, many locals refer to the museum as strange, distant and cold, or as an inaccessible place that few people can identify with:

There are many things displayed in the exhibitions, but there's little information [targeted at] those who do not understand [the subject]. It is as if it didn't arouse any interest at all. It's like sitting with a child with a storybook and lots of pictures. The child will browse it, but only when they have subtitles, right? They'll want to know, the clothes [the characters are wearing], whatever. Teachers are used to doing this, [they'll ask:] 'Are you paying attention to what is going on?' Why? [Because] it makes them want to learn (...) The way it is now, it's more like visiting an amusement park than a museum. It's not because it doesn't arouse curiosity, I think people are ashamed, maybe if they [the museums] were more disseminated as normal places to be visited... The membership card is not well-publicised, so it gives you access, but those who don't read it. ... (R14)

Some respondents point out that they only visit museums that are free of charge. Furthermore, they argue that museums are perceived by a significant part of Brazilian society as special, differentiated spaces, where the poor or those with less cultural capital are ashamed to go. Another problem reported by Rio de Janeiro locals is the difficulty of getting to the museum in terms of travel time and distance, but also the precariousness and cost of public transport. Some of the interviewed visitors were from neighbouring cities, the so-called Baixada Fluminense, a zone that has an inferior infrastructure and offers few cultural options. Thus, residents of these regions are required to travel to the upper-class neighbourhoods of the city if they are to visit museums:

No, it's not usual [to visit the museum]. Only when there's really ... It's about once every two years. Perhaps the attendance will increase, the problem is the structure. This is really good, but it is very difficult to get to the museum in Rio de Janeiro, [there is the issue of] parking. ... (R31)

Thus, compared to other leisure spaces, museums seem difficult to access. As a reference, we estimated that for a family living in Nova Iguaçu (a city in the Baixada Fluminense that has no museums at all) it would take three hours by bus to go to the museum and come back, and they would have to change buses at least twice – an expensive and tiring journey.

We also investigated the museums' capabilities to engage local audiences. The Rio de Janeiro museum seems to have established a dialogue with the city, by organising programmes to introduce locals to museum spaces, showing exhibitions by local artists and addressing themes related to the surrounding community. We came across several cases where the museum was politically engaged through its curatorship. In one of them, the museum invited an artist to create an exhibition on a subject that was worrying the residents of a neighbouring slum, who were being evicted from their houses for a redevelopment project. The artist's work was made from the rubble and debris of the houses and he donated it to the museum as a piece of art so that the city hall had to incorporate it into its collection. It was a strong political act because the museum was not designed to have an art collection, only to host exhibitions. However, the act attracted attention because the rubble was left in the middle of the street, which created a social problem caused by the city hall. In another case, an artist created a portrait on the museum's wall of a resident who had been removed from his home because of a revitalisation project, forcing his presence through memory and art.

In contrast, the Ouro Preto museums are configured as tourist spaces. Interactive exhibitions seem to have a limited ability to bring the local population closer to its own history. Members of the local population only seem to recognise themselves in those spaces when they have been exposed to information and discussions about the content of the exhibitions:

When you take an ordinary person into a space that is listed as a heritage site, or to museums, and try to show that person that they belong there, that it's all their history, not a monument built for tourists [...] When they get into one of these places, having participated in the debate about what these places represent to them, there's a noticeable change in behaviour. That is, they come to identify with that and see themselves in that place, in that very place they're visiting. (R23)

The vast majority of visitors (95% of our informants) at the Ouro Preto museums visited in groups. While 70% reported to have talked to someone about the museum collection and content, these conversations were held only with acquaintances, never with the museum staff or other visitors. Furthermore, the visitors of the Ouro Preto museums are rarely native to Ouro Preto; this leads to a detachment from the content of the exhibitions caused by a lack of identification. Finally, as the visitors only speak with their acquaintances, the museum experience does not necessarily affect their connection with the local culture and community, nor between the museum and the city. Among all our informants, 84% stated that

they did not have suggestions for improvement, nor did they engage in interaction; this underscores the absence of dialogue, and the resulting missed opportunity for transformation of reality in these museums.

When the visitors were asked about their reason for visiting the museum, the second-most cited reason was 'to accompany someone,' followed by their 'interest in the city of Ouro Preto.' These answers lead us to conclude that Castro's (2016) emancipation categories, dialogue and transformation of reality, were not taking place. According to Freire, such dialogue must happen through different ideas that come into contact in a dialectic way. In the absence of a contradiction or antithesis, dialogues cannot properly occur. In other words, if visitors only engage in conversations with acquaintances, this presents no opportunity for human emancipation. We hypothesise that experimental exhibitions, designed to prompt interactions with strangers, can contribute to emancipation or at least, greater awareness of reality.

During their visit, a significant proportion of respondents (84% of our informants) stated that they did not wish to make any suggestions or interventions. Among those who said they did, some mentioned their desire to obtain more information about the artists or the artworks on display. This supports the idea that the oppressed hosts the oppressor inside themselves, an idea which assumes an unilinear relation of cultural transmission by the museum as a given (the 'culture of silence,' Freire 2011). The silence appears here as a voice that is silent through the oppressed acceptance and host of the oppressor's culture. Notably, we (and Freire) are speaking from the perspective of a very unequal society, which contains within itself many different cultural, social, educational, economical and residential levels of access. This goes against the principles of praxis and socialisation. Perhaps the respondents in question believe they have little to say or contribute when, in fact, their feelings merely reflect the introjection of a dominant, oppressive and hegemonic thinking in their minds that lays the foundations of the culture of silence. Perhaps the data denotes a tautological experience that returns to itself. Or the results may indicate a form of postmodern hedonism, taking pleasure in something that is regarded as important, or communicating to friends and acquaintances that what is supposed to be done (i.e., consumption of culture) has indeed been done. This form of hedonism can be fulfilled, for instance, by visiting a historic city or one of its museums. Again, we reach the same result: the act of going somewhere else to arrive at the same place, with the same convictions, because no dialogue with the local audience or the city has been established.

Another aspect that may affect the lack of reciprocity between visitors and museums is the lack of potential boundary zones such as public resting areas, enjoyment spaces or food courts in the museums. Indeed, the physical structure of the Ouro Preto museums consists exclusively of exhibition halls. Notably, visitors who registered as users on the website TripAdvisor reported that one hour is sufficient time to visit these museums without rushing. In other words, there is evidence that visitors adopt the role of *flâneurs* (Urry, 1991) without contemplating, discovering or appropriating reality.

In contrast, the Rio Art Museum has a large, fenced open space, as well as a café, a restaurant, a souvenir shop, a terrace, meeting rooms and auditoriums. These facilities may become spaces for experimentation because visitors can interact and talk about what they have experienced in the exhibitions. These potential boundary zones were only present in the Rio de Janeiro museum, where they offered ways to experience museums, other than through their content, that are important for the emancipatory process.

We found evidence of emancipatory processes, such as changed perceptions of reality, of self-esteem, and of justice, in interviews with visitors following their visit. We probed those visitors who responded positively, inquiring whether the change was caused by museum content (mainly art objects) or other things or events. Some visitors mentioned seeing homeless people in front of or inside the museum, asking for money (or visiting); others discussed how the contrast between the new, beautiful and rich buildings and the surrounding favelas made them think about emancipation-related themes. Further, some visitors mentioned how expensive the visit was to them and how their peers cannot come into the museum. Finally, some thought that ‘it is not up to them’ to reflect about the shortcomings in their society.

One woman described how she misses out when she doesn’t go to museums (or cultural places), as illustrated here: ‘I stay a slave to television, seeing boring movies, some soap operas that don’t add (culturally) anything, just showing violence, people cheating on each other. What does it add? Nothing’ (R 24). When prompted about this effect of museum visits, she described how every time she goes into a museum or to a cinema, something changes within her; not just because of the content, but also the experience: ‘Anywhere (cultural) thoughts change, expand. We don’t realise, but when we go out we realise that we are not the same’ (R. 24).

At MAR, we noticed that the visits awakened or increased the feeling of wanting to learn with the different cultures for 82% of visitors. After the visit, 76% of the visitors stated that they started to think more about cultures or groups that they knew little or nothing about. This suggests that the museum played a role in arousing curiosity about diversity, for instance:

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Interviewer	Did the visit to the museum increase or make you more aware of how critically you perceive the society in which you live?
R 25	Yes, because the exhibition does it.
Interviewer	Was it related to the exhibition?
R 26	Yes!
R 25	For sure, the one with pictures, then!
Interviewer	Was it also related to the tour, to the whole context?
R 25	Yes.
R 26	There’s no way why ... not having it, because, what happens? You’re talking about one, about a city, so it’s in that context.

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The two respondents went on to talk about the landscape they saw from the rooftop of the museum, which included a new, beautiful building and another museum, but also slum areas and poor neighbourhoods. Further, they talked about how they felt discriminated against when they discussed visiting museums and other cultural places, because the nearby city they live in is known as being ‘not so well developed’:

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- R 25      Discrimination ... discrimination is oppression!
- R 26      It is a very complex context, you know.
- R 25      I, I speak directly, about oppression, discrimination, once again I speak, for the neighbourhood, for the city I live in.
- R 25      So sometimes, clearly, the person speaks like this, you don't live there, you don't have the physique, you don't have the intellect ... I mean, this is discrimination because a suburban neighbourhood or a city that is not so well, unfortunately, developed financially, cannot have intelligent people? In the 21st century, we live. So, when you say: hey, you live in São Gonçalo, but it's not possible, you speak well ...
- 

This belief that the museum ‘is not for everyone’ seems socially accepted in Brazil and permeates interviews with visitors, staff and managers. Even though this belief is generated and reinforced in social interactions outside museums, it is also represented in exhibitions, as exemplified in the following exchange:

- 
- Interviewer      Did the visit to the museum change the way you see the city of Rio de Janeiro?
- R27              Yes, a lot.
- Interviewer      Did it have to do with the exhibition?
- R27              It was. And with the ride. Especially with the terrace. That part over there. There was a person there explaining, it was really cool, then she even criticises the vehicle, not in the sense of being good or bad, but it is a criticism, to think about, right.
- R28              People from the favela.
- R27              What about people, and people? How are they going to live? You have, I think it's really cool what you did here, so it's the beginning that you have an overview, you have the mundane, and there's a story, right after that. I know that these exhibitions will change over time, but today's one was really cool.
- 

In interviews, managers, curators and staff at the MAR discussed the changes that occurred in some visitors when homeless people visited the museum. Historically, museums welcomed homeless people, but had to change this policy because, for example, it was not possible to provide a place to store the belongings of homeless people during their visit. Another problem was the complaints of some visitors about the smell of the homeless people. These situations give visitors new insights, sometimes more meaningful than those gained from museological objects.

We sought to understand how the museums' contents affected the emancipation process. For processes related to boundary zones, we only considered the responses of MAR visitors, as the museums of Ouro Preto generated no boundary zones due to the style and spatial limitations of the buildings. A significant percentage of the respondents claimed to have changed their way of thinking about the world, and related this change to respect, a critical view of reality, and love. When we asked how their feeling of change involved the museum visit, we asked respondents to indicate whether the main reason was the content of the exhibitions, other reasons not related to the content (i.e., boundary zone), or both. The findings showed us that content of exhibitions most frequently provoked change in visitors' perceptions (44%), while 18% mentioned boundary zone, and 38% indicated both factors. Thus, the museum content is a key factor, but not the only one. The presence of a boundary zone, both on its own and together with the content of the exhibitions, prompts transformation, thus indicating its role in the human emancipation process. The existence of the boundary zones and the evidence of the emancipatory potential of museums can, to some extent, reshape these organisations' reason for being.

Apart from the diversity of spaces, other aspects distinguish the MAR from the Ouro Preto museums in terms of how these spaces are used to expand opportunities for experimentation. For instance, the MAR management board promotes meetings with the local community that are not directly related to the exhibitions, for instance the *Café com Vizinhos* programme ('Breakfast with Neighbours'). Here, local residents in the neighbourhoods surrounding the museum are invited to participate in a conversation with its employees while having breakfast:

In the case of [the event called] *Café com Vizinhos*, the invitation goes like this: 'come over and bring someone you think should come too.' So, we never know in advance who's going to come, and there's always someone different. The neighbouring residents also invite other neighbours. So, there may be a guy who is developing a project or something. 'I've just moved here, I'm developing a film project.' And then the person next door says: 'I live here in Morro da Conceição, I came with my children-' So, this decision to include in the invitation the idea to invite whoever you think should come ends up in immense diversity. Besides, the museum's social media are absolutely organic. People start to enjoy and get involved with this space, so it's associated with the social networks, the newsletters, and the mailing. And with the Municipal Secretary of Culture, so that the information is disseminated. (R19)

In this space-time frame, within the physical structure of the museum, the population can propose themes and artists for the exhibitions. Residents may share sentiments about their problems and create proposals to be adopted in their lives. Sometimes the themes emerging from these encounters are forwarded by curators to guest artists, who use them to create exhibitions. These encounters,

rather than works of art, can transform society – artists and audiences – through the museum.

## Conclusion

This chapter has explored processes of estrangement and reconciliation between individuals and museums, analysed how these relationships are affected by the spatial dynamics of the museums in question, and examined where and how museums reinforce spatial appropriation. Although many residents feel estranged by museums, we also found opportunities for emancipation in how people experience museums. For instance, at the Rio Art Museum, the experiences occurring in the boundary zones and the direct participation of locals in the exhibitions, especially those about everyday life in Rio de Janeiro, engaged the city's inhabitants and fostered emancipatory reflections grounded in art.

Conversely, in Ouro Preto, even though the content of the historical museums is connected to the heritage that much of its population descend from, we observed that residents were even more detached. As possible solutions, we suggest two interrelated perspectives involving the experimental character of the museological space, and the link between the exhibitions and contradictions with the lives of Ouro Preto residents.

Our approach involves, above all, breaking through broader cultural barriers. It requires the recognition of various historically marginalised cultural manifestations that shape elements of the identity of Ouro Preto residents. These elements, in turn, relate to the very purpose of these museums. At this point, we suggest another emancipatory potential in the encounter between different cultural productions.

In the transformative role that we advocate for museums, they provide an education that perceives culture as the cornerstone of freedom and guides men and women through a continuous emancipatory process concerning their thoughts and actions. The effects of this education will be manifested at the level of democratic citizenry, since a democratic state requires real, conscious citizens who act in the world.

From this perspective, the opportunities for experimentation must be guided by a political experience based on a greater awareness of oneself, the world and its structures and the perception of oneself as an agent of transformation. As the study of the MAR revealed, it may not be paramount that the exhibition itself has an experimental form, for a significant part of the visitor's experience takes place in the so-called boundary zones.

Museums can also represent an opportunity to connect people to historical elements, because they unveil important contradictions of human development and foster the critical skills of individuals. Museums can become closer to the individuals and social groups who have remained historically alienated from these spaces.

## Notes

- 1 The Gold Cycle happened in the eighteenth and nineteenth centuries, when many expeditions from every region of the country, even from Europe, took the route to the hinterland of Minas Gerais to explore gold mines (Machado & Figueirôa, 2001).
- 2 Inconfidência Mineira was a plot organised against the taxes on gold implemented by the Portuguese crown in the captaincy of Minas Gerais.

## Bibliography

- Alderoqui, S., & Pedersoli, C. (2011). *La educación en los museos: de los objetos a los visitantes*. Paidós.
- Boast, R. B. (2011). Neocolonial collaboration: Museum as contact zone revisited. *Museum Anthropology*, 54(1), 56–70.
- Bourdieu, P. (2011). *A distinção: crítica social do julgamento*. Zouk. (Original work published in 1979.)
- Bourdieu, P., & Wacquant, L. (2012). *Una invitación a la sociología reflexiva*. Veintiuno Editores. (Original work published in 1992.)
- Bruno, J. S. C. O. (2002). Museu da Arte Contemporânea de Niterói, RJ: Uma estratégia de promoção da imagem da cidade. *Revista Brasileira de Estudos Urbanos e Regionais*, 4(1), 91–105.
- Canclini, N. G. (2009). Diversidade e Direitos na Interculturalidade Global. *Revista Observatório Itaú Cultural*, 8, 143–152.
- Carlile, P. R., Nicolini, D., Langley, A., & Tsoukas, H. (2013). *How matter matters: Objects, artifacts, and materiality in organization studies*. Oxford University Press.
- Castro, D. C. (2013). Museus e educação sob inspiração de Paulo Freire. In C. Gurgel & P. E. M. Martins (Eds.), *Estado, organização e pensamento social brasileiro* (pp. 191–216). Editora da UFF.
- Castro, D. C. (2016). *Alguém com quem contra: emancipação humana e organizações museais* [PhD thesis, EBAPE-FGV]. EBAPE-FGV Research Repository. <http://bibliotecadigital.fgv.br/dspace/bitstream/handle/10438/17054/Tese%20Algu%20C3%A9m%20com%20quem%20Contar%20Diana%20Castro.pdf?sequence=1&isAllowed=y>
- Dale, K. (2005). Building a social materiality: Spatial and embodied politics in organizational control. *Organization*, 12, 649–678.
- Everett, J. (2002). Organizational research and the praxeology of Pierre Bourdieu. *Organizational Research Methods*, 5(1), 56–80.
- Franklin, A., & Papastergiadis, N. (2017). Engaging with the anti-museum? Visitors to the Museum of Old and New Art. *Journal of Sociology*, 53(3), 79–92.
- Freire, P. (2001). *Conscientização: teoria e prática da libertação: Uma introdução ao pensamento de Paulo Freire*. Centauro.
- Freire, P. (2007). *Ação cultural para a liberdade e outros escritos*. Paz e Terra.
- Freire, P. (2011). *Pedagogia do Oprimido*. Paz e Terra.
- Goulding, A. (2013). Older people learning through contemporary visual art: Engagement and barriers. *International Journal of Art & Design Education*, 32(1), 18–32.
- Hanquinet, L., & Savage, M. (2012). Educative leisure and the art museum. *Museum and Society*, 10(1), 42–59.
- ICOM. (2015). ICOM Portugal, definição de museu. <https://icom-portugal.org/2015/03/19/definicao-museu/>
- Machado, I. F., & Figueirôa, S. F. M. (2001). 500 years of mining in Brazil: A brief review. *Resources Policy*, 27(1), 9–24.

- Macleod, S. (Ed.). (2005). *Reshaping museum space*. Routledge.
- Macleod, S., Hanks, L. H., & Hale, J. (Eds.). (2012). *Museum making: Narratives, architectures, exhibitions*. Routledge.
- Orlikowski, W. J. (2007). Sociomaterial practices: Exploring technology at work. *Organization Studies*, 28(9), 1435–1448.
- Osorio, J. E. R. (2015). La des-contextualización en un museo del cuerpo en la 'calle de las guapas' de Manizales y la construcción de un corpus estético. *Revista Lasallista de Investigación*, 12(1), 177–191.
- Pruulmann-Vengerfeldt, P., & Aljas, A. (2011). Digital cultural heritage: Challenging museums, archives and users. *Journal of Ethnology and Folkloristics*, 3(1), 109–127.
- Rectanus, M. W. (2002). *Culture incorporated: Museums, artists, and corporate sponsorship*. University of Minnesota Press.
- Rectanus, M. W. (2006). Globalization: Incorporating the museum. In S. Macdonald (Ed.), *A companion to museum studies* (pp. 381–397). Blackwell.
- Smith, T. (2009). *What is contemporary art?*. University of Chicago Press.
- Sallaz, J. J., & Zavisca, J. (2007). Bourdieu in American sociology, 1980–2004. *Annual Review of Sociology*, 33, 21–41.
- Simon, N. (2010). *The participatory museum*. Museum 2.0.
- Thiry-Cherques, H. (2006). Pierre Bourdieu: A teoria na prática. *Revista de Administração Pública*, 40(1), 27–55.
- Urry, J. (1991). *The tourist gaze: Leisure and travel in contemporary societies*. SAGE.
- Vergara, L. G. (2008). Utopias antropofágicas das raízes do Brasil. In M. S. Chagas et al. (Eds.), *A democratização da memória: A função social dos museus ibero-americanos* (pp. 245–266). Museu Histórico Nacional.
- Vieira, E. F., & Vieira, M. M. F. (2004). *A dialética da pós-modernidade: A sociedade em transformação*. Editora FGV.
- Yin, R. K. (2009). *Case study research: Design and methods*. SAGE.
- Zukin, S. (2010). *The culture of cities*. Blackwell.

# 8

## EXPERIMENTAL INNOVATION IN MUSEUMS: ENCOURAGING CREATIVITY, BUILDING CONFIDENCE AND CREATING SOCIAL VALUE

*Haitham Eid*

Research and development (R&D) is recognised as a legitimate pathway for innovation in the for-profit and nonprofit sectors. It is the systematic process by which organisations develop new or enhance existing products or services. In the private sector, most firms have dedicated departments charged with managing the R&D process. These departments consist of specialised teams with diverse expertise, including scientists, technologists and designers. While the typical organisational structure in museums does not encompass a permanent R&D department, museums apply R&D through ad-hoc teams, created to oversee and manage specific innovation projects. Upon delivering results of the innovation, these teams are dissolved, allowing each team member to continue his/her regular assignments in the museum (or engage in a different innovation project with a different team). For the sake of clarity, museum innovation is defined as ‘the new or enhanced processes, products or business models by which museums can effectively achieve their social and cultural mission’ (Eid, 2016).

Based on this definition, let us take the process of creating an innovative exhibition as an example (with the acknowledgement that not every exhibition is considered innovative). The process starts by assembling a team, which in most cases consists of a museum curator, designer, museum educator, registrar, technologist and project manager. From the ideation and conceptualisation process throughout the design and delivery phases, the team members, each of whom brings to the project a crucial set of expertise, meet regularly and work closely with each other. After the opening of the exhibition, the team is dissolved until the next innovation project is decided.

The traditional R&D model has been historically effective in facilitating and managing innovation. However, this model is now being challenged, as argued by Larry Schmitt, co-founder and managing partner of the management consulting firm Inovo: ‘In today’s environment, R&D is no longer sufficient. What is needed

is an Innovation System that is much more than traditional R&D. It is a profound reimagining of the traditional functions of Strategy, R&D and Business Development' (Schmitt, 2016). One of the strategic disadvantages of R&D is the isolation of the innovation process in specific departments or teams, distancing it from the rest of the organisation and, more importantly, from the end-user. Additionally, the fast development in technology and the rapid change in customers' demands and expectations stipulate a more agile approach to innovation. The traditional R&D model, on the other hand, is a lengthy process that can provide inaccurate results about the viability of the innovation being sought, which is known as false-negatives or false-positives. As such, innovation practitioners have begun to look at experimental innovation as a novel way to meet these new challenges.

In addition to the previous factors, museums are expected to take a more significant role in addressing contemporary social and environmental issues, a challenge that requires innovative thinking and profound reflections on how museums approach their work. In this context, experimental innovation, as discussed below, can provide a platform to explore new concepts and realise systematic change. More specifically, this chapter regards experimentation as a core organisational quality for innovation. If encouraged and rewarded across the museum, experimentation provides a more decentralised approach to innovation, where everyone in the museum is given the opportunity, even at a small scale, to explore and apply new ideas. This is different, as discussed earlier, from traditional R&D, which is carried out by specialised teams (whether they are part of a permanent department or an ad hoc) and isolates the innovation process from the rest of the organisation.

## Experimental innovation

Experimental innovation is a fairly new concept with no clear definition. Hampel et al. (2019), for example, ground their understanding of experimental innovation in two principles: the scientific approach to experimentation and capturing customers' interests at the early stages of the innovation process. The scientific approach to experimentation is inspired by the lean start-up approach, which 'involves turning the underlying assumptions upon which a business model is built into hypotheses that can be tested through the careful use of experiments [...]' (Hampel et al., 2019, p. 1). Within this context, understanding the end-users' (e.g., customers, visitors, audiences, communities) needs, interests and concerns informs the formalisation of the hypothesis, which results in a faster innovation process, higher certainty and lower resource requirements.

Hampel et al. (2019) note that scholarship on experimental innovation is 'limited to a handful of publications to date,' which explains the ambiguity around the term, but also highlights the need for more research to unpack the essential elements and associated values of experimental innovation. Nonetheless, enabling a broad approach to experimentation can provide critical intangible infrastructure for internal

innovation. For example, authorising individual employees to question the *status quo* and present possible solutions, establishing an organisational culture that encourages and recognises creativity and constructing internal collaborations between different individuals, departments or units are all crucial infrastructures for innovation.

While experimental innovation appears to have significant advantages, it can also present considerable challenges. More specifically, experimental innovation disrupts established authorities, organisational structures and allocation of resources. Those are the types of challenges that every organisation needs to investigate to rejuvenate and remain relevant; hence, they can also be viewed as opportunities for improvement and growth. Ferrier (2018) provides several strategies to address these challenges and develop an organisational culture which is conducive to experimentation. Some of these strategies include training employees on experimental methodologies, developing and promoting channels to share and review new ideas by employees, building internal communication channels to increase awareness of new technology or business trends and rewarding employees for their innovative achievements (Ferrier, 2018). To illustrate the previous discussion, I briefly examine two initiatives from the private sector that aim to adopt experimental innovation as a core organisational value.

The first initiative is Pfizer's Dare to Try programme. Pfizer, one of the world's largest biopharmaceutical companies, launched the program in 2013 to give its employees 'a comprehensive methodology to develop new ideas, take thoughtful risk through experimentation, and ignite change' (Pfizer, n.d.). Through specialised training, some employees become 'innovation champions' who permeate experimental culture and behaviour among their teams.

The second initiative is 3M's initiative 15% Culture, which allows employees to spend 15% of their time experimenting with new ideas or projects of their choice. 'FlexAbility,' 'Mentoring' and '15% Culture' make the three core elements of 3M's organisational culture. To highlight the role of experimentation, 3M states on its website: 'Whether it's experimenting with a new technology, forming a special interest group around a fresh idea or finding a new way to run a process, our 15% Culture gives employees in all areas the license to innovate' (3M, n.d.). The idea of giving employees the time and, more importantly, the 'license to innovate' is crucial to building an effective experimental innovation model. Later in this chapter, I will discuss how public organisations can adopt a similar concept, an 'authorising environment,' coined by Seb Chan, chief experience officer at the Australian Centre for the Moving Image (ACMI) in Melbourne.

The two initiatives at Pfizer and 3M give a brief overview of how experimental innovation is implemented at two world-leading companies in the area of innovation. Although experimental innovation is a relatively new concept, as discussed previously, it has attracted many museums around the world. The implementation model, however, varies from one museum to another. This variation is expected considering the lack of a structured understanding of experimental innovation and the unique character for each museum in terms of its collections, size, governing body, organisational structure and audiences. The remainder of this



chapter explores and analyses examples of experimental innovation models in museums in Australia, the United States and the United Kingdom.

## **Institutionalisation of experimental innovation in museums**

For museums (or any organisation) to achieve any degree of innovation, they must promote creativity, imagination and out-of-the-box thinking among their employees. That requires an organisational structure that nurtures, encourages and rewards experimentation as an essential part of the innovation process. In that sense, adopting experimentation as a core organisational value, as argued here, is crucial to building a successful museum innovation model. That should be manifested in the museum's DNA, including its mission, policies, procedures and how the museum leadership articulates the culture of experimentation in its messages to museum employees, external collaborators and the community. Therefore, a close analysis of the museum's organisational structure can indicate the readiness of the museum to adopt experimental innovation.

The Grant Museum of Zoology, which is part of the University College London (UCL) in the United Kingdom, advertises itself as an experimental test-bed (Ashby, 2018). In his article, 'Museums as experimental test-beds: Lessons from a university museum,' Ashby (2018) stresses the importance of establishing an experimental philosophy and communicating this philosophy with everyone involved with the museum:

The decision for the Grant Museum to work at being an experimental museum was a deliberate one – we actively set about seeking research partnerships and made projects very visible from the outset, so that other potential academic collaborators saw that we were open to proposals. We even designed the new museum space with this kind of work in mind.

*(Ashby, 2018, p. 6)*

As Ashby states, experimentation needs to be intentional and reflected in all aspects of museum work, including how it chooses its partners and designs its internal space. Additionally, Ashby emphasises how the Grant Museum continuously reiterated its experimental philosophy to the world:

The first thing we did, and continue to do, is say that we are an experimental test-bed. Every time we get in front of a museum or a Higher Education audience, or whenever we write a practice-based journal article or press release, we say that we want to act as an experimental test-bed. Such repetition of the message is key to getting the idea ingrained in stakeholders' opinion of you.

*(Ashby, 2018, p. 6)*

The quote illustrates Ashby's belief in the power of consistent messaging, both internally (to museum employees) and externally (to museum constituents), to activate and confirm experimentation as a core museum value. Moreover, Ashby (2018) gives special emphasis to the role of top museum administration, arguing that 'strategic plans and senior management's communications need to reflect the philosophy [of experimentation] if a museum's staff – and ideally its audiences – are to believe that they are an experimental test-bed' (Ashby, 2018, p. 6).

By doing so, the museum leadership provides the staff with 'the license to innovate' and encourages them to adopt experimentation in their daily work. Seb Chan concurs with Ashby and adds that the museum leadership needs to give employees 'a sense of responsibility [over the experimentation process] and trust that they will use it responsibly' (Chan, 2019). Chan calls it an 'authorising environment,' where employees are given the green light to experiment with new solutions and try novel approaches. This authorising environment is paramount to experimental innovation, which is one of five core value at ACMI. In its annual report, ACMI states: 'Innovation requires experimentation and risk-taking. We enable a culture that embraces creative risk-taking, supporting bold ideas and new voices with energy and commitment' (ACMI, 2019). The ACMI case will be discussed further below.

In a U.S.A. context, one of the most known museums for adopting experimental innovation across their organisational structures is the Crystal Bridges Museum of American Art in Arkansas. In fact, Crystal Bridges is the only museum I know of that has an employee position titled 'creative director of experimentation and development.' This position is currently occupied by Shane Richey, who has been with the museum in different roles, including web designer and digital media manager, since 2009. Richey states, 'Crystal Bridges is interested in the convergence of art and innovation, but there's a balance to be found when using experimentation to add value to our purpose' (Crystal Bridges, 2019).

Richey's background as a web designer and digital media expert seems to shape the experimental innovation model at Crystal Bridges, which is centred around technology. However, Richey confirms that '[t]he goal is not technology for technology's sake, but looking for new tools that we can use to bring the public closer to art' (Crystal Bridges, 2019). To keep all staff members engaged and thinking creatively beyond digital, the museum carved out a space in the Early American Art Gallery, called 'The Niche,' which serves as an experimental lab to explore new exhibition or content ideas by anyone in the museum (Harmon, 2019). Richey underscores the significance of The Niche: 'The best way to empower museum staff is to allow them to have ideas and make them feel like they have the ability to pursue those ideas even if you as a leader are not sure about them' (quoted in Harmon, 2019, n.p.); and The Niche is a practical way to do just that. It gives the museum staff the 'license' or 'authorising environment' to run their experimentation. In summary, the institutionalisation of experimental innovation at Crystal Bridges is manifested in a dedicated position, a rare finding in museums, and also in an experimental space that is available for any museum staff member to explore new ideas.

In a report for the *Washington Post* titled ‘Experimentation is key to success for National Portrait Gallery’s director,’ Kim Sajet, director of the National Portrait Gallery, explains how experimentation has been a cornerstone in her leadership style: ‘I’m very much about experimentation. I came in and said, “You know, nothing is a sacred cow. Let’s look at breaking down the hierarchies, experimenting and piloting things”’ (quoted in McGlone, 2015, n.p.). The National Portrait Gallery is located in Washington, DC, and is part of the Smithsonian Institution. As a manifestation of Sajet’s strategy, the museum challenged established curatorial practices and the traditional definition of portrait art by commissioning Cuban American artist Jorge Rodriguez-Gerada to create a six-acre landscape portrait on the National Mall in Washington, DC, midway between the World War II Memorial and the Lincoln Memorial. Approximately 2,000 tons of sand, 800 tons of soil, 10,000 wooden pegs, miles of string and assistance from GPS topography poles (which allows the materials to be placed with precision) have been used to create the portrait. This experimentation does not only expand the understanding of what constitutes a portrait but also inspires a more in-depth discussion about issues related to race, which is one of the issues that Sajet was interested in investigating through the National Portrait Gallery (McGlone, 2015). Titled ‘Out of Many, One,’ the portrait depicts the face of a young man with multiracial features. The face was inspired by many pictures of ordinary Washingtonians taken by Rodriguez-Gerada, reflecting the diversity of American communities.

The previous discussion illustrates the different strategies by which museums have attempted to institutionalise experimental innovation. Through establishing an ‘experimental philosophy,’ as is the case in The Grant Museum of Zoology (U.K.), or by providing an ‘authorising environment,’ as Chan describes it at ACMI (Australia), or, perhaps, through creating an official museum position for ‘Experimentation and Development,’ as seen at Crystal Bridges Museum of Art (U.S.A.), or by challenging current curatorial practises, as is the case at the National Portrait Gallery, many museums across the world have realised the significance of adopting experimental innovation and have taken serious steps to make sure it is embedded in their daily work.

Yet, how is experimental innovation implemented and practised in museums? A key approach is to apply the concepts of design thinking (DT) and, more recently, accelerated design thinking (ADT). To answer how experimental innovation strategies are turned into practices it is important to explore the DT and the ADT approaches and analyse their connection to experimentation and ADT. The analysis is illustrated by investigating a recent project to re-create an audio guide for the Scorsese exhibition at the Australian Centre for the Moving Image (ACMI) in Melbourne.

### **Adopting an accelerated design thinking (ADT) approach**

The concept of design thinking was developed in the late 1950s and early 1960s by design engineers (see, for example, Clancey (2016) on the work of John Edward

Arnold on ‘creative engineering’) as a novel approach to use creativity in solving complex problems. Through a defined but interactive, non-linear process, design thinking strives to understand the user/audience/constituent, challenge current assumptions and redefine problems to develop innovative solutions. Rooted in political economy, democracy and feminism frameworks, the Scandinavian countries developed critical, user-led design approaches in the 1970s, intending to empower end-users (Stuedahl, 2018).

More recently, design thinking has gained popularity in the museum and cultural heritage sectors (see, for example, MacLeod et al., 2015; Silver et al., 2013) for its human-centric approach. More specifically, a five-step model – empathise, define, ideate, prototype and test – was introduced by Stanford University Hasso Plattner Institute of Design (commonly known as the d.school); and the model has become the standard framework for design thinking in many organisations, including museums. It is worth noting though that while DT helps engage the end-user and reach more reliable results, the entire process can be time-consuming. Additionally, the fast development in technology, marketplace volatility and the rise of personalisation in products, services, marketing and customer experience, which all require a more agile innovation strategy, have compelled many companies in the private sector to adopt an accelerated design thinking (ADT) approach.

In the same vein, similar factors to the ones mentioned above compel social organisations (including museums) to develop a more accelerated approach to design thinking as a vehicle for innovation (Mabogunje et al., 2019). It is argued here that ADT seems to be one of the appealing strategies to achieve that goal, as the following example illustrates.

ACMI Labs, self-described as the unit responsible for ‘experiments in media, technology & user experience’ at the ACMI is known for having a leadership that values and drives innovation. Its chief experience officer states:

For most of the practice here and in my previous roles, [it] was about creating a space where experimentation, which is perceived as risky, is embraced. And that means authorising people to do things and take responsibility for things [...] not working and give them the space and sometimes the protection to do that.

*(Chan, 2019)*

I discussed earlier the importance of creating an ‘authorising environment’ to encourage experimentation. Building on that discussion, let us explore how this environment, along with adopting the ADT approach, can improve innovation in the museum context. In 2015, when ACMI was about to receive a travelling exhibition on Martin Scorsese, the iconic American film director, producer and actor, Chan and Lucie Paterson, heads of experience, product and digital at ACMI, thought the accompanying audio guide was not suitable for ACMI audiences, and they wanted to do something about it:

We are buying an exhibit that has an audio guide. We could have just taken the audio guide, but between Lucie and me, we thought that [the audio guide] kind of sucked, and it was an opportunity for experimentation. It was Lucie's job to transform it into something that sucked-less. That's a very small thing, but it was very significant.

(Chan, 2019)

Paterson explains: 'It was all in French [...]. You kind of just listened to a narrative, and there wasn't much connection to what you were looking at in the exhibition' (Paterson, 2019). Paterson, in this instance, utilised her expertise on museum experience, empathising with the potential exhibit audiences. This reflects Naiman's description of design thinkers as they 'rely on customer insights gained from real-world experiments, not just historical data or market research' (Naiman, 2019).

With almost no budget, Paterson experimented with a few options to improve the audio guide. In collaboration with ACMI curators, the team identified 15 stops throughout the exhibition to place the audio narrative and added another layer of interpretation by including a written transcription of the audio to make the experience accessible to wider audiences. Information about personal items given by Scorsese from his house or his studio for this specific exhibition was also added to the narrative. After several iterations, the audio guide was tested internally (with people who were not involved in the project). Additionally, the small team conducted interviews with visitors and observed audience reactions, which led to further small but essential improvements in the design of the audio guide itself and the overall service design of the product from end to end (Paterson, 2019).

Notably, this short experimentation had a broad impact on the creation of museum audio guides inside and outside ACMI. Chan (2019) uncovers that 'the same codebase was repurposed for the Wallace and Gromit exhibition the following year – which saved us effort and allowed us to focus those energies on content creation instead' (Chan, 2019). Additionally, ACMI Labs made the source code for the audio guide available on GitHub, a hosting platform for software development. Andrew Serong, Web & Software Developer at ACMI, wrote a special blog on the open platform *Medium*, explaining different technical aspects of the code and how it can be forked at other organisations (Serong, 2016). Records show that at least five other institutions in five different countries have used the code for their internal audio guides, including Vila Itororó in São Paulo, Brazil, the Immigration Museum (part of Museum Victoria) in Melbourne, Australia, the National Galleries of Scotland, the Museum of Contemporary Art in Panamá and the Kalmar läns Museum in Kalmar, Sweden.

A close analysis of the Scorsese audio guide project reveals that the ADT approach was implemented to guide the incremental innovation process, as follows:

1. Empathise: understanding the significance of engagement in the museum experience. Paterson and Chan empathised with potential visitors of the exhibit and understood that improvements are needed.

2. Define: the exhibit audio guide was in French with no direct connections to the objects on display. Therefore, the design challenge was to add an audio guide in English and link the narrative to specific objects in the exhibition.
3. Ideate: working with the museum curators, the team brainstormed ideas to improve the audio guide.
4. Prototype: the new engaging audio guide was developed.
5. Test: the audio was tested internally and externally before launching. It was also connected to Google Analytics to assess its effectiveness during the exhibition.

As a reminder, ADT aims to fast-track (not eliminate) the design process. In the case of the Scorsese audio guide, we can identify the intersection of experimental culture and ADT, which leads to a more nimble and agile innovation model. Some researchers refer to this phenomenon as ‘post-agility’ (Baskerville et al., 2011). If Paterson and Chan had to face complicated administrative structures to address the issue, the entire project could have been killed at an early stage. Remember that Chan and Paterson did not have to add another project to their full work schedule. Many other museums would have probably accepted the original audio guide. But because Chan and his team adopted an ADT approach coupled with an organisational culture that nurtures and encourages experimentation, the team was motivated to identify the problem and offer a swift and creative solution. Therefore, it is essential to note here that creativity and experimental mindset for museum employees, along with conducive organisational culture, are important factors in encouraging these types of incremental innovations to take place.

## Embracing failure

Not all experiments succeed. Therefore, creating a culture in the museum that embraces failure and considers it an opportunity for learning and growth is an essential prerequisite for experimental innovation. This belief is shared among all innovative institutions and leaders. Jeff Bezos, founder and CEO of Amazon states:

One area where I think we are especially distinctive is failure. I believe we are the best place in the world to fail (we have plenty of practice!), and failure and invention are inseparable twins. To invent you have to experiment, and if you know in advance that it’s going to work, it’s not an experiment. Most large organisations embrace the idea of invention, but are not willing to suffer the string of failed experiments necessary to get there.

*(Bezos, 2016)*

In this quote, Bezos eloquently unpacks the connection between failure, experimentation and innovation. They are interconnected and interdependent. Shying

away from failure (and experimentation) is a strategy that leads to a stagnant, idle work environment. In contrast, innovative museums build a culture that encourages experimentation and accepts failure. I had an extensive discussion with Seb Chan in 2014 when he was the director of the Digital & Emerging Media Department at Cooper Hewitt, Smithsonian Design Museum in New York City about innovation in museums. We ended up spending a considerable amount of our time talking about failure, how it is perceived and dealt with in museums. Chan had strong views on this specific issue – some of these views are common beliefs in the innovation community, but others can be seen as a little provocative. Chan asserts:

I am a firm believer that failure is instructive. One of the reasons we invested so heavily in in-house expertise at Powerhouse (and now, increasingly at Cooper-Hewitt), is that it allowed for lots of small, inexpensive failures, and the cultivation of more of a culture of experimentation and continuous improvement.

*(Chan, 2014)*

Chan actively promotes this message to his team. Micah Walter and Aaron Cope, who were part of Chan's digital team at Cooper Hewitt, confirm the same understanding about failure. For example, Walter (2014) states, 'we use failure to learn and build and grow. It is a necessary part of everything we do,' and Cope (2014) adds that 'if something fails, then what is important is to be able to recognise that it failed and to understand why; and to be able to speak about it.'

The previous statements are in line with the conventional wisdom among innovation experts. What is probably a provocative but sensible proposition is Chan's idea of the need to fail publicly. Sharing failures with the public may seem as undesirable strategy, but Chan sees it in a different light:

If it all happens behind closed doors, the only criticism you will get is from the people who are already doing it a particular way. If you fail publicly, you will get people who will criticise you who will say, 'I am already doing it better. Why are not you doing it like this?' You will also get supporters who say, 'Wow, that was a really interesting way of trying that. Did you think about this other way?' If it is only internal, you never get that feedback from people outside.

*(Chan, 2014)*

Museums may be able to avoid potential public criticism by shielding their experimentations from the public, but by doing so they also lose the potential of receiving valuable feedback and creative ideas from external sources. Creating channels by which creative ideas can move into and outside the organisation is known as open innovation (Eid, 2016, 2019). Chan values open innovation and

argues that ‘the open part is that it has to be open publicly. If it is not open publicly, you do not get the benefit of the world criticising your work’ (Chan, 2014).

As part of its ethics, standards and professional practices standards, American Alliance of Museums (n.d.) emphasises that maintaining public trust is crucial to museums. Sharing failures with the public can be perceived as a trigger to sabotage public trust, a fear that leads many museums to keep the outcomes of their experimentation (especially failed ones) internally. This is a legitimate concern. However, the failures to which Chan refers are not spectacular ones and will arguably not lead to losing public trust. Quite the contrary, transparency and getting the public involved is an effective strategy that builds public trust.

Another concern that prevents some museums from publicly sharing their failures is the fear of missing out on funding opportunities and donations (if they are perceived as incompetent). Chan (2014) refutes that notion and argues:

I would say though that the proof in my work is that has not been the case; in fact, it has resulted in millions of dollars coming to this [Cooper Hewitt] museum. And in the case of the Powerhouse, millions of dollars came through new government projects and visitor action. You have got to trust that that is going to happen. It is not going to happen for everyone, and it is not always going to work for me. But I think there is a reasonably – at least in our case here – a clear line between our experimentation and literally millions of dollars of funding.

*(Chan, 2014)*

The opportunity to willingly share failures with the public and attract valuable feedback from external sources might work in the nonprofit world. This is a great advantage that the museum sector enjoys, which makes the innovation ecosystem more diverse and dynamic. Sectoral innovation ecosystem can be defined as a set of complex relationships between key actors, networks, institutions and technologies (Malerba, 2005). Actors may include individuals (such as curators, artists, administrators, technologists, educators and audiences) and organisations (such as museums, universities, associations, corporations and nonprofits). What is apparent is that there is a plethora of innovative ideas, skills and expertise outside any individual museum. And those museums that can attract and capitalise on external ideas and expertise will be able to advance their museums. Overall, each museum may have to decide the degree of openness and transparency with their internal experimentation, balancing between the need to fail publicly and maintaining public trust. What is certain, though, is that accepting failure as part of the creative process is essential to building an effective experimental innovation model in any museum.

## Conclusion

The fast development in technology and the increased expectations of museums to take a larger role in addressing contemporary social and environmental issues are



compelling many museums to develop a more innovative and agile approach to their work. In an attempt to respond to these challenges, many museums around the world are adopting experimental innovation, an emerging framework that promotes the use of experimentation across all organisational units and levels. This chapter has documented that experimental innovation models vary from one museum to another. From establishing an ‘experimental philosophy’ and presenting itself as an ‘experimental test-bed,’ to building an ‘authorising environment,’ where experimentation is encouraged (and possible failure is accepted) and instituting a dedicated position (such as director of experimentation and development) for experimentation, each museum is carving out its individual strategy to encourage experimentation as part of its daily practices. Overall, establishing an organisational culture that promotes experimentation and encourages museum staff to test their creative ideas helps museums achieve their missions more effectively.

## Bibliography

- 3M. (n.d.). *3M Careers*. <https://www.3m.com/>: [https://www.3m.com/3M/en\\_US/careers-us/working-at-3m/life-with-3m/](https://www.3m.com/3M/en_US/careers-us/working-at-3m/life-with-3m/)
- ACMI. (2019, August). *2018-2019 Annual report*. [https://acmi.s3.amazonaws.com/media/uploads/files/Annual\\_Report\\_2018-19.pdf?Signature=drfhUKSWKiqr6Z83aqBE6stodMw%3D&AWSAccessKeyId=AKIAJJOVMAJPAFURBISA&Expires=1577766326](https://acmi.s3.amazonaws.com/media/uploads/files/Annual_Report_2018-19.pdf?Signature=drfhUKSWKiqr6Z83aqBE6stodMw%3D&AWSAccessKeyId=AKIAJJOVMAJPAFURBISA&Expires=1577766326)
- American Alliance of Museums. (n.d.). *Public trust and accountability standards*. <https://www.aam-us.org/programs/ethics-standards-and-professional-practices/public-trust-and-accountability-standards/>
- Ashby, J. (2018). Museums as experimental test-beds: Lessons from a university museum. *Journal of Natural Science Collections*, 5, 4–12. <https://www.natsca.org/article/2435>
- Baskerville, R., Pries-Heje, J., & Madsen, S. (2011). Post-agility: What follows a decade of agility? *11th International Conference on Agile Software Development, XP2010* (pp. 543–555). Trondheim, Norway: Elsevier.
- Bezos, J. (2016). *Letter to shareholders*. <https://www.sec.gov/Archives/edgar/data/1018724/000119312516530910/d168744dex991.htm>
- Brooklyn Museum of Art. (2019, November). *About the museum*. <https://www.brooklynmuseum.org/about>
- Chan, S. (2014). Interview with Seb Chan, Director of Digital & Emerging Media Department at Cooper Hewitt, Smithsonian Design Museum. (H. Eid, Interviewer).
- Chan, S. (2019, July). Interview with Seb Chan, Chief Experience Officer at the Australian Centre for the Moving Image in Melbourne, Australia. (H. Eid, Interviewer).
- Clancey, W. J. (2016). *Creative engineering: Promoting innovation by thinking – John E. Arnold*. Stanford Digital Repository. <https://stacks.stanford.edu/file/druid:jb100vs5745/Creative%20Engineering%20-%20John%20E.%20Arnold.pdf>
- Cope, A. (2014). Interview with Aaron Cope, Digital & Emerging Media Department at Cooper Hewitt, Smithsonian Design Museum. (H. Eid, Interviewer).
- Crystal Bridges. (2019, 23 January). *From space travel to augmented reality: Crystal Bridges looks for new ways to innovate*. <https://crystalbridges.org/blog/from-space-travel-to-augmented-reality-crystal-bridges-looks-for-new-ways-to-innovate/>

- Eid, H. (2016). The museum innovation model: A museum perspective on innovation. *Museums and the Web* (pp. 261–276). <https://mw2016.museumsandtheweb.com/paper/the-museum-innovation-model-a-museum-perspective-to-innovation/>
- Eid, H. (2019). *Museum innovation and social entrepreneurship: A new model for a challenging era*. Routledge.
- Ferrier, A. (2018, 15 March). Increasing experimentation and autonomy capability: The new corporate innovation imperative. *Innovation Management*. <https://innovationmanagement.se/2018/03/15/increasing-experimentation-and-autonomy-capability-the-new-corporate-innovation-imperative/>
- Hampel, C., Perkmann, M., & Phillips, N. (2019). Beyond the lean start-up: Experimentation in corporate entrepreneurship and innovation. *Innovation*, 22, 1–11. 10.1080/14479338.2019.1632713
- Harmon, E. (2019, 30 January). The spaceship solution: How museums can use experimental technology to solve problems. *American Alliance of Museums*. <https://www.aamus.org/2019/01/30/the-spaceship-solution-how-museums-can-use-experimental-technology-to-solve-problems/>
- IC3. (n.d.). Methodology. <https://ic-3.com/methodology/>
- Mabogunje, A., Sonalkar, N., & Leifer, L. (2019). Redesigning social organization for accelerated innovation in the new digital economy: A design thinking perspective. In C. Meinel & L. Leifer (Eds.), *Design thinking research looking further: Design thinking beyond solution-fixation* (pp. 143–156). Springer. [https://link.springer.com/chapter/10.1007/978-3-319-97082-0\\_8](https://link.springer.com/chapter/10.1007/978-3-319-97082-0_8)
- MacLeod, S., Dodd, J., & Duncan, T. (2015). New museum design cultures: Harnessing the potential of design and ‘design thinking’ in museums. *Museum Management and Curatorship*, 30(4), 314–341.
- Malerba, F. (2005). Sectoral systems of innovation: A framework for linking innovation to the knowledge base, structure and dynamics of sectors. *Economics of Innovation and New Technology*, 14(1–2 Microeconomics and Innovation), 63–82.
- McGlone, P. (2015, 15 October). Experimentation is key to success for National Portrait Gallery’s director. *Washington Post*. [https://www.washingtonpost.com/entertainment/museums/experimentation-is-key-to-success-for-national-portrait-gallery-s-director/2015/10/15/7ab5dbae-6b8e-11e5-9bfe-e59f5e244f92\\_story.html](https://www.washingtonpost.com/entertainment/museums/experimentation-is-key-to-success-for-national-portrait-gallery-s-director/2015/10/15/7ab5dbae-6b8e-11e5-9bfe-e59f5e244f92_story.html)
- Naiman, L. (2019). Design thinking as a strategy for innovation. *The European Business Review*. [https://www.europeanbusinessreview.com/design-thinking-as-a-strategy-for-innovation/?\\_\\_cf\\_chl\\_jschl\\_tk\\_\\_=baacc81bfff727d4189fdcf9b29c2919371a5534-1577404709-0-AZu2SkGXaNRHvMOMSTHebgYT5scvZeZGzpcqJ0ptLG0VkB\\_gElWwX6VAJ6xqhel7YzGCi5YWwLLX8of8HeHnzylH7Nva9\\_aT](https://www.europeanbusinessreview.com/design-thinking-as-a-strategy-for-innovation/?__cf_chl_jschl_tk__=baacc81bfff727d4189fdcf9b29c2919371a5534-1577404709-0-AZu2SkGXaNRHvMOMSTHebgYT5scvZeZGzpcqJ0ptLG0VkB_gElWwX6VAJ6xqhel7YzGCi5YWwLLX8of8HeHnzylH7Nva9_aT)
- Paterson, L. (2019, July). Interview with Lucie Paterson, Head of Experience, Product & Digital at the Australian Centre for the Moving Image (ACMI). (H. Eid, Interviewer).
- Pfizer. (n.d.). Culture matters: Building on our OWNIT! culture. [https://www.pfizer.com/files/investors/financial\\_reports/annual\\_reports/2014/business\\_colleagues.htm](https://www.pfizer.com/files/investors/financial_reports/annual_reports/2014/business_colleagues.htm)
- Schmitt. (2016, October 7). Reinventing R&D for the age of innovation. *Inovo*. <https://www.theinovogroup.com/reinventing-rd-for-the-age-of-innovation/>
- Serong, A. (2016, 30 May). An open source museum audio guide. *Medium*. <https://labs.acmi.net.au/an-open-source-static-museum-audio-guide-4c5cd83dbdcb>
- Silvers, D. M., Wilson, M. W., & Rogers, M. (2013). Design thinking for visitor engagement: Tackling one museum’s big challenge through human-centered design. *Museums and the Web 2013*. Portland, OR. <https://mw2013.museumsandtheweb.com/paper/design-thinking/>

- Stuedahl, D. (2018). Participation in design and changing practices of museum development. In K. Drotner, V. Dziekan, R. Parry, & K. C. Schroder (Eds.), *The Routledge handbook of museums, media and communication*. Routledge.
- The Center for Social Innovation. (n.d.). Defining social innovation. <https://www.gsb.stanford.edu/faculty-research/centers-initiatives/csi/defining-social-innovation>
- Visser, J. (2017). The museum as center for social innovation. *History News*, 72(1), pp. 9–13. <https://visschstan.com/files/2017-07/visser-with-cover-toc.pdf>
- Walter, M. (2014). Interview with Micah Walter, Digital & Emerging Media Department at Cooper Hewitt, Smithsonian Design Museum. (H. Eid, Interviewer).

## **PART III**

# Users



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# 9

## EXHIBITIONS AS A COLLABORATIVE RESEARCH SPACE FOR UNIVERSITY-MUSEUM PARTNERSHIPS

*Palmyre Pierroux, Birgitte Sauge, and Rolf Steier*

Collaboration between partners in universities and museums is increasingly viewed as an important means of demonstrating the societal relevance of both research and practice in the GLAM sector (galleries, libraries, archives and museums). Recent studies have shown the significance of university-museum research collaborations in the context of advancing visitors' cognitive development in museum settings (Sobel & Lipson, 2016), fostering the democratisation of knowledge through citizen projects in archives (Hetland et al., 2020), and producing novel experiences of art, science and cultural heritage through the co-design of innovative exhibition technologies in galleries (Drotner et al., 2019; Kenderdine, 2020). Approaches to modelling and implementing such partnerships has thus emerged as a topic in museum studies, with experimental museology conceptualised as mutually beneficial alignments between professional practices and academic discourses, balancing both museum curators and university researchers' interests and contributions.

A particular challenge in experimental museology, as we see it, is identifying and supporting partners' different aims and motivations as these unfold during various phases of a university-museum research collaboration. In her review of university-museum collaborations, Gaskins (2016) identified differing priorities, time frames, interaction styles and tensions in reconciling the implications and communication of research findings as sources of potential cultural conflicts. In museums, for example, directors, curators and educators may participate in research projects with universities to prioritise building new audiences, enhancing the quality of visitor experiences, developing visitors' knowledge, and advancing academic insights and professional expertise that keep their institutions relevant (Simon, 2016). In universities, researchers prioritise museums as powerful settings for studying informal learning (Sobel & Lipson, 2016), but also an ideal space for developing theoretical concepts of embodied experience and meaning-making in the domains of science, art, architecture and other forms of cultural heritage

(Christidou & Pierroux, 2019; Leister et al., 2018; Steier, 2014; Tzortzi, 2015). In other words, expectations, tensions and interests among university–museum partners in research projects do not necessarily match but may nonetheless be negotiated.

In this chapter, we use three decision events from a design-based research project as rich illustrations of how trade-offs and benefits were negotiated and viewed by the respective partners, namely, two researchers at a university (first and third authors) and a curator in an architecture museum (second author). The aim of the chapter is to describe and analyse how our respective research and practice interests emerged, became foregrounded and overlapped over the course of nine months, in the design of an exhibition experiment at a national architecture museum. We present an analysis of these decisions and their implications for the research project from both museum and university perspectives. Based on the analysis we conclude that the decisions formed a collaborative research space that was owned by neither university nor museum but instead required a dynamic researcher positionality to shift between three research lenses. Moreover, as a collaborative exercise in critical reflexivity, the chapter demonstrates an equitable approach to identifying key dynamics of productive university–museum research collaborations. In conversation with perspectives on experimental museology, the following questions are investigated: what constitutes a collaborative research space in experimental museology? How do decision events in a design process shape – and become shaped by – collaborative research dimensions?

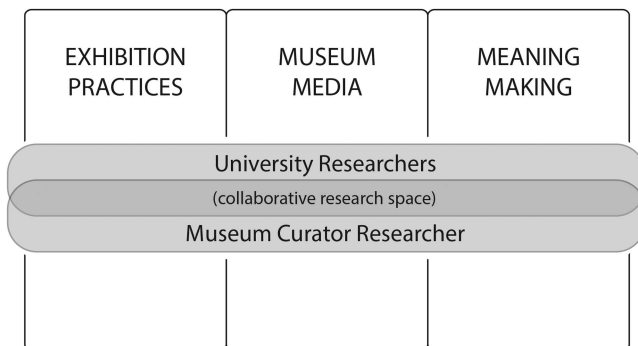
## Research lenses

The project was organised to accommodate the different, but overlapping interests of project partners coming from different research traditions. Overall, there were shared interests in digital media and new knowledge practices in museums, and in exploring the communicative potential of virtual reality and immersive environments in architecture exhibitions (Kenderdine, 2020; White & Chen, 2020). These interests stem from what has been identified as a gap between, on the one hand, contemporary ‘born digital’ architecture that is designed using virtual reality modelling and a realm of digital as well as analogue tools (Pierroux et al., 2019; Sauge, 2019), and on the other hand, architecture exhibition practices, which in museums still largely rely on the display of conventional analogue objects and representations like models, drawings and photos (Pierroux et al., 2019). This gap served as foreground for the curator’s research interests and also framed the overall project aims: to explore new *exhibition practices* (Sauge, 2018a, 2018b, 2019) and how virtual reality might be designed and used to provide and enhance multi-sensory architectural experiences in museum exhibitions. The curator brought to the partnership both her research expertise as architectural historian and her practice expertise as senior curator at a national architecture museum. The university researchers’ interests in the project centred on concepts of embodiment in meaning-making (Steier, 2014; Steier & Kersting, 2019; Steier et al., 2015) and

particularly in virtual and immersive environments. The university researchers' interests in the project centred on concepts of embodiment and how meaning-making is accomplished through interactions in virtual and immersive environments (Steier, 2014; Steier & Kersting, 2019; Steier et al., 2015).

In addition to this research team, a curator colleague from the museum who specialised in education and digital media was a formal participant in the project, contributing a practice perspective on visitor studies. Other professionals formally engaged in the study included a lead architect at a prominent architectural firm, a virtual reality developer and a soundscape developer. The architect partner viewed the collaboration as an opportunity to build on earlier works commissioned for exhibitions and to explore disciplinary interests in body-nature relationships in architectural design. The architect's motivation in this study was to inspire visitors to think about how spaces formed in nature may be similarly experienced in architecture, heightening visitors' awareness of the body's dimensions and functions also when moving through *virtual* 'nature' and 'built' environments. The soundscape and VR developers' interests were more specialised in terms of technical issues, but were similarly focussed on how to enhance visitors' multisensory experiences through *museum media* design. While each of these partners brought their respective research interests into the collaboration, our focus is on the formal university-museum research partnership.

In keeping with the partners' interests described above, three research lenses were identified at the beginning of the project: exhibition practices, museum media and meaning-making. Each lens comprises a specific field of inquiry, and distinct sets of aims and questions were discussed, formulated and updated by all team members in a collaborative process that resulted in a shared living document. This document informed design decisions for the exhibition experiment but also aimed to guide research – both discipline-specific and interdisciplinary – that could advance practice in the different fields (Figure 9.1). During the design process, then, as key decisions were made by the team, the researchers purposefully drew on and traversed these three lenses in a 'collaborative research space' (Freeth



**FIGURE 9.1** Research lenses in university-museum partnership.



& Caniglia, 2020) that was created and maintained through a ‘self-consciously interdisciplinary practice’ (Fitzgerald et al., 2012, p. 11). Specifically, the collaborative research space was defined by similar epistemic interests in how architectural environments may be modelled for museum exhibitions using virtual reality, in ways that foster visitors’ experiential knowledge and embodied understandings of architecture. The project culminated in a full-scale ‘blended reality’ exhibition experience in an architecture museum and five weeks of visitor studies.

## **Design-based approaches and collaborative research**

Research collaborations between universities and museums are often organised using some form of design-based approach, particularly when new technologies or learning activities are introduced and studied in exhibitions and galleries (Pavement, 2019; Samis, 2019; Stuedahl, 2019). There are different paradigms of design-based research in museums, each of which has ‘professional theories’ (vom Lehn et al., 2020) about visitor experience, design processes and the involvement of participants as collaborators. Design-based approaches and professional theories thus become critical tools and resources for partners during the imagining, planning and implementation of exhibitions (vom Lehn et al., 2020). Below we describe the design-based approaches within each research lens that were relevant for the partner collaboration.

### ***Exhibition practices and design-based research***

Changing exhibition practices and ensuing interests in how these may entail ‘remodelling the museum as an institution’ (Bjerregaard, 2020, p. 12) constitute the first paradigm of design-based research. In several early studies, both museum insider (Roberts, 1997), and embedded university outsider (Macdonald, 2002) positions were adopted to study how decisions were made among teams of museum staff and consultants in exhibition design processes. Both are ethnographic studies, illuminating how design decisions about exhibition components (for example, an exhibition’s content, representations and resources) were negotiated by an exhibit team to incorporate the interests of different stakeholders, disciplinary knowledge and new types of expertise. Ethnographic approaches include the voices and actions of the collaborators and allow for unpacking the ‘belief systems, behaviours, and relationships of the exhibit team’ (Roberts, 1997, p. 10). More interventionist methods have also been used to study change in exhibition practices, for example, by introducing new arenas for visitor participation in rethinking the design of activities, resources and the role of museums (Pringle, 2019).

According to Kenderdine (2020), the GLAM sector (galleries, libraries, archives and museums) is renewing research interests in ‘the role of the museum as a site in which knowledge processes take place and are interrogated’ (Kenderdine, 2020, p. 306). In the past decade or so, for example, exhibition practices have been

explored as experiments and reflexive tools for museum curators and academics within the museum (Bjerregaard, 2020; Macdonald & Basu, 2007). Here, exhibition making processes are made visible to consciously question concepts and practices of representation, narrativity and experience, among other topics (Basu & Macdonald, 2007), with ‘a focus on the capacity of exhibitions to generate research in and through themselves’ (Bjerregaard, 2020, p. 1). In Norway, the turn to questioning expertise and meaning-making within their own museums based on reflexive studies of exhibition design practices has been termed by university museum researchers as ‘the new knowledge production’ (Maurstad & Hauan, 2012). A characteristic of this design-based approach is that it focuses on processes and questions other than those posed by ‘research in the conventional sense of the term: systematic data gathering and careful observation and analysis in order to test a hypothesis’ (Bjerregaard, 2020, p. 12). The project discussed in this chapter thus differed from the ‘exhibitions as research’ concept outlined by Bjerregaard (2020) because it included both ‘conventional’ research methods and a multi-professional collaboration that incorporated both insider and outsider researcher roles. Charting how a collaborative design-based research space figures into the territory of this ‘new knowledge production’ is one of the challenges explicitly addressed in the project and in this chapter, that is, to understand how the concept of ‘exhibitions as research’ may be stretched across epistemic interests, partner relations and institutional practices.

We nonetheless share Bjerregaard’s acknowledgement of institutional challenges in implementing ‘the kind of experimental museology that seems to emerge from this approach’ (Bjerregaard, 2020, p. 1). Bjerregaard points to potential tensions when museum business models, with an emphasis on efficiency, need to ‘accommodate these unpredictable processes within the larger ‘museum machinery,’ noting that ‘if we want to turn exhibitions into research, the exhibition will not progress according to the most efficient plan, but according to the curiosity and serendipity involved in *finding out*.... It is, in practice, a re-modelling of the museum as an institution’ (Bjerregaard, 2020, p. 12). In sum, design-based approaches to studies of exhibition practices may adopt or move between insider and outsider researcher positions; to understand how knowledge is produced and represented, but also to critically examine how exhibition practices shape – and are shaped by – the museum as an institution.

### ***Museum media and design-based research***

Second, as part of larger trends and developments in museum media research (Drotner & Schröder, 2013; Drotner et al., 2019; Parry, 2010), it is possible to identify user-centred design methods from informatics and computer science (Hornecker & Ciolfi, 2019), which foreground studies of technological development and the social and biological mechanisms of information processing. In general, these design-based approaches are future-oriented (Vavoula & Sharples, 2007), focussed on how technologies may be designed for users’ real and

envisioned needs and behaviours in museum settings. In human–computer information (HCI) studies in museums, it has not been unusual for prototypes to be developed and tested by university researchers with limited participation of museum staff or visitors, with publications reporting on design rationales, evaluation outcomes and insights regarding design features (Hanlee, 2020; Hornecker & Ciolfi, 2019). Although the value of such experimentation with digital media is debatable in terms of innovation in museum practices (Hornecker & Ciolfi, 2019; Pavement, 2019; Samis, 2019), it is clear that technology-oriented research, carried out over decades in museum settings, has been instrumental in shaping museum mediascapes as they are experienced today, in the digital age (Hornecker & Ciolfi, 2019; Kidd, 2014; Parry, 2007; 2010).

Significantly, increased collaboration between museum staff and university researchers in design processes has been key to the transformational impact of this research, playing a role in some museums becoming early adopters of new museum media (Freeman et al., 2016; Samis, 2019). As noted by Knell over a decade ago: ‘The opportunities provided by technology have developed so rapidly and become so pervasive that these workers are beginning to emerge from their backroom documentation projects to join up with academic researchers from leading university computer science departments, in order to construct a roadmap that will take museums into the future’ (Knell, 2010, pp. 445–46). University–museum research partnerships (Kenderdine, 2020), participatory design methods involving visitors and stakeholders (Simon, 2010) and more recent trends of do-it-yourself (DIY) approaches to exhibition design and research (Ecsite, 2018) may thus be viewed as emerging, in part, from such early ‘joining up’ practices. This tradition of research on new museum technologies nonetheless remains focused on experiments with clear criteria for design and the evaluation of outcomes rather than the transformative expansion of museum practices.

### ***Meaning-making and design-based research***

A third paradigm of design-based approaches is seen in areas of research that focus on meaning-making in museums, as part of a wider interpretive endeavour in audience engagement. In studies anchored in the learning sciences, such methodological approaches are referred to as educational design research (EDR) (Anderson & Shattuck, 2012; Barab & Squire, 2004; McKenney & Reeves, 2018). Beginning in the early 1990s (Brown, 1992) and based on theories in developmental psychology (Vygotsky, 1978; 1981), researchers argued the need for studies of learning activity in actual contexts and natural settings. In contrast to academic laboratory settings, this approach emphasised the design of iterative interventions – planned changes – in existing practices (for example, introducing new digital resources or instructional designs in classrooms) to study their impact on learning processes and subsequently identify how practices could be improved.

In museum-related learning research, EDR has emphasised the participation of museum staff and visitors in design processes. For researchers, a participatory design

process provides deeper understandings of the complexities of meaning-making practices in the specific museum setting (Simon, 2010; Smørdal et al., 2014; Stuedahl, 2019). In science centres, for example, researchers have collaborated on exhibit designs with museum staff to then systematically study how families, young people, students and children learn conceptual knowledge or use evidence to reason about scientific phenomena (Bakken & Pierroux, 2015; Krange et al., 2019; Sobel & Lipson, 2016). Changes are made to the exhibits based on findings and new conjectures, in an iterative collaborative design process that is informed by both research and practice. In art and cultural heritage museums, researchers and curators have similarly collaborated with other experts on exhibit designs that facilitate visitors' interpretation and meaning-making, with researchers systematically studying visitors' embodied, multi-sensory and social interactions to advance learning theory (Steier, 2014; Steier et al., 2015), and curators then integrating findings in the design of new interpretive practices (Pierroux et al., 2014). In this study, EDR methods were used to understand how features of the museum setting, including embodied, social interactions in a blended reality environment, mediated visitors' experiences and understandings of architecture.

Together, these three paradigms of design-based approaches to research in museums, exhibition practices, museum media and meaning-making, each with distinct traditions of involving research collaborators, comprised the collaborative research space for this study. Therefore, an important challenge for the university-museum research team was practicing what Freeth and Vilsmaier (2020) call a dynamic researcher positionality to shift between these three research lenses, assuming insider and outsider roles at different moments during the design of the exhibition experiment.

## Analytical approach

The analytical approach in this study is based on critical-reflexive analyses of our respective university-museum research practices (Freeth & Vilsmaier, 2020; Gaskins, 2016; Phillips et al., 2013), linking researcher positionality to empirically rich descriptions of decision events in the design of the exhibition components. The term *decision event* is used to highlight the temporal, collaborative aspects of negotiating the design and implementation of exhibition components. An 'event' in this sense is not a precise moment in time but describes the trajectory and consequences of a particular team decision. Based on notes, documents and recordings of project meetings, three narratives are presented to demonstrate how decisions regarding key exhibition components foregrounded a particular research lens, to describe how differences in knowledge interests were tackled in relations between researchers and partners, and to consider the implications these may have had for the knowledge that was co-produced (Phillips et al., 2013). In keeping with Roberts' (1997) critical-reflexive approach, each narrative begins with a close look at one exhibition component, presenting an account of its initial design or idea and the debates surrounding its development. The narrative identifies points

of agreement, contention and debate that emerged in the collaborative research space, but also illustrates design issues relevant to each research lens: exhibition practices, museum media and meaning-making.

### ***Research lens: exhibition practices***

The first decision event is viewed from a research lens on exhibition practices, specifically, the selection of the exhibition space. The team initially planned the research as a series of iterative experiments in a small, concrete, curtained space (10 m<sup>2</sup>) that was somewhat secluded and available in the architecture museum. From the museum curator perspective, the limited size of the initial room was seen as positive in the sense that the design of physical elements would not demand great effort from the museum's own staff and it would be possible to realise within the project's budget. The black box character was also considered appropriate for the use of VR, since architectural qualities were envisioned as being experienced primarily within a designed virtual environment, through a headset. From the university researchers' perspective, an important affordance of this inconspicuous space in the museum was the temporal dimension associated with design-based research, which requires iterative cycles of development and refinement. The plan was to develop prototypes and iterations of the exhibition onsite for a period of several months, with the exhibition space closed off for development work and then opened periodically to invite visitors into the space for empirical studies. However, drawbacks of the space were noted by the team as well. The high walls were concrete, covered with black curtains, and the space had two openings without doors. These features had implications for the room's acoustics and would be a challenge for planned experiments with sound. The limited floor space (10 m<sup>2</sup>) also constrained the number and size of physical elements that could be included in the experiment, particularly important to the architect. There were curatorial concerns as well, in terms of how the planned use might intervene in the experience of the larger adjacent exhibition. Finally, there would be little space for a video camera to use in visitor studies, and not much room for participants other than the person wearing the VR headset.

About two months into the nine-month design process, the curator presented to the team a new option of using the museum's large and most prominent gallery space (100 m<sup>2</sup>), designed by the prominent Norwegian architect Sverre Fehn for the exhibition experiment (Figure 9.2). A gap had become available in the museum's exhibition program that would allow use of the Fehn gallery, and the curator had negotiated with museum leadership for an extended exhibition period that allowed for the visitor research. For the curator, and for the architect, the new space represented an opportunity to design a comprehensive exhibition installation with spatial and aesthetic qualities, accompanied by information to the public (e.g., newspaper announcements, press, signage in the exhibition). From her perspective, a realistic and interesting exhibition situation could be created rather than a 'laboratory for experiments' that had no specific architectural qualities in itself.



**FIGURE 9.2** Exhibition experiment in Fehn gallery. Photo courtesy of Nasjonalmuseet.

A focus on content – the disciplinary architectural perspective/framing that is the basis for all exhibitions in an architecture museum – could thus be upheld. The exhibition installation could include elements that were thoughtful, thoroughly designed, and well composed, in a space that stirred visitors' curiosity and also allowed them to experience Fehn's architecture. These are qualities that the curator values and wants architecture exhibitions to have. From her perspective, the architect would also have greater opportunity to explore how his firm's work could be communicated in exhibition media, which she was interested in as a researcher.

For the university researchers, moving the exhibition to the larger space was a clear demonstration of museum support for the project, validating the research partnership. Increased space would also allow for the design of a greater range of sensory experiences, primarily by incorporating more movement and sound. However, moving the exhibition from a more secluded area to such a prominent location had implications for how the project would be perceived by visitors, with higher expectations for the quality of the experience and the robustness of the technology and other features. Such high expectations run counter to the more experimental nature of an educational design research project, which asks visitors to not focus on an unfinished structure or handwritten note, but instead imagine what the experience could be like. Therefore, instead of inviting small groups of visitors into the space periodically over several months to iteratively research and design exhibition components, the testing of components was conducted at the architecture studio with recruited participants. Ultimately, since it was assumed that the new location would attract a larger audience than initially planned, an 'experimental' framing was preserved by using texts and announcements explaining to visitors that the exhibition was part of a research project and that

visitors' experiences would be asked to complete a questionnaire after their visit. Another consequence of the change in venue was that plans for collecting video data and interviews using recruited participants were condensed to an intense five-day period just prior to the public opening of the exhibition. A discussion of findings from these visitor studies is outside the scope of this chapter.

The change of venue decision event meant that university researchers needed to compromise on the EDR method of iterative experimentation. Although the exhibition was presented as an experiment to the recruited participants and the general public, it was in the form of a finished experiment rather than interventions based on incremental changes and revised conjectures (McKenney & Reeves, 2018). While the curator acknowledged that the exhibition could no longer be conceptualised as a 'laboratory for experiments,' this concession was in her view offset by the advantages of being able to design an exhibition with the same kind of professional attention to aesthetics and disciplinary content that curators, visitors and colleagues value and expect from a museum, and would ultimately contribute to the quality of data collected during visitor studies. The curator's disciplinary interests in architecture, digital media and representation in exhibition practices were clearly foregrounded in this decision, aligned more with 'exhibition as research' traditions *within* the museum (Bjerregaard, 2020) that are oriented to the development of the curator's academic discipline (Brenna, 2012). The decision event, for example, afforded the curator close dialogue with the architect partner during the design process about the development of architectural concepts, including spatial and structural considerations. This type of insight represented crucial knowledge for her, both as architecture historian and as curator interested in contemporary architecture exhibition practices. However, by also championing the university researchers' use of 'conventional research methods' (Bjerregaard, 2020) to study visitors in a prominent exhibition space, the collaborative research space became anchored within the museum as well, as a new experimental museology practice. In sum, there was shared acceptance among university and museum research partners of the respective trade-offs, even while these were valued somewhat differently; the collaborative research space accommodated the negotiation of a dynamic researcher positionality (Freeth & Vilsmaier, 2020).

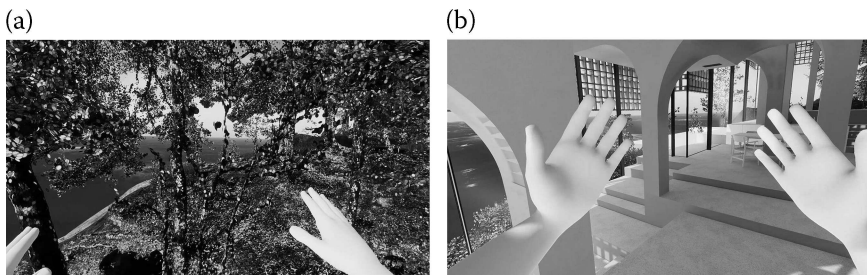
### **Research lens: museum media**

The second decision event is viewed from a research lens on museum media and consisted of a commitment to experiment with visitors wearing tracking sensors in the exhibition design. Previous use of VR technology by our architect partner relied on clients teleporting through an architectural model by clicking a button on a controller. Based on demonstrations and the expertise of the VR developer on staff at the architectural firm's office, the team was introduced to the idea of tracking motion and movement in the exhibition setting using sensors attached to the body. The technology, though new and mostly untried in Norway, would enable greater interaction with physical objects while in the virtual environment,

such as sitting in a chair or navigating steps, as well as allow for movement and a broader range of sensory experiences. The decision was risky, however, in terms of time needed for procuring equipment, designing visualisations, testing tracking quality, precision and robustness and coordinating design issues with the architect and sound developer.

From the curator's perspective, incorporating movement in the blended reality exhibition would enhance the physical, multisensorial and temporal experience of real architectural space, and was seen as the most relevant way of breaking with existing temporal and perceptual experiences of architecture in exhibitions, whether moving between displays of objects, two-dimensional materials or 1:1 models of building details. Neither should the visitor experience be based on walking, standing, or turning on a flat floor in a  $4 \times 4 \text{ m}^2$  space while clicking a handheld device to move through virtual realities, as this may be seen as merely extending a visually based experience. Instead, the design should be in line with the architect's philosophy about the body's memory and corporeal experience of architecture, which could only be realised in a full-scale and fully immersive installation. The use of sensors, mounted on feet and waist and connected by a tracking module in the ceiling, was thus crucial for realising the envisioned design, correlating the experience of the physical setting in which the visitors moved (Figure 9.2) with the two virtual worlds, nature and architecture (Figure 9.3), that the visitors saw and heard in the headset, 'toggling' between them using a handheld controller. The architect saw the possibility of aligning 1:1 models of these two virtual realities by simplifying and abstracting some forms while exactly matching other contours for navigation and conceptual purposes. Exact correlation between these virtual contexts and the built environment was also essential, both for the safe physical navigation of the exhibition and for an optimal understanding of the nature/architecture relations that one toggled between.

From the university researchers' perspective, the opportunity to introduce mobility through motion-tracking sensors created an exciting opportunity to include movement and embodied experience in the empirical agenda of the study. Inviting visitor movement and exploration in a bended reality setting meant a potential contribution to embodiment research in museum contexts, as well as to



**FIGURE 9.3** Virtual views of nature (left) and architecture (right) as seen in headset, from same physical orientation.



newer studies of movement, touch and gesture in the learning sciences. A consequence of this decision event for the university researchers was including a focus on movement and mobility in the research questions and in the survey and interview questions that were posed to visitors.

The decision event to use sensor-tracking technology was thus central to interests of both research partners, and the narratives above highlight how these interests stem from and relate to different disciplinary traditions in interesting ways. The study of embodiment and movement in museum exhibitions, from a learning science perspective, is linked to explorations of how bodily orientations and gestures figure into processes that foster intersubjectivity, joint attention and meaning-making in virtual and physical environments. Contemporary architecture theory explores how human experience and understanding of architecture is intertwined with movement and all of the senses, through the body's memory and corporeal experience of place and being in the world (Pallasmaa, 2005). In this sense, the museum media research lens, which introduced qualitatively new types of interactions with architecture, was perhaps most crucial in creating the kind of fruitful interdisciplinary collaborative research space that all partners aim for when collaborating across institutions, enriching and expanding respective disciplinary ideas, methods and traditions. However, the researchers also had to largely rely on the technology experts and architect partner for the design of the museum media exhibition components and thus a significant part of the visitor experience. Consequently, the division of labor in the design of this exhibition component was more clear cut than collaboration on other components; there was not a strong overlap of skills for this specialised work. In a museum media research lens that foregrounds technical and technology-oriented design work, both university and museum researchers assumed a more limited collaborative role, involved mainly in testing and evaluating (Hornecker & Ciolfi, 2019).

### **Research lens: meaning-making**

The third decision event is viewed from a research lens on meaning-making and the agreement among partners to design a virtual reality visitor experience that was social, interactive and sharable. The decision about this exhibition component is not neatly identifiable in terms of a specific point in time, but was a gradual development over the course of conceptual work related to the design. The architect presented his interests in body-space relationships in terms of how individuals experience their surroundings through movement, and this individual focus naturally carried over into the team's initial design discussions. However, the university researchers emphasised the importance of a sociocultural perspective on meaning-making and were thus interested in how the exhibition could be designed to address the problem of how to allow visitors to share and develop interpretations, understandings and reflections through talk and social interaction during VR experiences in museums (see for example Parker & Saker, 2020). For this reason, it was agreed that the design of the exhibition experience would be based on visitor pairs.

Moreover, in designing the empirical studies, the university researchers aimed to collect rich data about visitor experiences, including reflections after their visit but most importantly their in-the-moment experiences of being in the blended reality environment. Accordingly, the decision to design the experience as social meant that pairs of visitors would be able to discuss their experiences with each other as they took turns exploring the space. From an empirical perspective, visitor talk would thus be visible (hearable) to the researchers, and could be recorded using video cameras and analysed as data. The outcome of this decision event was an exhibition experience that required two visitors, alternating between roles as viewer and as companion. As mentioned, analyses of the visitors' meaning-making is not in focus in this chapter.

On the museum's side, there was support for designing a social experience since the museum had data that visitors overwhelmingly visit with friends or family – the museum visit was a social activity. There was also a general interest in collecting research data on how visitors experience architecture exhibitions. The museum had previously conducted a smaller study based on interviews with randomly selected visitors in the permanent exhibition and viewed the research collaboration as an opportunity to collect a completely different type of dataset – observations, recordings, interviews, questionnaire responses and VR tracking recordings. To accommodate meaning-making research interests in both institutions, the university researchers worked closely with the education curator at the museum to develop a questionnaire for all visitors. The 22 questions were formulated to provide data relevant to each of the three research lenses and particularly to be relevant for museum practice. Questions that asked visitors to evaluate their exhibition experiences as pairs, their understanding of the content and whether they would recommend the exhibition to a friend are examples of how the museum's practice-based interests were accounted for in the data collection (Biuo, 2020).

For the university researcher, this decision event involved taking a theoretical stance that ensured relevant data for publishing research articles based on studies from the exhibition experiment. For the curator, there was a belief that the data was important for answering questions the museum is asking itself: who is the audience of exhibitions in architecture museums in the twenty-first century? And how do we engage these audiences? Therefore, the involvement of the education curator was crucial to maintaining meaning-making as a research lens that was relevant for both museum and university partners. In addition to participating in the planning and implementation of the questionnaire, she did much of the work to recruit participants with different types of architectural and VR expertise, different ages and different genders for the video-recorded visits and interviews that were led by the university researcher. She also participated in planning the visitor experience, hiring and training museum facilitators, for example, who familiarised visitors with the VR equipment and monitored their visit.

The decision event for this exhibition component, as with the others, had practical and technical design implications for all of the partners. Companions, for

example, meant that visitors could feel safe moving around the installation without being concerned about tripping on cables or stumbling because of a potential misalignment between the virtual and physical scenes. This safety aspect meant that visitors within the VR scene could be more fully immersed in the environment, trusting that their partner would stop them from bumping into a wall or falling off a step. A soundscape design that was both a shared experience (ambient sounds projected through exhibition speakers) and an individual experience (additional sounds in open headset) and the installation of a large screen to share a viewer's virtual experience (Figure 9.2) are further examples of how foregrounding one partner's research interests – here, the university partner – raises a range of research and design issues for other partners.

### ***To sum up***

A premise of experimental museology is that museums will achieve greater societal relevance through closer alignments between professional practices and academic discourses in research production. In this chapter, these alignments were explored across institutions, as researchers and professionals from a museum and a university collaborated on an exhibition experiment in an architecture museum. As a case study of experimental museology, the project proved beneficial and relevant for visitors, museums and society in different ways. First, in terms of new research-based practices, the national museum involved visitors in a new exhibition practice – an exhibition experiment contributing to policy aims for greater openness, access and visitor participation in museum practices. Reviews in national newspapers and magazines were particularly positive to involving the public in a research experiment in the museum (see for example Henriksen, 2018). The architecture firm developed new professional practices related to the use of VR in design work for public buildings, architecture exhibitions and other commissions, as well as new perspectives on involving 'users' in shaping and evaluating the firm's architectural projects. Second, in terms of innovation, the project produced a new creative use of tracking sensor technology as museum media in architecture exhibitions, contributing to qualitatively new experiences of the body's movement through nature and architecture and new understandings of the relations between them. Based on the curator's international network and a conference presentation of the 'co-production' approach in this project (Sauge, 2018c), the architecture firm and the museum were invited to further develop the experiment as a work to be shown in a new exhibition titled 'The architecture machine: The role of computers in architecture' at the Architekturmuseum der Technische Universität München in the autumn 2020. A proposal is also underway for acquiring the exhibition experiment as a 'work' for the national museum's permanent collection. Third, the empirical studies, still underway, have contributed new insights into visitors' interactions and meaning-making in blended reality environments, among other topics (Biuso, 2020; Pierroux et al., 2019; Sauge, 2018b; Steier, 2020). In these very concrete ways, then, the case demonstrates the potential and value of experimental museology for transforming

institutional and professional practices, developing innovative tools and media, and contributing new research to an interdisciplinary field.

This chapter also contributes to studies of how collaboration on exhibition designs is accomplished by teams with members from museums, universities and firms. Based on our own participation in such a team, we have demonstrated how decision events in a design process shape – and become shaped by – different partner interests. To analyse the research process, we introduced the concept of a collaborative research space to describe partner relations and differing knowledge interests, emphasising the need for a ‘dynamic researcher positionality’ (Freeth & Vilsmaier, 2020). A collaborative research space challenges long traditions of research *on* museums and museum practises as the domain of university academics and not a relevant topic of study for curators. It also breaks with traditions of curators conducting research *within* the museum on topics related to their fields of specialisation, the collections, or their own exhibition practices. Although these traditions share interests in experimenting with collaboration, design-based methods and exhibition research, an experimental museology also requires, in our view, a critical-reflexive practice for analysing differing knowledge interests among partners and how these may impact the knowledge that is produced. Finally, as an extension of the collaborative research space described in this study, the narratives above also represent an exercise in ‘collaborative critical reflexivity.’ In this sense, this chapter serves as both discussion – and product – of an experimental museology.

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## Bibliography

- Anderson, T., & Shattuck, J. (2012). Design-based research: A decade of progress in education research?, *Educational Researcher*, 41(1), 16–25.
- Bakken, S. M., & Pierroux, P. (2015). Framing a topic: Mobile video tasks in museum learning. *Learning, Culture and Social Interaction*, 5, 54–65.
- Barab, S. A., & Squire, K. D. (2004). Design-based research: Putting a stake in the ground. *Journal of the Learning Sciences*, 13(1), 1–14.
- Basu, P., & Macdonald, S. (2007). Introduction: Experiments in exhibition, ethnography, art and science. In S. Macdonald & P. Basu (Eds.), *Exhibition experiments* (pp. 1–24). Blackwell.

- Biuso, E. (2020). *Space, place and presence in a virtual architecture exhibition*. (Unpublished master's thesis). University of Oslo, Norway.
- Bjerregaard, P. (2020). Introduction: Exhibitions as research. In P. Bjerregaard (Ed.), *Exhibitions as research: Experimental methods in museums* (pp. 1–16). Routledge.
- Brenna, B. (2012). Gjort er gjort: Universitetsmuseene post factum [Done is done: The university museums post factum]. In A. Maurstad & M. A. Hauan (Eds.), *Museologi på norsk: Universitetsmuseenes gjøren* [Museology in Norwegian: The university museums' practices] (pp. 231–237). Akademika.
- Brown, A. L. (1992). Design experiments: Theoretical and methodological challenges in creating complex interventions in classroom settings. *Journal of the Learning Sciences*, 2(2), 141–178.
- Christidou, D., & Pierroux, P. (2019). Art, touch and meaning making: An analysis of multisensory interpretation in the museum. *Museum Management and Curatorship*, 34(1), 96–115.
- Drotner, K., & Schröder, K. (Eds.). (2013). *Museum communication and social media: The connected museum*. Routledge.
- Drotner, K., Dziekan, V., Parry, R., & Schröder, K. C. (2019). Media, mediatization and museums: A new ensemble. In K. Drotner, V. Dziekan, R. Parry, & K. C. Schröder (Eds.), *The Routledge handbook of museums, media and communication* (pp. 1–12). Routledge.
- Ecsite. (2018). *SPARKS capture learning report*. [https://www.ecsite.eu/sites/default/files/d4\\_3\\_sparks\\_capture\\_learning\\_report\\_final\\_0.pdf](https://www.ecsite.eu/sites/default/files/d4_3_sparks_capture_learning_report_final_0.pdf)
- Fitzgerald, D., Brunner, E., Koellinger, P., & Navarro, A. (2012). 'The good, the bad and the ugly': *Understanding collaboration between the social sciences and the life sciences*. Strategic Workshop Report. Standing Committee for the Social Sciences. [http://archives.esf.org/fileadmin/links/Social/Publications/TheGoodThe\\_BadTheUgly.pdf](http://archives.esf.org/fileadmin/links/Social/Publications/TheGoodThe_BadTheUgly.pdf)
- Freeman, A., Adams Becker, S., Cummins, M., McKelroy, E., Giesinger, C., & Yuhnke, B. (2016). *NMC Horizon report: 2016 museum edition*. The New Media Consortium. <https://www.learntechlib.org/p/182007/>
- Freeth, R., & Vilsmaier, U. (2020). Researching collaborative interdisciplinary teams: Practices and principles for navigating researcher positionality. *Science and Technology Studies*, 15, 247–261.
- Freeth, R., & Caniglia, G. (2020). Learning to collaborate while collaborating: Advancing interdisciplinary sustainability research. *Sustainability science*, 15(1), 247–261.
- Gaskins, S. (2016). Collaboration is a two-way street. In D. Sobel & J. L. Lipson (Eds.), *Cognitive development in museum settings: Relating research and practice* (pp. 151–170). Routledge.
- Hanlee, I. (2020). Human-centred design in digital media. In H. Lewi, W. Smith, D. vom Lehn, & S. Cooke (Eds.), *The Routledge international handbook of new digital practices in galleries, libraries, archives, museums and heritage sites* (pp. 319–325). Routledge.
- Henriksen, A. (2018, 21 February). Slik blir fremtidens museumstur [The museum visit of the future], *Aftenposten*. <https://www.aftenposten.no/osloby/i/rLdL5w/Slik-blir-fremtidens-museumstur>
- Hetland, P., Pierroux, P., & Esborg, L. (Eds.). (2020). *A history of participation in museums and archives: Traversing citizen science and citizen humanities*. Routledge.
- Hornecker, E., & Ciolfi, L. (2019). Human-computer interactions in museums. *Synthesis lectures on human-centered informatics*, 12(2), i–171.
- Kenderdine, S. (2020). Hemispheres: Transdisciplinary architectures and museum-university collaboration. In H. Lewi, W. Smith, D. vom Lehn, & S. Cooke (Eds.), *The*

- Routledge international handbook of new digital practices in galleries, libraries, archives, museums and heritage sites* (pp. 305–318). Routledge.
- Kidd, J. (2014). *Museums in the new mediascape: Transmedia, participation, ethics*. Ashgate.
- Knell, S. J. (2010). The shape of things to come: Museums in the technological landscape. In: R. Parry (Ed.), *Museums in a digital age* (pp. 445–463). Routledge.
- Krange, I., Silseth, K., & Pierroux, P. (2019). Peers, teachers and guides: A study of three conditions for scaffolding conceptual learning in science centers. *Cultural Studies of Science Education*, 15(1), 241–263.
- Leister, W., Tjøstheim, I., Norseng, P. G., Joryd, G., Bagle, E., & Sletten, H. T. (2018). Digital storytelling and engagement in exhibitions about shipping. *Norsk museumstidsskrift*, 4(2), 50–72.
- Macdonald, S. (2002). *Behind the scenes at the science museum*. Berg.
- Macdonald, S., & Basu, P. (Eds.). (2007). *Exhibition experiments*. Blackwell.
- Maurstad, A., & Hauan, M. A. (Eds.). (2012). Universitetsmuseenes gjøren: Om redskaper og relasjoner i museenes kunnskapsproduksjon [Done is done: On tools and relations in museum knowledge formation] In A. Maurstad & M. A. Hauan (Eds.), *Museologi på norsk: Universitetsmuseenes gjøren* [Museology in Norwegian: The university museums' practices] (pp. 13–31). Akademika.
- McKenney, S., & Reeves, T. (2018). *Conducting educational design research*. Routledge
- Pallasmaa, J. (2005). *The eyes of the skin: Architecture and the senses*. Wiley.
- Parker, E., & Saker, M. (2020). Art museums and the incorporation of virtual reality: Examining the impact of VR on spatial and social norms. *Convergence*. <https://doi.org/10.1177/1354856519897251>
- Parry, R. (2007). *Recoding the museum: Digital heritage and the technologies of change*. Routledge.
- Parry, R. (Ed.). (2010). *Museums in a digital age*. Routledge.
- Pavement, P. (2019). The museum as media producer: Innovation before the digital age. In K. Drotner, V. Dziekan, R. Parry, & K. C. Schröder (Eds.), *The Routledge handbook of museums, media and communication* (pp. 31–46). Routledge.
- Phillips, L., Kristiansen, M., Vehviläinen, M., & Gunnarsson, E. (2013). Tackling the tensions of dialogue and participation: Reflexive strategies for collaborative research. In L. Phillips, M. Kristiansen, M. Vehviläinen, & E. Gunnarsson (Eds.), *Knowledge and power in collaborative research: A reflexive approach* (pp. 1–18). Routledge.
- Pierroux, P., Qvale, A., Steier, R., & Sauge, B. (2014). Posing with art: Researching and designing for performative acts of interpretation. In *Museums and the Web 2014*, 2–5 April, Baltimore, MD. <https://mw2014.museumsandtheweb.com/paper/posing-with-art-researching-and-designing-for-performative-acts-of-interpretation-2/>
- Pierroux, P., Qvale, A., Steier, R., & Sauge, B. (2019). Studying visitors' exhibition experiences in a virtual reality environment. In *Visitor Studies Association Annual Conference*, Detroit, 10–13 July.
- Pierroux, P., Steier, R., & Sauge, B. (2019). Imagining, designing and exhibiting architecture in the digital landscape. In Å. Mäkitalo, T. Nicewonger, & M. Elam (Eds.), *Designs for experimentation and inquiry: Approaching learning and knowing in digital transformation* (pp. 87–109). Routledge.
- Pringle, E. (2019). *Rethinking research in the art museum*. Routledge.
- Roberts, L. C. (1997). *From knowledge to narrative: Educators and the changing museum*. Smithsonian Institution Press.
- Samis, P. (2019). Revisiting the utopian promise of interpretive media: An autoethnographic analysis drawn from art museums, 1991–2017. In K. Drotner, V. Dziekan,

- R. Parry, & K. C. Schröder (Eds.), *The Routledge handbook of museums, media and communication* (pp. 47–66). London: Routledge.
- Sauge, B. (2018a). BIM, a discussion in Norwegian competitions. In M. Theodorou & A. Katsakou (Eds.), *Competition grid: Experimenting with and within architecture competitions*. RIBA Publishing.
- Sauge, B. (2018b). The forest in the house: Architecture exhibition experiment as a design-based research practice partnership. In *ICAM 19: Migrating Ideas*, Copenhagen, 9–13 September.
- Sauge, B. (2018c). CONNECT: Enabling exhibition co-production. In *ICAM 19: Migrating Ideas*, Copenhagen, 9–13 September.
- Sauge, B. (2019). *Digital design media in Norwegian architects' current practice: Survey 2016-2017*. Oslo, Norway: National Museum of Art, Architecture and Design.
- Simon, N. (2010). *The participatory museum*. Museum 2.0.
- Simon, N. (2016). *The art of relevance*: Museum 2.0.
- Smørdal, O., Stuedahl, D., & Sem, I. (2014). Experimental zones: Two cases of exploring frames of participation in a Dialogic museum. *Digital Creativity*, 25(3), 224–232.
- Sobel, D., & Lipson, J. L. (Eds.). (2016). *Cognitive development in museum settings*. Routledge.
- Steier, R. (2014). Posing the question: Visitor posing as embodied interpretation in an art museum. *Mind, Culture, and Activity*, 21, 148–170.
- Steier, R. (2020). Designing for joint attention and co-presence across parallel realities. In *International Conference of the Learning Sciences (ICLS) Nashville 2020*, Nashville.
- Steier, R., & Kersting, M. (2019). Metaimagining and embodied conceptions of spacetime. *Cognition and Instruction*, 37(2), 145–168.
- Steier, R., Pierroux, P., & Krange, I. (2015). Embodied interpretation: Gesture, social interaction, and meaning making in a national art museum. *Learning, Culture and Social Interaction*, 7, 28–42.
- Stuedahl, D. (2019). Participation in design and changing practices of museum development. In K. Drotner, V. Dziekan, R. Parry, & K. C. Schröder (Eds.), *The Routledge handbook of museums, media and Communication* (pp. 219–231). London: Routledge.
- Treimo, H. (2020). Sketches for a methodology on exhibition research. In P. Bjerregaard (Ed.), *Exhibitions as research: Experimental methods in museums* (pp. 19–39). Routledge.
- Tzortzi, K. (2015). *Museum space: Where architecture meets museology*. Routledge.
- Vavoula, G., & Sharples, M. (2007). Future technology workshop: A collaborative method for the design of new learning technologies and activities. *Computer-Supported Collaborative Learning*, 2, 393–419.
- vom Lehn, D., Sang, K., Glassborow, & King, L. (2020). Exhibition design and professional theories: The development of an astronomy exhibition. In H. Lewi, W. Smith, D. vom Lehn, & S. Cooke (Eds.), *The Routledge international handbook of new digital practices in galleries, libraries, archives, museums and heritage sites* (pp. 270–282). Routledge.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Vygotsky, L. S. (1981). The instrumental method in psychology. In J. Wertsch (Ed.), *The concept of activity in Soviet psychology* (pp. 134–143). Sharpe.
- White, A., & Chen, E. (2020). China museum's digital heritage profile: An evaluation of digital technology adoption in cultural heritage institutions. In H. Lewi, W. Smith, D. vom Lehn, & S. Cooke (Eds.), *The Routledge international handbook of new digital practices in galleries, libraries, archives, museums and heritage sites* (pp. 103–115). Routledge.

# 10

## TRANSFORMING ASTROPHYSICS IN A PLANETARIUM: 'WE ARE PART OF THE UNIVERSE, THE UNIVERSE IS PART OF US'

*Line Bruun Nicolaisen, Marianne Achiam, and Tina Ibsen*

Knowledge of astronomy has always held power. From ancient times, there has been a divide between those close to the sky, and those far from it; a divide of often-divine connotations (Selin, 2000). This uneven distribution of power has persisted from early astronomy to its modern Western forms (Gorman, 2005; Penprase, 2011). Today, inequitable power structures are formed throughout scientific culture (e.g., Haraway, 1988; Harding, 1991).

When museums create exhibitions about science, they purposefully deconstruct scientific knowledge, values and practices and reconstruct them to create environments that appeal to their visitors. This de- and reconstruction runs the risk of inadvertently reproducing the biases, dilemmas and inequalities of science (cf. Levin, 2010; Nicolaisen & Achiam, 2020). Ultimately, the inequalities reproduced in this way can lead to a misalignment between the institutions and those they are set to serve, which results in social, economic and ethnic exclusion (cf. Dawson, 2014). This problem has been observed and challenged more recently across a range of museums (e.g., Christensen, 2016; Robinson, 2017).

Uncovering, analysing and critiquing these biases are pursuits in their own right. Here, however, we discuss how to go even further by promoting change. We are aligned with 'third wave' museology, which focusses on both exhibition design and practice (Macdonald, 2007; Macdonald & Basu, 2007) when addressing the dilemmas museums are facing (Hein, 2010). We report on the first phase of a study which builds on theory through design (Markussen, 2017) by linking research, design and practice through an iterative design experiment as a means to address gender inequity. Specifically, we discuss how the Planetarium in Denmark underwent a redefinition process, emerging as an example for institutions facing similar dilemmas (cf. Hein, 2010).



In general, planetariums differ from museums in that they do not rely on objects from collections to disseminate their scientific and technical subject matter. However, like museums they disseminate scientific subject matter to the general public, and like some science centres and museums, the Planetarium has been challenged by dwindling visitor numbers in recent years. In response, it launched a strategy in 2016 to re-establish its relevance as an out-of-school science education provider. This included inviting a science education researcher to participate in the development of the new permanent exhibition *Made in Space*. The aim of this collaboration was to create an exhibition design that balanced the requirement of representing authentic astrophysics, space technology and planetary science (ASTPS) with the need to create inclusive experiences.

### Existing research

The objective of *Made in Space* was to make recent research on ASTPS inclusive, relevant and available for a diverse audience. This task is challenging, given the uneven distribution of power and access to ASTPS (Griffin, 2014). The uneven distribution is manifest, for instance, in the Space Race Model (Gorman, 2005), which presents space discovery as a triumph of technological achievement and the natural human urge to explore. It thereby creates a master narrative of the interests of largely white male American astronauts, space administrators, scientists and politicians as universal human values, and downplays the military, nuclear, nationalist and colonial aspirations of space faring nations (Bryld & Lykke, 2000). This master narrative leaves little room for other perspectives, effectively ‘devaluing previous, non-technological or other connections to space’ (Griffin, 2014, p. 39).

Evidence of these other perspectives is scarce, as they are found in different contexts and manifest themselves in different ways. Recent studies point out how women’s voices are systematically excluded from astronomy (Caplar et al., 2017), how the views of Indigenous people in Hawai’i on astronomy are ignored (Ciotti, 2010) and how Indigenous people in Australia must compete with the needs of a rocket range for water (Gorman, 2007). We argue that these transgressions result from a broader ‘culture of positivism’ that positions an existing body of knowledge as neutral and scientific rather than as a tool to serve certain groups (Kincheloe & Tobin, 2009). This culture leads to exclusionary practises within both research and research communication. We thus urge the community of ASTPS researchers and practitioners to act (cf. Johnston, 2019); we ourselves take action by asking: How can the inequalities of ASTPS be purposefully replaced with more equitable and inclusive framings of knowledge in the development of an exhibition? Based on a brief theoretical outline and an overview of dominant ASTPS discourses, our answers in the following are based on the authors’ co-design of and research on the initial stages of developing the *Made in Space* exhibition. We discuss these answers with a view to future developments in experimental museology.

## Theoretical framework

Our research acknowledges that people's ideas, values and knowledge are shaped by social, political, cultural, economic, gender and ethnic experiences. Science is not exempt from those influences. As discussed, we are interested in how the inequalities inherent in interactions with ASTPS may epistemologically empower or disempower certain groups or individuals. Consequently, we locate this research in the critical theory research paradigm (Tregust et al., 2014), which just like critical museology (Shelton, 2013) stems from the Frankfurt School (Kincheloe & McLaren, 2005). Both have a focus on practice; however, as their domains differ, they tackle different dilemmas and problems in their efforts to challenge and transform institutions for the betterment of the people involved (Tregust et al., 2014).

We see institutions as being defined by the rules, conventions and indeed power dynamics that constrain and enable people's behaviour and thereby structure social interactions. These rules and conventions may be explicit and accepted as official, or they may be implicit, created and enforced outside officially sanctioned channels (Waylen, 2014). Institutions, in turn, are embedded in broader societal and cultural contexts with their own sets of rules and conventions that interact with those of the institutions. This view of institutions as being embedded in societies, and knowledge being embedded in institutions, is reflected in our choice of the anthropological theory of didactics (ATD) as the framing for this study (Bosch & Gascón, 2014). The theoretical backdrop of ATD is inspired by the French sociologists Marcel Mauss and Michel Verret; in addition to emphasising the nested nature of knowledge, the theory acknowledges the fundamental human nature of all scientific knowledge (Chevallard & Bosch, 2014). Thus, knowledge is always shaped by the (societal, institutional, disciplinary) ecology that it 'lives' within; when knowledge is transplanted to a new context, it is necessarily reshaped to that particular ecology.

Accordingly, we conceptualise the development of *Made in Space* as the selection of ASTPS-related knowledge, values and practices, produced within and adapted to research institutions, and the subsequent deconstruction and reconstruction of the selected ASTPS-related knowledge, values and practices with the purpose of making them viable in a cultural institution, namely a planetarium (cf. Mortensen, 2010). This study thus tracks the changes in the ASTPS-related knowledge, values and practices through their gradual transformation from research context to dissemination context. Of particular importance are the ways in which the inequalities of ASTPS are purposefully replaced with more equitable and inclusive framings of knowledge. In the following, we describe the inequalities of ASTPS in terms of dominant discourses, which we see as elements of the 'culture of positivism' of the ASTPS research disciplines.

### *ASTPS as masculine-gendered*

A growing body of research provides evidence of the masculine gendering of astrophysics and related sciences. From the inception of space exploration, masculine

adventure has been a constant referent (Redfield, 2002), most recently embodied by the postponement of the world's first all-female spacewalk due to the unavailability of space suits in fitting sizes (Connley, 2019). However, this gender inequality is also present in more academic aspects of ASTPS, e.g., citation counts in astronomy publications (Caplar et al., 2017) or workplace experiences (Clancy et al., 2017).

### ***Space research for the good of mankind***

Griffin (2014) describes how space industry is often discussed in terms of providing humanity with universal benefits, e.g., ensuring a skilled workforce for the future or educating the global public about the importance of space. Often, Griffin writes, these discussions seem to lack an awareness of people who are not part of the logic of space technology (e.g., by being employed or otherwise occupied by it). Related to the notion of benefit to mankind is the perception of ASTPS research as a selfless response to a higher calling (Redfield, 2002), or even 'sacred duty' (Whitten, 1996).

### ***Exploration-colonisation terminology***

The link between space travel and colonial history is familiar to most. Research describes how in discussions of space travel, frontier metaphors and nation-building vocabulary habitually invoke Columbus (Pecker, 1987) as well as terms such as 'conquest,' 'settlement,' 'expansion' and even 'colony' in spite of their present-day negative connotations (Redfield, 2002).

### ***Epistemic authority***

Hilgartner (1990) describes how an important narrative among scientists is that of scientific knowledge as their exclusive preserve. Public communication, in contrast, involves the creation of simplified representations for the public to grasp. This distinction serves to ensure the primacy or epistemic authority of scientific knowledge over other kinds of knowledge and has been observed more recently as well (e.g., Davies, 2008; Garvin, 2001). It also seems to exist among astrophysicists; certainly Griffin (2014) provides evidence of how the space industry seems to place the public in an asymmetrical position of ignorance.

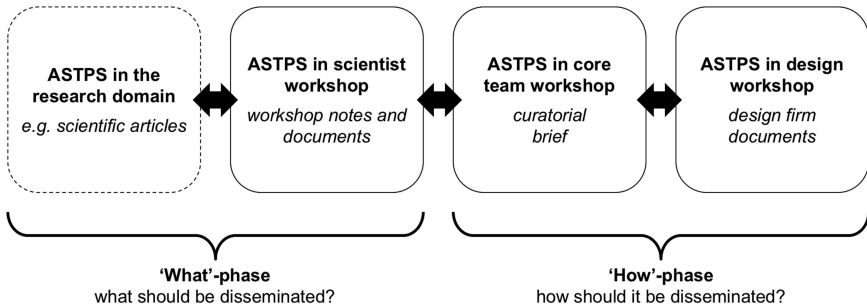
In sum, the four dominant discourses in ASTPS are related to masculine gendering, space research as a common good, exploration-colonisation and the epistemic authority of science. These dominant discourses comprise the analytical lens for the present study.

### ***Development of *Made in Space****

The exhibition *Made in Space* opened at the Planetarium in February 2018. The focus here is a series of exhibition workshops that took place in 2016–2017,

designated as the scientist workshop, the core team workshop and the design workshop. Analytically, the development had two main phases: the ‘what’ phase, in which ASTPS knowledge, values and practises were selected to be included in the prospective exhibition, and the ‘how’ phase, in which the selected content was transformed and restructured for educational purposes (Figure 10.1). The main actors involved in the development process are described in Table 10.1.

The objective of *Made in Space* was to present ASTPS in a way that was ‘accessible, engaging and entertaining to a broad diversity of visitors’ (Ibsen et al., 2017).



**FIGURE 10.1** The development of *Made in Space* took place in a series of workshops and was recorded in a number of documents (shown in italics). Analytically, the development of the exhibition can be divided into a ‘what’-phase and a ‘how’-phase. Figure adapted from Sandholdt and Achiam (2018).

**TABLE 10.1** The main actors involved in the development of *Made in Space*. The astrophysicists are all members of faculty at Danish universities, while the communicator and planetarium staff members have graduate degrees in astrophysics and work professionally with science communication. The researcher is a PhD fellow in science education, and the designers are employed at a professional exhibition design firm.

<i>Actor</i>	<i>Scientist workshop</i>	<i>Core team workshop</i>	<i>Design workshop</i>
Astrophysicist 1	X		
Astrophysicist 2	X		
Astrophysicist 3	X		
Astrophysicist 4	X		
Astrophysicist 5	X		
Communicator	X		
Project leader	X	x	x
Planetarium staff 1	X	x	x
Planetarium staff 2	X	x	
Planetarium staff 3		x	x
Researcher	X	x	x
Designer 1			x
Designer 2			x
Designer 3			x

The core team was informed by a study of a previous Planetarium exhibition, *Space Mission*, which demonstrated how the masculine gendering of ASTPS found across academic contexts had been reproduced in the opportunities for interaction and meaning making in *Space Mission* (Nicolaisen & Achiam, 2020). Accordingly, the development of *Made in Space* was intended as a means to not just produce a new, and more inclusive, exhibition, but also contribute to a general model of inclusive exhibition development for the Planetarium.

## Methodology

The results presented here are based on audio recordings of the three workshops, field notes taken by the researcher (the first author), and the documents produced during the workshops and between them. The data were analysed using the six steps of thematic analysis (Braun & Clarke, 2006), with the dominant discourses (cf. Hughes, 2001) of ASTPS as an analytical lens. We (first and second authors) coded the data independently of each other, and subsequently compared this coding to verify our categorisations. In more than 90% of cases we agreed; in those cases where we initially disagreed, we reached a common agreement by revisiting our descriptions of the four dominant discourses. This analysis allowed us to observe the presence of the dominant discourses of ASTPS in the data as well as their gradual replacement in the development of the exhibition.

## Analysis

The participants in the first phase of *Made in Space* were invited primarily for their position at the cutting edge of astrophysics research in Denmark, and secondarily for their experience with science communication. In the scientist workshop, these professionals were tasked with identifying the most important astrophysics research in Denmark. They were urged to focus on what this research was, not on how to disseminate it. This work resulted in a preliminary list of more than 20 topics. Subsequently, they were asked to prioritise their list to identify the three most important topics, and selected exoplanets, cosmology and black holes.

In their discussions about these topics, the participants in the scientist workshop used a number of different rationales and arguments. Unsurprisingly, one argument was of the status of these topics at the cutting edge of Danish astrophysics research, but the prevalent lines of reasoning for including these topics seemed related to the dominant discourses of ASTPS. For instance, while research on exoplanets is significant in terms of being on the cutting edge of astrophysics, the participants in the scientist workshop referred repeatedly to exploration and colonisation in the discussions, for instance: '[Exoplanets as a topic] is good, because it is "modern Columbus", it is the discovery journeys, it is things you can relate to ... you can arrive at Proxima B.' This statement explicitly invokes Columbus as well as the notion that humans may someday arrive at Proxima B, the closest known exoplanet to the Earth. It seems to reflect a frontierist ideal in which new

territories are perceived as unowned and ‘for the taking’ (Small, 2017). In another example, Astrophysicist 3 discusses exoplanets, invoking a colonialist rationale as well as the idea that space research is for the good of mankind:

We do [research] because of the science, there is not necessarily any financial value in it. But I sometimes like to say that we are also doing this because we would like to find a place we can colonise someday.

It is noteworthy that their references to colonisation seem unproblematic to the participants, given the recent attention to decolonising not just museums (e.g., Robinson, 2017) but also university curricula (e.g., Andrews, 2019; Conana et al., 2016).

When Astrophysicist 3 invokes her/his motivation as scientific, not financial, in the quote shown in the preceding, she/he hints at the ‘for the good of mankind’ discourse of ASTPS. We found a number of references to this discourse in the participants’ discussions about cosmology. One instance was observed in participants’ ambition to recruit young visitors to an astrophysics study programme or career pathway, as exemplified in the following:

---

Astrophysicist 4	What do visitors gain from [cosmology]?
Astrophysicist 2	... enlightenment, on different levels, both for adults but especially for children, right? What is it called – when something leads to – recruitment, is that correct?
Astrophysicist 1	... that research is not just for the chosen few. I mean that if they experience that, they might see themselves as someone who could work with this. [The] recruitment thing is also why I’m here.

---

Another variation of the ‘for the good of mankind’ rationale is the idea of ASTPS research as a selfless response to a higher calling (Redfield, 2002). We observed this rationale numerous times in the scientist workshop, for instance: ‘All science is about “what is the meaning of life and why are we here”’; that is what drives every scientist’ (Astrophysicist 4). At times, the participants in the scientist workshop seemed to adhere to the epistemic authority discourse. In other words, they considered ASTPS in an idealised way, giving authority to those who know and seeing the public as deficient with respect to ASTPS. This position is evident in the following:

---

Astrophysicist 4	Most people on the street, they have a worldview which is on a level with what they had in the middle ages, right? I mean, they are not at all ...
Planetarium staff 1	... yeah, and there are many people who have heard that the universe started with the Big Bang. [...] There are really many people who think that this was in one place in the Universe, and something the size of a pea exploded and then it became the whole Universe [sighs].

---

Another manifestation of this discourse was observed in participants' discussions of the capability of the general public to understand scientific knowledge production. Specifically, the participants seemed reluctant to entrust the public with aspects of science that could be misconstrued, e.g., the tentativeness of scientific knowledge, as shown in the following:

---

Communicator	We also have to include the angle that the Big Bang model is solid.
Astrophysicist 1	This is a recommendation that we give the designers, that these models shouldn't be wrapped in too many reservations; that this is the best suggestion from our models. Because, I think the model that is so important to us scientists, or the theory that is completely misunderstood ... [the public seems to think that] one theory is as good as another.
Communicator	It is because the word theory has two different meanings in research language and in everyday language.

---

Finally, we also observed references to the epistemic authority of scientific knowledge in the participants' discussions of black holes. The reference to the general public as 'mere mortals' in the second quote seems to elevate the astrophysicists to near-divine status, thereby cementing their authority:

---

Astrophysicist 1	A lot of people are afraid of black holes. Maybe it is also a good thing if it is explained that it is a harmless phenomenon.
Astrophysicist 2	That is the thing that may be difficult for the... the mere mortals, right, the thing that light is still energy, that it is the energy that is influenced and not just.... Because light has no mass, right.

---

In addition to these examples, we have observed a number of instances in which the workshop participants spoke more generally about the communication of ASTPS. It was interesting to note how a rule of thumb for some participants was to consider the general public in terms of a 'fourteen-year-old boy' (Planetarium staff 2, Astrophysicist 1). Based on our data, it is difficult to say what lies behind this notion, but it could be a manifestation of the masculine gendering of ASTPS observed in the research literature.

In sum, using our analytical lens of dominant discourses, we identified discourses related to 'for the good of mankind,' colonisation-exploration, the epistemic authority of scientific knowledge, and (tentatively) masculine gendering, that were part of the rationales for selecting the topics exoplanets, cosmology and black holes in the scientist workshop. These discourses served to construct an underlying 'othering,' forming a 'them' (the public) and 'us' (the experts).

The restructuring of ASTPS knowledge in the 'how' phase was shaped by careful negotiations led by the Researcher, of how to question disciplinary framings of knowledge (cf. Nicolaisen & Achiam, 2020). The initial activity was the core team workshop (Figure 10.1), which aimed to clarify the content selected

in the scientist workshop, and to restructure that content to reflect a core narrative for the exhibition. The product of the core team workshop was an internal document (Ibsen et al., 2017; the ‘curatorial brief’), to be handed over to designers with no specialisation in ASTPS.

## The core team workshop

The researcher initiated a central discussion about inclusion in the core team workshop, which focussed on shifting the emphasis of the selected content away from the restrictive, textbook-like categorisation of ASTPS observed in parts of the scientist workshop towards a more human-centred framing (cf. Hein, 2010). The following exchange exemplifies this discussion:

---

Planetarium staff 2	Part of the aim is also how we use cosmology, and how we have reached these understandings. How we can even study the beginning ... and then it makes sense to start with us.
Planetarium staff 3	If the message is that one should understand one’s own place in the universe, right, then it makes sense to start with ourselves.
Planetarium staff 1	When it comes to cosmology, then it is the story about us. I think that many [people] miss that point; they think it is something that happens far away. But in the field of cosmology, it is the big questions you work with. Where do we come from? What processes occurred for us to be here today, and what will happen in the future?

---

This discussion resulted in a restructuring of the topic cosmology. Rather than taking for granted the discipline-based chronological sequence running from the Big Bang to the present day, the participants in the core team workshop decided to take a point of departure in humans, and trace the constituent elements of humans back to their formation in the development of the universe:

Imagine that you arrive at the exhibition, and then you stand in front of something, and then it breaks you apart and says that you consist of water, and this, and this, and then it continues: ‘where do these things come from?’ Then you have hydrogen and helium from the Big Bang, you have the ... the small stars and so on.

*(Planetarium staff 1)*

Not only did the restructuring of cosmology reflect a marked departure from the primacy of scientific knowledge, it also provided a basis for a central narrative for the exhibition. Through the discussions, the exhibition’s guiding question evolved into ‘we are part of the universe, the universe is part of us’ (Planetarium staff 1). As the workshop participants began to unfold this question, the two other selected topics (exoplanets and black holes) were fit into the larger picture: ‘But in this



way, the three topics merge into one, right? They don't have to be three different parts in the exhibition, do they?' (Project leader).

Thus, rather than having three distinct topics (exoplanets, cosmology and black holes), *Made in Space* now had an overarching theme based on notions from cosmology, with black holes and exoplanets as sub-themes (Figure 10.2). However, even though the restructuring of the content for *Made in Space* represented a deliberate departure from the epistemic authority of scientific knowledge, we still observed instances of adherence to this discourse in the core team workshop. The following example is an excerpt from a discussion about how the expansion of the universe, caused by the Big Bang, allows astronomers to effectively look 'back in time':

I think it is important that we are aware that regular people don't have that way of thinking. It shouldn't be something that we just throw at them. Because we assume that of course people know that the further you look out, the further you look back in time – but people don't know that.

(Planetarium staff 1)

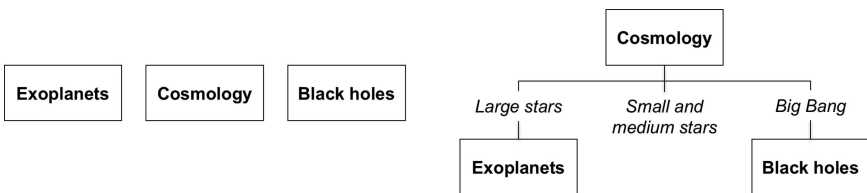
Even though they echoed the astrophysicists' notions of the primacy of scientific knowledge, the participants in the core team workshop still focussed on finding ways to address the perceived knowledge gap between ASTPS experts and the public. The following exchange illustrates an aspiration to empower prospective visitors to evaluate scientific claims for themselves:

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Planetarium staff 2    You can hear in the news that now the age of the universe has changed. And so people think to themselves, 'okay, so [astrophysicists] are just sitting around thinking strange thoughts' ...

Planetarium staff 1    ... yeah, or 'why have you invented dark matter, I don't like that.' I think it is in the way we have to present it, that we don't make science up. It is based on science, and that is how we present everything in here. If this is to be an exhibition where we also talk about how we get the results, and how we work with these things, then this will be part of it. Then we will talk about the processes and not just the final results – and then [the visitors] will also see that.

---



**FIGURE 10.2** The restructuring of the content for *Made in Space* from the scientist workshop (left) to the core team workshop (right).

The examples we observed of adherence to the primacy or authority of scientific knowledge came from workshop participants with ASTPS backgrounds. Even though these participants were employees of the Planetarium and fully invested in its *raison d'être*, their alliance to ASTPS disciplinary culture may have made it difficult for them to completely forego its dominant discourses (cf. Cole, 2009). Even so, the researcher's continued attention to inclusion perspectives in the design work led to a replacement of the dominant ASTPS discourses: colonisation, masculinisation of science or 'for the good of mankind' in the core team workshop. This replacement was perceived as a positive addition rather than a reduction, as suggested by the following reflection by Planetarium Staff 1:

I think it is a good thing, as well, when we talk about gender – because then we could have more people sharing one experience. Or maybe even having something that two people can interact with. That is some of the things you found as well, [Researcher], that that is more gender inclusive as well.

In summary, the participants in the core team workshop created a central narrative to encompass the three selected ASTPS topics in a coherent way and restructured those topics towards a human-centred framing likely to appeal to a broader diversity of visitors (cf. Nicolaisen & Achiam, 2020). The dominant discourses observed in the scientist workshop were gradually replaced with more constructive considerations of the capabilities of prospective visitors, even if some members of the core team still adhered to notions of the epistemic authority of science. The results of the core team workshop were documented in the curatorial brief, which was subsequently handed over to a design firm.

## The design workshop

The second activity in the 'how' phase of the development of *Made in Space* was the design workshop (Figure 10.1). In this workshop, the design firm presented their proposal for *Made in Space*, based on the curatorial brief, and discussed it with the core team. Prior to the workshop the Researcher had had extensive discussions with the design team about inclusion, and had shared a set of guidelines on key inclusion elements, including connecting scientific content with learners' bodies, the importance of social experience, emphasising cooperation rather than competition and a strong focus on visual (rather than cognitive) aspects of ASTPS (Achiam & Holmegaard, 2017; Dancstep née Dancu & Sindorf, 2018; Nicolaisen & Achiam, 2020).

The design workshop marked the transposition of the ASTPS content from its written form in the curatorial brief into a different modality, namely renderings, animations and visualisations. The discussions in the design workshop were prompted by this modality shift as well as considerations of the inclusion guidelines. One prominent theme was of the intended interactions between *Made in Space* and its prospective visitors. In these discussions, we observed how considerations of the

sensory and affective aspects of ASTPS partially replaced earlier considerations of its cognitive aspects. For instance, when discussing the design firm's overarching objective for *Made in Space*, Designer 1 focussed on creating a sense of awe and excitement among visitors, rather than 'trying to fit too much information in.' Later, as the discussion turned to concrete design ideas related to cosmology, Designer 1 again invoked the affective aspects of ASTPS:

One possibility is that we build a kind of a show moment that ties everything together. So, every thirty minutes there is one event where everybody goes 'well, this is extraordinary' [...]. So, one of the ideas is that we do the Big Bang, and that there is a single point that explodes out and kind of fills the entire space. Which would be ... which would feel amazing in that space.

Another example of the focus on sensory experiences is the designers' suggestion to use Kinect, an infrared camera system that allows the user to interface with a visualisation on a screen using their body movements, rather than buttons or toggles. Kinect supports multiple physical engagement patterns (Hsu, 2011), thus affording a diversity of ways to interact with the subject matter.

In addition to their attention to affective and sensory aspects of ASTPS, the designers also incorporated the strong focus on the social aspects of the exhibition visit as prompted by the researcher. As they were discussing the Big Bang event, Designer 2 added:

It is also about creating that communal experience. So, previously you've had lots of individual experiences, you can stand, you can do whatever you want in your space, taking your time, but then we have this moment where everyone is as one. We get this, kind of, this 'wow' moment.

Research has acknowledged the social nature of visits to cultural institutions (e.g., Falk & Dierking, 2013). Indeed, one of the issues of the earlier Planetarium exhibition, *Space Mission*, was its focus on individual experiences rather than shared ones (Nicolaisen & Achiam, 2019).

Finally, although the dominant discourses of ASTPS had been more or less completely replaced by more equitable discourses, we still observed an adherence to the primacy of scientific knowledge. The following discussion is prompted by the description of the Big Bang moment mentioned by Designer 1 in the preceding:

You show the Big Bang as one point exploding, creating the universe from one point. But that would mean that we have a centre of the universe, which we don't. [...] This is a misconception that every single science centre kind of continues to promote, and every exhibition promotes this, and people misunderstand it. So, I think that that is one of the things that we in this exhibition really need to be careful about, not to reinforce these misconceptions.

(Planetarium staff 1)

In sum, the discussions in the design workshop were focused on the affective, sensory and social aspects of the selected ASTPS topics rather than their cognitive aspects. Although it was not always obvious in the moment that this replacement was taking place, in reflective moments, members of the team would discuss how the researcher's input had helped them change their focus: 'Yeah, I think the fact that we started this process of you talking about it as well has sort of created a different mindset' (Designer 3).

At this stage of the exhibition development, the dominant discourses observed in the scientist workshop were almost completely replaced by more equitable and inclusive constructions of ASTPS. One exception to this pattern was the lingering adherence to the epistemic authority of science.

## Conclusion

In this chapter, we have documented how a practical design experiment gradually and purposefully replaced the inequalities built into ASTPS with more equitable and inclusive framings of knowledge. First, we found several dominant discourses to exist in the ASTPS of scientists and planetarium professionals, namely masculine gendering, 'for the good of mankind,' colonisation-exploration terminology and the epistemic authority of scientific knowledge. These discourses were addressed through a design experiment, based on a theoretical foundation (Macdonald, 2007; Markussen, 2017; Treagust et al., 2014) and persistent attention to the inequitable discourses. As a result, the dominant discourses were replaced by social, affective and sensory framings of ASTPS. This replacement entailed a restructuring of content as well as the transformation of its form.

We acknowledge that prospective visitors to the exhibition are not passively situated in the scientific discourses they encounter but are active agents of their own experiences (Hughes, 2001; Nicolaisen & Achiam, 2020). This means that they bring their own perceptions and understandings to bear on *Made in Space*, including, potentially, perceptions of space exploration as a masculine, colonialist endeavour. However, we would argue the changes effected in the design of *Made in Space* allow for alternative receptions, perceptions and interaction with ASTPS content, thereby shifting the *implied* ways of engaging with ASTPS in a more equitable direction (Nicolaisen & Achiam, 2020).

In this study, the 'culture of positivism' that positions ASTPS as neutral and scientific (cf. Kincheloe & Tobin, 2009) was arguably replaced with a 'culture of relativism' in which scientific culture is not necessarily superior to the experiences and perceptions of visitors (cf. Champion, 2017). Thus, the design process can be understood as an experiment in Latour's sense of the word; 'transformative for the people and materials involved' (Latour, 1999; Macdonald & Basu, 2007), set in a broader ecology of societal, institutional and disciplinary conditions. In the following, we discuss these ecologies in turn.

Astrophysics, space technology and planetary science are part of our shared societal and cultural ecology. ASTPS do not just belong to the elite minority of

people directly engaged with them, but have broad significance and relevance (Gorman, 2005). For instance, it has been suggested that the most significant effect of the space programme was not its scientific or technological achievements, but ultimately, its impact on the imagination of the public (quoted in Geppert, 2018). As policy-makers and critical actors turn towards ensuring inclusive and equitable learning opportunities for all citizens (UN Sustainable Development Goal 4), more attention is being paid to exploring new ways of deconstructing science and re-imagining it to create opportunities that are accessible to all members of society (De Leo-Winkler, 2019; Griffin, 2014; Johnston, 2019). It is within this wider societal ecology the Planetarium is embedded and in which the development of *Made in Space* represents one of an increasing number of efforts to widen public participation in ASTPS.

Of particular relevance to this discussion is institutional ecology, understood here as the symbolic meta function of science centres, museums and, we suggest, planetariums. By their symbolic function, we refer to these institutions' ability to suspend time and place to offer the visitors experiences beyond the walls and geographic location of the building (Achiam & Sølberg, 2017). In fact, planetariums are uniquely qualified to create this suspension of time and place, given their long history of dome projection technology that allows visitors to experience 'how it is' in space (Achiam et al., 2019; Bleeker, 2017). In the present study, we saw how this institutional visual regime and imaginary (cf. Shelton, 2013) was used to reconstruct content from astrophysics, space technology and planetary science to create a proposal for an inclusive and engaging exhibition.

Finally, in developing *Made in Space*, the Planetarium joins the ranks of progressive science centres and museums who question authoritative, canonical science and seek instead to engage their visitors in negotiating what science means for them (Sandholdt & Achiam, 2018). From a disciplinary point of view, this approach challenges the notion of objectivity, which has historically been an important part of the self-image of the natural science disciplines (Reiss & Sprenger, 2017). However, a consensus is emerging that just like other processes and products of human culture, the natural sciences are constructed by and within power relations in society, not apart from them (e.g. Haraway, 1988; Harding, 1991). As a consequence, the natural sciences cannot produce culture-free knowledge (Brickhouse, 2001).

In this chapter, we have shown how a proposal for an engaging and inclusive exhibition resulted from the deconstruction and reconstruction of inaccessible and exclusive disciplinary content. We have documented how the dominant discourses of ASTPS in the initial deconstruction of the content resulted in a divide between the experts and the public, and how these discourses were disrupted through transformative experiments, which replaced the existing discourse with more inclusive ones. This deconstruction and reconstruction was explicitly guided by a *critical* perspective on the culture of positivism associated with the natural science disciplines (here in the form of dominant discourses of ASTPS), but as we have discussed, the particular ecology of discipline, institution and society in which the development of *Made in Space* was embedded played an important *constructive* role.

In particular, ongoing societal discussions of inclusion, institutional considerations of planetarium modalities and the scientific disciplines' gradual coming to terms with the illusion of their objectivity created an ecological context that was conducive to the development of an engaging and inclusive proposal for an exhibition. We suggest that the development of *Made in Space* can be understood as a practise-based illustration of how its developers were able to constructively reconcile a number of different discourses with their actual practices.

## Bibliography

- Achiam, M., & Holmegaard, H. T. (2017). Informal science education and gender inclusion. In L. S. Heuling (Ed.), *Embracing the other: How the inclusive classroom brings fresh ideas to science and education* (pp. 32–40). Flensburg University Press. [https://www.researchgate.net/publication/326176462\\_Informal\\_science\\_education\\_and\\_gender\\_inclusion](https://www.researchgate.net/publication/326176462_Informal_science_education_and_gender_inclusion)
- Achiam, M., Nicolaisen, L. B., & Ibsen, T. (2019). Planetariums between experience and enlightenment. *Nordisk Museologi*, 19(1), 11–24.
- Achiam, M., & Sølberg, J. (2017). Nine meta-functions for science museums and science centres. *Museum Management and Curatorship*, 32(2), 123–143.
- Andrews, K. (2019). Blackness, empire and migration: How black studies transforms the curriculum. *Area*. Epub ahead of print. [https://rgs-ibg.onlinelibrary.wiley.com/doi/full/10.1111/area.12528?fbclid=IwAR0zu0eLTq3MURpMR8WBVsVagvuoLb3hf0qtXFwY9Vj-l1\\_p2vflZE3ZLl8](https://rgs-ibg.onlinelibrary.wiley.com/doi/full/10.1111/area.12528?fbclid=IwAR0zu0eLTq3MURpMR8WBVsVagvuoLb3hf0qtXFwY9Vj-l1_p2vflZE3ZLl8)
- Bleeker, M. (2017). Who knows? The universe as technospace. *Early Popular Visual Culture*, 15(2), 247–257.
- Bosch, M., & Gascón, J. (2014). Introduction to the Anthropological Theory of the Didactic (ATD). In A. Bikner-Ahsbahs & S. Prediger (Eds.), *Networking of theories as a research practice in mathematics education* (pp. 67–83). Springer.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology Virginia. *Qualitative Research in Psychology*, 3(2), 77–101.
- Brickhouse, N. W. (2001). Embodying science: A feminist perspective on learning. *Journal of Research in Science Teaching*, 37(5), 441–458.
- Bryld, M., & Lykke, N. (2000). *Cosmodolphins: Feminist cultural studies of technology, animals and the sacred*. University of Chicago Press.
- Campion, N. (2017). The importance of cosmology in culture: Contexts and consequences. In A. J. Capistrano de Souza (Ed.), *Trends in modern cosmology* (pp. 3–17). London: IntechOpen.
- Caplar, N., Tacchella, S., & Birrer, S. (2017). Quantitative evaluation of gender bias in astronomical publications from citation counts. *Nature Astronomy*, 1, 0141.
- Chevallard, Y., & Bosch, M. (2014). Didactic transposition in mathematics education. In S. Lerman (Ed.), *Encyclopedia of mathematics education* (pp. 170–174). Springer.
- Christensen, H. D. (2016). A never-ending story: The gendered art museum revisited. *Museum Management and Curatorship*, 31(4), 349–368.
- Ciotti, J. E. (2010). Museums and planetariums: Bridging the gap between Hawaiian culture and astronomy through informal education – a case study. *Forum on Public Policy*, 2010(2), 1–14.
- Clancy, K. B. H., Lee, K. M. N., Rodgers, E. M., & Richey, C. (2017). Double jeopardy in astronomy and planetary science: Women of color face greater risks of gendered and racial harassment. *Journal of Geophysical Research: Planets*, 122(7), 1610–1623.

- Cole, K. C. (2009). *Something incredibly wonderful happens: Frank Oppenheimer and the world he made up*. Houghton Mifflin Harcourt.
- Conana, H., Marshall, D., & Case, J. M. (2016). Exploring pedagogical possibilities for transformative approaches to academic literacies in undergraduate physics. *Critical Studies in Teaching and Learning*, 4(2), 28–44.
- Connley, C. (2019). NASA cancels first all-female spacewalk due to 'spacesuit availability.' *CNBC Make it*. www.cnn.com
- Dancstep née Dancu, T., & Sindorf, L. (2018). Creating a female-responsive design framework for STEM exhibits. *Curator: The Museum Journal*, 61(3), 469–484.
- Davies, S. R. (2008). Constructing communication: Talking to scientists about talking to the public. *Science Communication*, 29(4), 413–434.
- Dawson, E. (2014). "Not designed for us": How science museums and science centers socially exclude low-income, minority ethnic groups. *Science Education*, 98(6), 981–1008.
- De Leo-Winkler, M. A. (2019). The universal universe or making astronomy inclusive. *Nature Astronomy*, 3(7), 576–577.
- Falk, J. H., & Dierking, L. D. (2013). *The museum experience revisited*. Left Coast Press.
- Garvin, T. (2001). Analytical paradigms: The epistemological distances between scientists, policy makers, and the public. *Risk Analysis*, 21(3), 443–456.
- Geppert, A. C. T. (2018). European astrofuturism, cosmic provincialism: Historicizing the space age. In A. C. T. Geppert (Ed.), *Imagining outer space: European astroculture in the twentieth century* (pp. 3–28). Palgrave Macmillan.
- Gorman, A. (2005). The cultural landscape of interplanetary space. *Journal of Social Archaeology*, 5(1), 85–107.
- Gorman, A. (2007). La Terre et l'Espace: Rockets, prisons, protests and heritage in Australia and French Guiana. *Archaeologies*, 3(2), 153–168.
- Griffin, J. M. (2014). *Experience and viewpoints in the social domain of space technology* [PhD dissertation, University of Plymouth]. <http://hdl.handle.net/10026.1/3084>
- Haraway, D. (1988). Situated knowledges: The science question in feminism and the privilege of partial perspective. *Feminist Studies*, 14(3), 575–599.
- Harding, S. (1991). *Whose science? Whose knowledge? Thinking from women's lives*. Cornell University Press.
- Hein, H. (2010). Looking at museums from a feminist perspective. In A. K. Levin (Ed.), *Gender, sexuality and museums: A Routledge reader* (pp. 53–64). Routledge.
- Hilgartner, S. (1990). The dominant view of popularization: Conceptual problems, political uses. *Social Studies of Science*, 20(3), 519–539.
- Hsu, H.-M. J. (2011). The potential of Kinect in education. *International Journal of Information and Education Technology*, 1(5), 365–370.
- Hughes, G. (2001). Exploring the availability of student scientist identities within curriculum discourse: An anti-essentialist approach to gender-inclusive science. *Gender and Education*, 13(3), 275–290.
- Ibsen, T., Rasmussen, K. S., & Kristensen, M. T. (2017). Ny udstilling (internt dokument) [New exhibition (internal document)]. Tycho Brahe Planetarium.
- Johnston, K. V. (2019). A dynamical systems description of privilege, power and leadership in academia. *Nature Astronomy*, 3(12), 1060–1066.
- Kincheloe, J. L., & McLaren, P. (2005). Rethinking critical theory and qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (3rd ed.) (pp. 303–342). Sage.
- Kincheloe, J. L., & Tobin, K. (2009). The much exaggerated death of positivism. *Cultural Studies of Science Education*, 4, 513–528.

- Levin, A. K., (Ed.) (2010). Straight talk: Evolution exhibits and the reproduction of heterosexuality. *Gender, sexuality and museums. A Routledge reader* (pp. 375–394). Routledge.
- Latour, B. (1999) *Pandora's hope: Essays on the reality of science studies*. Harvard University Press.
- Macdonald, S. (2007). Interconnecting: Museum visiting and exhibition design. *CoDesign: International Journal of CoCreation in Design and the Arts*, 3, 149–162.
- Macdonald, S., & Basu, P. (2007). *Exhibition experiments*. Blackwell.
- Markussen, T. (2017). Building theory through design. In L. Vaughan (Ed.), *Practice based design research* (pp. 87–98). Bloomsbury Academic.
- Mortensen, M. F. (2010). Museographic transposition: The development of a museum exhibit on animal adaptations to darkness. *Éducation & Didactique*, 4(1), 119–137.
- Nicolaisen, L. B., & Achiam, M. (2020). The implied visitor in a planetarium exhibition. *Museum Management and Curatorship*, 35(2), 143–159.
- Pecker, J.-C. (1987). Pourquoi ce colloque? [Why this conference?]. In J. Schneider & M. l'Eger-Orine (Eds.), *Frontières et conquête spatiale: La philosophie à l'épreuve [Frontiers and space conquest: The philosopher's touchstone]* (pp. 3–8). Kluwer Academic Publishers.
- Penprase, B. E. (2011). *The power of stars: How celestial observations have shaped civilization*. Springer.
- Redfield, P. (2002). The half-life of empire in outer space. *Social Studies of Science*, 32(5–6), 791–825.
- Reiss, J., & Sprenger, J. (2017). Scientific objectivity. In E. N. Zalta (Ed.), *The Stanford encyclopedia of philosophy*. <https://plato.stanford.edu>
- Robinson, H. (2017). Is cultural democracy possible in a museum? Critical reflections on indigenous engagement in the development of the exhibition Encounters: Revealing stories of Aboriginal and Torres Strait islander objects from the British Museum. *International Journal of Heritage Studies*, 23(9), 860–874.
- Sandholdt, C. T., & Achiam, M. (2018). Engaging or transmitting? Health at the science centre. *Nordisk Museologi: Journal of Nordic Museology*, 2018(2-3), 136–151.
- Selin, H. (Ed.). (2000). *Astronomy across cultures: The history of non-Western astronomy*. Springer.
- Shelton, A. (2013). Critical museology: A manifesto. *Museum Worlds*, 1(2), 7–23.
- Small, L. M. (2017). *Space museums: Technical and cultural considerations* [Master's thesis, University of Toronto, Toronto].
- Treagust, D. F., Won, M., & Duit, R. (2014). Paradigms in science education research. In N. G. Lederman & S. C. Abell (Eds.), *Handbook of research on science education* (vol. II, pp. 3–17). Routledge.
- Waylen, G. (2014). Informal institutions, institutional change, and gender equality. *Political Research Quarterly*, 67(1), 212–223.
- Whitten, B. L. (1996). What physics is fundamental physics? Feminist implications of physicists' debate over the superconducting supercollider. *NWSA Journal*, 8(2), 1–16.



# 11

## PARTICIPATORY DESIGN AS CONCEPT AND PRACTICE IN THE EXPERIMENTAL MUSEUM: THE CASE OF THE WORKERS MUSEUM

*Anne Scott Sørensen*

The Workers Museum was established in 1982 by means of the National Workers Union (LO) and supported by the Municipality of Copenhagen and from 1984 also by the Danish State. The museum is situated in the original Workers Assembly Building amid the capital, the oldest in Europe and second oldest in the world. It was raised by the early Workers Union in 1879 and is part of a transnational initiative of Workers Assembly Buildings applying for UNESCO's tentative list of world heritage (Bak-Jensen & Jensen, 2018; Ludvigsen, 2013). The Museum was, in 2019, awarded the European Museum Academy Award DASA for excellence in learning opportunities and for 'engaging particularly children and youngsters in the fundamental learning process of political action' (European Museum Academy, 2019).

In the case study, I focus on the upcoming exhibition *Activist!* to be launched in February 2021. The exhibition includes the peer-initiative *Museum Rebels* to start out already in 2018 with workshops at schools and with youth organisations all over the country, and includes the during the exhibition ongoing *Protest Workshop*, a physical installation and learning centre during the exhibition. The *Museum Rebels* initiative is supported by the Ministry of Culture and the *Protest Workshop* by the Roskilde Festival's call on 'Young Voices' 2019. The museum won the call due to the scheduled activities to 'train the activist talents of youngsters, strengthen community-building and keep democracy alive' (Roskilde Festival, 2020).<sup>1</sup> Both the DASA and the 'Young Voices' committee point at the fact that the museum is experienced in working with youngsters between 13 and 25 from upper secondary schools, high schools and vocational schools, and have them co-produce and even to some extent co-curate exhibitions such as the former *Unheard Youth* (2015–2016).

In Denmark and the Nordic countries, as in other parts of the world, museums have turned to participation as a strategy to transform the museum as public institution (Eriksson et al., 2020; Gether et al., 2017; Schwartz & Sørensen, 2018; Sørensen, 2016). However, only a few have up till now taken the strategy into the

very core of the institution and considered participatory design an option. Even if museums since long have pledged a widened understanding of participation to not only address how to transform visitors into participants but also how to enroll them already in the initial phases of planned activities, participatory design is of yet rather unexplored in theory and practice. Worldwide, reported experiments in museums are yet few, Nina Simon's practise-based take on *The participatory museum* as defined through processes of co-creation and co-decision coming closest (Simon, 2010). The argument here is that for museums to work with participatory design, it is necessary to consider it a concept in the sense that the Dutch cultural critic, curator and artist Mieke Bal has suggested. According to Bal (2002), a thorough investigation into what a concept might mean simultaneously is an investigation into what it might do. Part of the task, in this case, is to clarify the interrelatedness of the two concepts.

### Participatory design and participation as twin concepts

Participatory design and the broader concept of participation are, in Bal's (2002) sense of the word, travelling concepts that move across disciplines and across research and practise. They are subject to contestation but also to cross-fertilisation when used as a means of interdisciplinary exploration and reflection. They are useful 'not so much as firmly established univocal terms but as dynamic in themselves' and due to the fact that 'while groping to define, provisionally and partly, what a particular concept may *mean*, we gain insight into what it can *do*' (Bal, 2002, p. 11). Keeping this in mind, it is worth having a closer look at the way the two concepts have travelled between different fields of knowledge production and discursive domains to grow into what might be understood as a twin concept. In the following mapping, three international readers are marked as stepstones. They point to how the two concepts have derived from similar scientific and social roots and taken much the same routes since the mid-twentieth century. The first reader starts from the participatory design end, whereas the latter two starts from the participation end.

In the *Routledge international handbook of participatory design* (Robertson & Simonsen, 2013) the concept is traced back to the various social, political and civil rights movements of the 1960s and 1970s in U.S.A. According to the editors, designers and design researchers, at first within urban planning and since within information technology and computer system design, responded to this by investigating how they might relate the new ideas to their own practices and working conditions. The project was further pioneered in Europe and especially in Scandinavia as part of what became known as the workplace democracy movement during the 1970s. Since then it has evolved into a distinct concept to signify 'the direct involvement of people in the co-design of the artefacts, processes and environments that shape their lives' and thus been extended from workers and the workplace to 'ordinary' citizens and public life (Robertson & Simonsen, 2013, p. 2). Accordingly, participatory design is not defined by formulas, rules and strict

definitions but by a commitment to core principles. These, in turn, are informed by a rich heritage of projects, methods, tools and techniques from specific design contexts. The defining principles as listed by Robertson and Simonsen (2013, pp. 3–10) are:

1. To take a stand
2. Genuine participation
3. Mutual learning
4. Practice
5. Design

The first means to give primacy to human action and people's rights to participate in the shaping of the worlds, in which they act, and make design about designing futures for actual people. The second implies a fundamental transformation of the users' role from being merely informants to being legitimate and acknowledged participants in the design process. Following from these two, mutual learning and the setting up of mutual learning processes are further defining commitments. These basic principles next lead to questions such as: what does participation mean in terms of actual power to make decisions; who needs to participate and how can this be managed and supported; how can the design process itself be designed so people can participate in it; and what kinds of design tools and methods is needed? (Robertson & Simonsen, 2013, p. 5). The whole project still rests on the dual principles of practice and design to reinforce the interplay of creative and intellectual forces and enhance 'reflection-in-action.' In the end, the list discloses a dynamic paradox and implicit challenge: reverberating at the edge of design and participation, professional skills and democratic objectives.

Prior to the reader in participatory design, quoted above, social anthropologist Andrea Cornwall edited *The participatory reader* (Cornwall, 2011). She argues that the concept is basically about transformative political action and that it, inspired by the radical social movements of its time, took shape in social and community research from the early 1960s and 1970s. Basically, the concept is about autonomous social action, generated from below. However, the reader among others includes urban planner Sherry Arnstein's still much cited article 'The ladder of citizen participation' (Arnstein, 1969). The article presents 'a ladder' of participation in relation to public governance: from the lower (non-participatory) end of manipulation and therapy through the middle part (tokenism) of consultation and placation until the upper end (citizen power) of partnerships and delegated power and at the very top full citizen control (Arnstein, 2011 [1969], p. 217). Cornwall concludes that participation has come to include certain forms of 'invited' participation by governmental or non-governmental agencies, the intention of which allegedly is a distribution of power, but which has also made it a more ambivalent concept (see also Cornwall, 2008).

Unlike the former two, the reader *The participatory cultures handbook* (Delwiche & Henderson, 2013) traces the heritage of participatory cultures as a cultural

phenomenon. Again, the origins are found in the social movements of the 1960s and 1970s, including a computer underground that goes even further back to the late 50s and is closely connected to the rise of the so-called New Left (Delwiche, 2013). The reader predominantly is about how new digital cultures have evolved from these roots and today take more mundane forms. Kelty (2013) argues that in order to address today's digital cultures it is important to distinguish between media, technologies and platforms, and trace how they relate to other concepts such as formal social enterprises and organised publics in order to explore the way specific media technologies and platforms 'distribute rights, power, and resources' (Kelty, 2013, p. 27). He further argues that whereas participation was first understood to benefit the participants, it is now also expected to effect institutions, organisations and technologies. He concludes, that 'participation is no longer simply an opening up, an expansion, a liberation, it is now also a principle of improvement, an instrument of change and a creative force that cuts across different societal arenas.' Consequently, 'it no longer threatens, but has become a resource: participation has been made *valuable*' (Kelty, 2013, p. 24).

Yet other crossroads between social, technological and natural science research and practice have arisen to contribute to the conceptual work, for instance in new interdisciplinary knowledge fields such as sustainability and climate. At these new crossroads the twin concepts meet other concepts such as citizen science and citizen 'sensing.' Researchers within these fields document how participation is already included in everyday practices understood as inter-actions of objects, technologies and humans, and argue that sustainability and climate actions may tap in on such practices to again re-enforce them by providing conceptually grounded procedures, tools and techniques (Gabrys, 2017; Marres, 2012). They also argue that such processes are multi-faceted and the outcome equally multi-valent (Lury & Marres, 2015). One of the prerequisites of participatory design is that while it generates unexpected surplus and side effects, it is also unpredictable and imbued with mistakes and errors.

What comes across this short mapping of the field is, for the one thing, that participation and participatory design are performative concepts to imply a transformative action that involves people, things/technologies and procedures. Next, it has also become clear that such transformative processes are open and multi-dimensional and even messy to be guided not only by a mutual investment in the process but also a considerate outline and explicit communication. A point, I shall pursue in the following section on how the twin concepts have travelled into museum studies and museum practice.

## Participatory design and participation in museums

The basic ideas and principles of participation were translated into a museum context in the late twentieth century (Weill 1999). Since then, the enrollment of visitors in museums has been at the agenda as means to transform visitors as well as museums and revitalise their relevance as *public* institutions (Simon, 2010, 2016).

Simon (2010) refers to Arnstein's 'ladder of participation' and lays out some progressive steps for the museum to take from different forms of visitor contribution through different types of co-creation and co-decision onto hosting diverse community-generated initiatives. Simon does not rank the different steps, though, but considers them equally legitimate instruments to engage the public, and to be chosen between with a view to the specific museum, context and situation. She thereby also suggests establishing a more flexible and even pragmatic approach.

Pruulmann-Vengerfeldt and Runnell (2011), on their side, underscore museums' obligation to take the lead in societal transformative action and suggest an explorative approach by which visitors are made partners in 'experimental knowledge laboratories.' Taking this idea further, Sitzia (2020) introduces the related concept of public agency. She challenges the phrasing of Simon and others that museums today constitute a public contact zone to instead put the alternative claim forward that they equally are, and should be, a conflictual zone or 'battlefields of agency' (Sitzia, 2020, p. 186). Agency, then, implies 'a tense field of practice' in terms of collectives of stakeholders struggling to have their intentions met and mirrored in the outcome: besides professionals, museum departments, public authorities and eventually private agencies not least visitors conceived as citizens and local communities. This is to be felt most intensely in terms of the participatory step, that Sitzia wants to add to Simon's list, namely that of collection management by which the public is given a widened authority to enter the professional engine room and the level of museum governance. Sitzia accordingly speaks of a 'composite' agency but does not unfold the implications in any detail. Instead, she calls for a diversity of participatory practices to go beyond the ladder-model-way-of-thinking. She underscores that also collection management can take many forms, depending on context and situation. Nevertheless, her message is that to trigger the kind of public agency, she argues for, a rigorous design of participatory activity in each museum, exhibition, etc. is needed even if the process itself still must be open and directed by the mutual investment (Sitzia, 2020, p. 188).

What Sitzia calls attention to here, is the dynamic paradox which arises from the performative quality of participatory design, that for transition to happen there must be a considerate script with a clear sequel and transitory passage points. Along with this argument, Dufrasne and Patriarche (2011) suggest thinking of participation as participatory genres that constitute organising structures and establish repertoires of elements to be adjusted to the specific purpose. They also suggest that they may be analysed – and designed – according to six dimensions: why (purpose), how (degree), what (sequence), who/m (ratification), when (frequency) and where (location). Even if participation planning seems to be a conceptual oxymoron, success is claimed to depend on the degree of informed preparation and modulation. In the following, I shall suggest a method that takes a middle ground in balancing the more idiomatic and the more pragmatic, the more prescriptive and the more explorative approach to participatory design.

## An applied model for design analysis and practice

The approach, which I shall pursue, stays with the radical visions of participatory design, embedded in the former listed normative principles to supplement them and make them a set of well-described analytic and prescriptive criteria (Kelty et al., 2015). It presents a ‘7 dimensions-take’ on participatory design that is developed in the context of informational technology, but which is applicable to other contexts. The intention is to guide research-based practice in a widened field of participatory design by providing a prescriptive methodology that demonstrates the normative basis of the agenda but also provides a concrete tool for analyses and implementation while still leaving room for experimentation. The seven dimensions as listed by Kelty et al. (2015, p. 475) are as follows:

1. The educative dividend of participation
2. Access to decision making and goal setting in addition to task completion
3. The control or ownership of resources produced by participation
4. Its voluntary character and the capacity for exit
5. The effectiveness of voice
6. The use of metrics for understanding or evaluating participation
7. The collective, affective experience of participation

The first point settles learning as a vital part of participation and is concerned with not only content but as much with the learning process itself, including learning how to participate through participation. Kelty et al. thus distinguish between what they call new skills and ‘civic virtue,’ respectively, to designate the ongoing, mutual process of democratic education. The second point highlights that taking part in decisions has, on the one hand, to be anchored in factual task completion and, on the other hand, stretch into the goal-setting agenda of the task in question. It, again, is interdependent of the specific organisation and whether it takes the form of formal social enterprises or organised publics (to be further explained in Kelty, 2013). Museums as public institutions necessarily belong to the former and need to negotiate how far they can go in terms of their flexibility.

The third point is decisive, however often overlooked in practice: it is about the control and ownership of resources produced by participation. Often, they are also not easy to define since they take intangible forms. Maybe more surprising, the fourth point concerns a crucial right to withdraw from the process – without penalty but still with resources. The fifth point, again, is an absolute prerequisite since the issue of ‘voice’ is one of the most central capacities for participation in deliberative democracy (Kelty et al., 2015, p. 482). Still, it might also be slippery as a right to ‘speak out’ without negative consequences and in order to influence the very outcome of the task or process in question. It is also often not made visible and made feasible by feedback mechanisms. To nail it down, it is according to the authors necessary to have a sixth principle of metrics that monitors the collective as well as the individual outcome and makes the gain of participation visible to the

participants as well as the organisation. The final, and seventh, principle cuts across the former and maybe is the one principle that is best attuned to today's demand-side of participation: that of collective, affective and communicative experience. It is related to Cornwall's notion of collective action and Sitzia's notion of public agency to here underscore the dimensions of affective, mutual engagement. The authors refer to the sociologist Emile Durkheim's term 'collective effervescence' that designates an intense feeling of collective transition.

## The case study at the Workers Museum

In what follows, I shall take the Workers Museum as a case and put focus on the triple initiative of the exhibition *Activist!*, the partnership with young *Museum Rebels* and the *Protest Workshop* as an installation and activity center during the exhibition. The case is chosen due to the museum's advances in democratic education as argued by the DASA and the 'Young Voices' committee, respectively. On this ground, the triple initiative is considered a critical case in Flyvbjerg's (2006) sense of the word, meaning that the object of study will most likely show some of the characteristics of the outlined principles of participatory design. Next, the case is exploratory, in the sense put forward by Yin (2014), meaning that it is partaken to explore the analytical and advisory power of the framework. The question, the case study is designed to answer, is whether and to what extent the chosen framework for participatory design is instructive as an analytic and practice-oriented tool.

The case study builds due to the COVID-19 shutdown of Danish museums from March to June 2020 on the digital archives of the museum website, a Zoom interview with the two involved curators<sup>2</sup> and a FaceTime interview with a *Museum Rebel*.<sup>3</sup> As argued in recent discussions on digital methods, the video-based online interview comes close to the physical face-to-face interview but have both advantages and disadvantages in comparison. Even if semi-structured by intention, it is often more firmly orchestrated, which was also the case here, but also often supplemented by written comments during the interview and often more open to subsequent clarifications in writing and by email (O'Connor & Madge, 2017; Salmons, 2016). The main interview with the curators was partaken as a recorded one-hour interview to be followed by clarifying questions and deepening answers, including access to non-public documents such as applications and exhibition manuscript. The interview with the trainee was a half hour, tape-recorded interview to be followed by a short SMS-exchange. All interviewees have given informed consent and chosen to not be anonymous. They have further confirmed citations (trainee) and the way, they are referred to (curators).

To the context of the case study is to add, that the Workers Museum from the very start has been situated in a conflict zone due to its origin and purpose, and during the years been critically observed by the political right as well as the political left beyond the Social Democratic Party (Ludvigsen, 2009). In order to navigate in this politicised climate, the museum has up till now given high priority

to their permanent interior exhibitions of worker housings and working sites and less attention to the political history of the labor movement that is so closely connected to the history of the Social Democratic Party (Enstrøm & Stender, 2019; Ludvigsen, 2009). However, the strive to have the building on UNESCO's tentative list and a donation of 16 mill. Danish crowns to restore the by tradition rich Banquet Hall<sup>4</sup> have put the labour movement and its history of organisation and political struggle at the front to be actualised in a new national as well as global context. The so-called Arabic spring, the new democratic movements in southern Europe, and recent global youth and climate activism are all signals of new political openings. This is to be felt in a recent visitor study, according to which they ask the museum to stand by its heritage and put its values up front.<sup>5</sup>

It now seems timely for the museum to introduce the triple initiative of the exhibition *Activist!*, the organisational setup of the *Museum Rebels* and the combined installation and training center of the *Protest Workshop*. The aim of this triple initiative is to engage visitors and particularly youngsters in the roots and routes of democracy and contribute to democratic revitalisation. Within the overall take of this article, the question is to what degree or in what sense the outlined framework of participatory design is useful to analyse the way this triple initiative has been taken forward but also whether it would possibly fertilise the yet ongoing process. One overall challenge in applying the model is that the initiative is composed of a range of partnerships to include, at the one end, a university-based research group<sup>6</sup> and 30 activist interviewees, and, at the other end, a range of school classes and groups from youth organisations – the so-called *Museum Rebels*.<sup>7</sup>

I shall in the following analyses focus on the partnerships with school-classes and other groups of organised youth as *Museum Rebels* to take the form of a range of workshops to also prepare the *Protest Workshop* as concept, practise and installation during the exhibition. Each group of youngsters is enrolled at different stages and in different parts of the initiative and in such a way that the outcome, in the first place, rests within each group and workshop. Still, the initial workshops are meant to define the basic questions to be raised in the exhibition, whereas the later workshops are meant to take on a continued dialogue with the exhibition in such a way as to enhance a flow between workshops and between them and the exhibition to form a bigger imaginative collective of *Museum Rebels*.

### **The triple initiative: *Activist!*, *Museum Rebels* and *Protest Workshop***

The exhibition *Activist!*, planned to open in February 2021, has been in the pipeline for several years to be prepared partly through the above-mentioned research project, partly through initial workshops with school classes and other groups of youngsters to constitute a first 'wave' of *Museum Rebels*. The research project on Danish left-wing political activism asks how Danes engage in politics and relate to various forms of activism in the timespan 1960–2020. It includes a survey with respondents to represent the Danish population ( $N = 2500$ ) as well as



in-depth interviews with 30 self-declared living activists, involved in different types of political action from the anti-nuclear marches via the peace movements' sit-downs onto today's school strikes Fridays for Future. The material will be displayed in the exhibition in the form of statistics and excerpts from the survey, filmed and recorded interviews with the activists and 'talks' with the researchers. These original materials will be supplemented by documents, artefacts and audio-visual reportages to further enlighten the documented stories and events. Besides, the initial workshops with first wave *Museum Rebels* will be integrated in the exhibition in different ways for instance as citations on wall stickers that represent a present-day view on the issues, brought to the fore by the historic material. Throughout the exhibition, the voices of the different partners/participants are put in dialogue. Also, the museum visitors will be encouraged to engage, take a stand and make their voices heard in various ways throughout the exhibition. As to the overall purpose of the exhibition, it is stated by the curators that:

The aim of the exhibition is to appreciate people's democratic, activist engagement from the point of view that activists contribute to keeping democracy alive through their work. The museum does neither hail nor condemn specific forms of activism but provides a room where activists' own voices are heard, where the Danish population's general approach towards activism are communicated on the ground of new research, and where the visitors to the exhibition are invited to reflect and take a stand as to what they think activism is, can and should be. (K. Kamp-Albæk, e-mail exchange with author, 22 May 2020)

The overall priority on behalf of the museum thus is giving voice (principle 5) to the different partners/participants: survey informants, activist interviewees, museum rebels and eventually 'ordinary' visitors, and have them fertilise each other in different ways to enhance a mutual educative dividend (principle 1). The different partners do not come together as a manifest social collective but rather as contributors to an imaginative collective of museum rebels to ideally have a communal experience of participation (principle 7) – even if not direct 'access to decision making and goal setting in addition to task-completion' (principle 2) or 'control or ownership of resources produced by participation' (principle 3). Or rather these principles rest with the way, the different groups are enrolled, first and foremost the *Museum Rebels* of the initial as well as the subsequent *Protest Workshops*.

What came forth in the interview with the museum professionals is that the basic take on the exhibition has grown out of the early workshops with *Museum Rebels* and the enrollment of young trainees during the early planning process. It is these early activities, starting out already in 2018, that have gradually formed the take on the exhibition to have the rebels have an imprint on the basic script. The *Museum Rebels* have as an institutional setup and ongoing activity been established before the present initiative to be now taken further as a continuous part of the museum's educational activities to enforce the democratic *Bildung* of youth. The reasoning

behind is that even if Danish youth according to several surveys are among the most democratic informed in Europe, they are still underrepresented in public debate and governance and often doubt their own democratic mandate and right to have a voice. In the context of the *Activist!* exhibition, the *Museum Rebels* are made an integral part of the process from the very start and thus a part of the initiating design process. The youngster, I interviewed, was a young 8th-grade trainee, who as part of her job had to take part in the National Youth Assembly 2019 and engage peers in the issue of political activism. Besides she was asked to critically evaluate the at the time ongoing exhibitions and present her ideas for the professionals to implement in the upcoming exhibition. According to the trainee, she felt enthusiastic about the way she was listened to and heard: 'They even took a lot of notes,' she said. Asked about her own outcome, she commented that it gave her a new enthusiasm for and way of learning civics as her chosen school subject. She still stays informed about the museum and has joined a later exhibition on communism with her school class, even if she does not explicitly identify with the term *Museum Rebel* – 'it is more a word for the way the engage young people,' she reasons.

Up till now the *Museum Rebels*-initiative has primarily been with partners in the region of the capital, but in the context of the *Activist!* exhibition school classes as well as youth organisations all over the country have been invited to participate in initiating workshops through an open call. The purpose has been to identify the core questions of and the take on the exhibition by which present-day understandings of political engagement can be challenged with a view to how it might look like in the future. The early workshops are further meant to establish three platforms for the subsequent *Protest Workshop* each of which to generate a range of activities. One of the ideas that, according to the curators, has come up is to have the concept more permanently established as an alternative to the in Denmark school-based preparation for Christian confirmation (7th to 8th grade) to instead have a certificate as educated democrats.

Asked about the most visible imprint of the early *Museum Rebels* on the exhibition, the curators answer that what has come across the different workshops in the early phase is that activism basic means to take a stand and act upon it. It was generally phrased by the youngsters as a question of 'head' and 'heart' to interact and come out through 'the hands.' This bodily choreography has been grasped to form the basic design of the exhibition as a transformative journey with a sequel of steps to be taken, materialised as a movement through four exhibition rooms: (1) the personal stories of activists with an emphasis on motivation, choices and emotional engagement; (2) a synchronic display of different activist causes, formats and tools; (3) a diachronic outline of six decennials of activism in context of their time and the road taken from beginning to end; (4) reflection on means and ends, testing how far the actual museum visitors would go themselves: for what, with what means and at what price. The exhibition journey ends with the *Protest Workshop* as a platform to take on new action. In all sequences, the voices of the different partners/participants are blended and mixed with different types of materials, objects and media. In order to mark the presence of the *Museum Rebels* all

the way, stickers with citations and formed as hearts, heads and hands guide – and challenge – throughout.

Whether visitors would enter *The Protest Workshop* is vocational as is the booked sessions in the installation with museum educators and activists (principle 4). The *Protest Workshop* is thought of as partly a physical installation in the exhibition, partly a dynamic zone for multiple youth-centred teaching activities and programmes during the exhibition. In these new workshops, youngsters from schools, organisations and associations will meet people with different experiences and competencies and learn how to plan campaigns, raise debates and agitate, to in the end choose a burning question to be addressed and practice the skills themselves. The exact design of the installation is yet on the sign board to take the form of a literal as well as digital workshop in which visitors can transform into activists and produce their own remedies. One of the inspirations is found in a historic toolbox from the Socialist Youth Front (SUF)<sup>8</sup> with all the elements needed for their activities during election campaigns from sprays and stencils to fabrics for banners.

The rationale of the *Protest Workshop* is a learning-by-doing experiment by which first and foremost the enrolled youngsters can perform as protesters and experience an instant outcome of their engagement. Each workshop is participatory in the sense that the outcome is defined by the youngsters to take part in it. Possible outcomes would be production of posters, podcasts or campaigns on social media to be also included in the exhibition along the way. As to the principles of participatory design, the core principles 2 and 3, concerned with goal setting, ownership and control of resources, are an integrative part of each single workshop. It is less obvious how they inform the overall initiative since it is up to the museum professionals to orchestrate the interchange. This again leaves the museum with a moral obligation to be acted upon by attuning to the tone and voice of the involved youngsters. Besides, the *Museum Rebels* have suggested a broader definition of activism to be taken by the curators, including subjects such as animal welfare, vegetarianism and food trashing as well as actions such as speaking up in class, in the school yard or at home. Finally, a ‘wishing well’ of due causes has been created to gather further visions from incoming (young) visitors.

## **Conclusion: participatory design in the experimental museum**

Returning to the seven prescriptive criteria listed previously (Kelty et al., 2015, p. 475), it has become clear from the analyses of the triple initiative that the principles 1–3 are met within each partnership and workshop to also influence the exhibition even if in different ways and to different degrees. The early *Museum Rebels* have had a rather deep impact on the design of the exhibition *Activist!* already at the initial conceptual level. The youngsters, who are going to be involved during the exhibition and in the *Protest Workshops*, will have their ideas worked out immediately. All are enrolled in a limited space of time, and thus are not part of the process all the way through. This makes sense since we are speaking of youngsters

and for the bigger part of school classes and even school extinction classes to whom the engagement necessarily is timed. It nevertheless underscores that the influence on goals and control of resources is primarily cashed at the micro-level of workshops. To some participants, it will without doubt have consequences for their sense of ownership and specific identification as museum rebels as also seen in the interview with the trainee (principle 7). As the analyses have put forward, the multiple voices nevertheless contribute each their way to shaping a broader vision and affective engagement to also be felt and sensed in the interviews. Thus, the principles 1–3 and 7 can be said to be met as a basic imprint on the atmosphere and mood of both exhibition and workshops. Principle 4 – voluntariness – is a basic criterion of all three legs of the initiative, even again at the level of the school class and for the teachers to also be responsible for. Criterion 5 – voice – is the criterion accounted most consistently for by the curators and in the analysis. Not only the voices of the young rebels, but also the voices of researchers, survey-respondents, activists and visitors to reinforce or challenge each other, and shape a joint engagement with burning questions and a will to change. Criterion 6 – the use of metrics to value participation – again is a tricky one not only in the partnerships with schools and youngsters but in them all and as a general challenge to participatory design in public institutions. During the interview with the curators, this led to an open discussion of possible feedback mechanisms to secure that not least the youngsters/school classes experience to have contributed, how and with what. It might also contribute to the institution's/museum's own evaluation. To have more explicit measures for the outcome and value of participation and of the gain, when using participatory design methods, seems crucial in order to stipulate what a participatory design practice in fact can do to an exhibition and to the institution now and in the future.

Overall, the case study has shown the seven-dimensions model to be a relevant tool for a practice-oriented analysis and demonstrated how it can be done. It has helped balance the normative and pragmatic perspective and bring the conceptual coherence and practical implications forth to also point to where practice can be qualified. It has been a limitation of the case study that the voices of the *Museum Rebels* have not been heard with the same consistency as that of the curators. It would no doubt have brought other aspects to the fore if not changed the direction of the analyses and suggestions. What the seven-dimensions criteria are less suited for is to deliver a straightforward typology in the tradition of Arnstein's classic ladder-model or as seen in newer and more flexible graphic models such as triangles, stars, etc. It can also not tell how to adjust to specific types of museums or specific user groups and partners. The strength of the seven-dimension model lies within it *not* being a model but a dynamic set off criteria. Due to the solid anchoring in the conceptual heritage of participation and participatory design, it constitutes a guide and checklist for each museum to take on, elaborate and adjust, when the specific circumstances, intentions and range of activities are considered and accounted for. Even if the concept now has half a century on its back, it is still on the go to scaffold the experimental museum and the continued work on the 'design of design.' As put forward in the introduction to *Museum Activism*

(Janes & Sandell, 2019), seeking to purposefully bring about social change today, although the idea remains controversial, is the way many visitors, museum professionals as well as governmental bodies think about the roles and responsibilities of museums as knowledge-based social institutions, even if with differing ends.

## Notes

- 1 The prize was 1.4 million DKK. According to the museum, the title *Protest Workshop* might be changed to *Activist Workshop*.
- 2 The interviewees are the curators Kristine Kamp-Albæk and Kristine Møller Gårdhus. Programme director Linda Nørgaard Petersen took part in an e-mail exchange, before and after.
- 3 The interviewed museum rebel, Karen Anna Kroon, was an 8th-grade trainee (aged 14) from spring 2019. She was pointed out to me by the curators, a fact which has to be taken into account when weighing her contribution.
- 4 Composed of a grant from the Augustinus Foundation (10 million DKK) and the AKF Foundation (6 million DKK).
- 5 The museum in 2018 engaged with a private consulting agency (OPERATE) to have a visitor study. The report is not public, but referred to by Enström and Stender (2019).
- 6 The research project 'Grassroots, protesters and extremists: Political leftwing activism 1960–2020' (2018–2020) was conducted by professors Lasse Lindekilde and Thomas Olesen at The Department of Political Science, University of Aarhus, and archivist at The Workers Museum Jesper Jørgensen.
- 7 According to the museum, 1,074 pupils distributed across 33 school classes and 23 schools and a few other groups at the museum have been enrolled up till now (May 2020). Further workshops are scheduled for the autumn 2020.
- 8 SUF is the informal youth section of the political left-wing party 'Enhedslisten,' represented in the Danish Parliament.

## Bibliography

- Arnstein, S. R. (2011). A ladder of citizen participation. *Journal of the American Planning Association*, 35(4), 216–224.
- Bak-Jensen, S., & Jensen, M. (2018, 9 April). Folkets huse: Fællesskabets verdensarv [The people's houses: The world heritage of the community]. *Berlingske*. <https://www.arbejdermuseet.dk/kronik-folkets-huse-faellesskabets-verdensarv/>
- Bal, M. (2002). *Travelling concepts in the humanities: A rough guide*. University of Toronto Press.
- Carpentier, N. (2011). The concept of participation: If they have access and interact, do they really participate? *CM Communication Management Quarterly*, 6(21), 13–36.
- Cornwall, A. (2008). Unpacking 'participation': Models, meanings and practices. *Community Development Journal*, 43(39), 269–283.
- Cornwall, A. (2011). Preface. In A. Cornwall (Ed.), *The participatory reader* (pp. xii–xx). Zed Books.
- Cornwall, A. (Ed.). (2011). *The participatory reader*. Zed Books.
- Delwiche, A. (2013). The new left and the computer underground: Recovering political antecedents of participatory culture. In A. Delwiche & J. J. Henderson (Eds.), *The participatory cultures handbook* (pp. 10–21). Routledge.
- Delwiche, A., & Henderson, J. J. (Eds.). (2013). *The participatory cultures handbook*. Routledge.
- Dufresne, M., & Patriarche, G. (2011). Applying genre theory to citizen participation in public

- policy making: Theoretical perspectives on participatory genres. *CM Communication Management Quarterly*, 6(21), 61–86.
- Enstrøm, L. M. S., & Stender, L. M. (2019). *Arbejdermuseets fremtidige formidling: Arbejdermuseets omstillingsproces fra etablering frem til i dag* [The future communication strategy of The Workers Museum], MA thesis, University of Southern Denmark.
- Eriksson, B., Stage, C., & Valtysson, B. (Eds.). (2020). *Cultures of participation: Arts, digital media and cultural institutions*. Routledge.
- European Museum Academy. (2019, 21 September 2019). 2019 EMA awards. Press release. file:///C:/Users/annescott/Downloads/Press-Release-2019-European-Museum-Academy-Awards.pdf
- Flyvbjerg, B. (2006). Five misunderstandings about case-study research. *Qualitative Inquiry*, 12(2), 219–245.
- Gabrys, J. (2017). Air walk: Monitoring pollution and experimenting with forms of participation. In C. Bates & A. Rhys-Taylor (Eds.), *Walking through social research* (pp. 144–161). Routledge.
- Gether, C., Jalving, C., & Høholt, S. (Eds.). (2017). *The art of taking part*. ARKEN Bulletin 7. [https://www.arken.dk/wp-content/uploads/2017/04/bulletin-2017\\_lowres.pdf](https://www.arken.dk/wp-content/uploads/2017/04/bulletin-2017_lowres.pdf)
- Janes, R. R., & Sandell, R. (2019). Posterity has arrived: The necessary emergence of museum activism. In R. R. Janes & R. Sandell (Eds.), *Museum Activism*. Routledge.
- Kelty, C. M. (2013). From participation to power. In A. Delwiche & J. J. Henderson (Eds.), *The participatory cultures handbook* (pp. 22–32). Routledge.
- Kelty, C. M., Panofsky, A., Currie, M., Crooks, R., Erickson, S., Garcia, P., Wartenbe, M., & Wood, S. (2015). Seven dimensions of contemporary participation disentangled. *Journal of the Association for Information Science and Technology*, 66(3), 474–488.
- Ludvigsen, P. (2009). History of the Workers' Museum in Denmark. *International Labor and Working-Class History*, 76, 44–53.
- Ludvigsen, P. (2013). Workers' assembly halls as a proposition for UNESCO's World Heritage. *International Journal of Heritage Studies*, 9(5), 908–938.
- Lury, C., & Marres, N. (2015). Notes on objectual valuation. In M. Kornberger & A. Koed Madsen et al. (Eds.), *Making things valuable*. Oxford University Press.
- Marres, N. (2012). *Material participation: Technology, the environment and everyday politics*. Palgrave.
- O'Connor, H., & Madge, C. (2017). Online interviewing. In N. G. Fielding, R. M. Raymond, & G. Blanck (Eds.), *The SAGE handbook of online research methods* (pp. 416–434). SAGE.
- Pruulmann-Vengerfeldt, P., & Runnell, P. (2011). When the museum becomes the message for participating audiences. *CM Communication Management Quarterly*, 6(21), 159–179.
- Robertson, T., & Simonsen, J. (2013). Participatory design: An introduction. In T. Robertson & J. Simonsen (Eds.), *International handbook of participatory design* (pp. 1–17). Routledge.
- Roskilde Festival. (2020, 16 April). Press release. <https://presscloud.com/csp/vocast/message.csp?KEY=489870174634570>  
[https://slks.dk/fileadmin/user\\_upload/0\\_SLKS/Dokumenter/Museer/Museumsvirksomhed/Kvalitetsvurdering/Arbejdermuseet\\_Kvalitetsvurdering\\_2018.pdf](https://slks.dk/fileadmin/user_upload/0_SLKS/Dokumenter/Museer/Museumsvirksomhed/Kvalitetsvurdering/Arbejdermuseet_Kvalitetsvurdering_2018.pdf)
- Salmons, J. (2016). *Cases in online interview research*. SAGE.
- Schwartz, C., & Sørensen, A. S. (2018). Artivism and the para-institution; The Partisan Café and Museum of Burning Questions, Bergen Assembly 2016. *The Journal of Nordic Museology* 2/3, 121–135.
- Simon, N. (2010). *The participatory museum*. Museum 2.0.
- Simon, N. (2016). *The art of relevance*. Museum 2.0.

- Sitzia, E. (2020). Public participation and agency in art museums. In B. Eriksson, C. Stage, & B. Valtysson (Eds.), *Cultures of participation: Arts, digital media and cultural institutions* (pp. 185–200). Routledge.
- Sørensen, A. S. (2016). Participation: The new cultural policy and communication agenda. *Nordic Journal of Cultural Policy*, 19(1), 4–18.
- Weill, S. E. (1999). From being about something to being for somebody: The ongoing transformation of the American Museum. *Daedalus*, 128(3), 229–258.
- Workers Museum, The (n.d.) Homepage. <https://www.arbejdermuseet.dk/en/>
- Yin, R. K. (2014). *Case study research* (5th ed.). SAGE.

# 12

## IMPLICATIONS AND PERSPECTIVES FOR EXPERIMENTAL MUSEOLOGY

*Kirsten Drotner, Michael Haldrup, and Marianne Achiam*

As this volume demonstrates, experimental museology is about change. This is because experimentation by definition involves pushing boundaries, questioning institutional roles, routines and transgressing familiar ways of doing things. In that sense, experimentation is not limited to one dimension of the museum and its modes of communication. Experimental processes may focus on theoretical or practical dimensions, and they can evolve at different scales, from tweaking existing modes of collaboration to transforming organisational strategies. Experimental processes may also be set in motion by different agents related to museology, such as researchers, museum leaders or professionals or museum audiences. Moreover, experimental processes may be intended to serve different purposes, catalysing incremental or radical change. Yet, for all of these aspects experimental museology illuminates fundamental contingencies. Intended and actual practices, priorities and purposes do not always add up, and change processes materialise within structural dilemmas beyond the immediate remit of museums, as we uncovered in the volume introduction.

The preceding chapters offer a range of captivating examples of how to navigate these contingencies with regard to museum institutions, modes of representation and user engagement. Taken together, the chapters document how many museums deal with change by challenging received notions of their relations to the world around them. They move towards more contextualised, critical and communicative positions; and, as we argued in our introduction, museology needs to follow suit and, at best, catalyse these processes by adopting more holistic approaches to theory and practice.

Cutting across individual chapters, three implications stand out as particularly pertinent when navigating these contingencies through holistic approaches. There are ethical implications when museum institutions explore new and dynamic forms of collaboration; there are implications with regard to diversity when



museums design novel modes of communication; and democratic implications when museums engage with communities holding divergent affinities and values. So, here we chart key insights about these implications across the volume to help identify principles and suggest guidelines for successful change processes when museums enter uncharted territories of experimentation.

## Handling ethics in dynamic processes of collaboration

Concern for ethical issues is not new to museums, and all museums joining ICOM must subscribe to its global code of ethics as a binding guideline of professional practice. Yet, a corollary of socio-technical changes, as outlined in the introduction, has sparked a reappraisal of what Janet Marstine calls the ‘moral agency’ of museum institutions (Marstine, 2011, p. 5). This focus moves ethical considerations away from general codes and guidelines for individual museum professionals and on to specific institutional practices of what the museum ‘does with its resources, and for whom’ (Marstine, 2011, p. 8).

Such considerations are particularly pertinent when museums explore experimental approaches that will often involve the formation or expansion of new partnerships, from design companies and leisure industries on to NGOs, local community groups and wider global social and cultural networks and interests. Some of these partners may sign formal contracts with a particular museum as a basis of collaboration. Other partners’ operations may not be defined by legally binding regulations and rules of governance. This will often be the case for local community groups and online networks whose members, rather than having clearly demarcated common interests and identities, are bound by ‘weak ties’ (Granovetter, 1983) and rarely have the resources of rights claiming should their autonomy, integrity or privacy be challenged during collaboration with a museum. Such challenges are particularly pertinent when experimentation involves the generation of digital data because museums have only recently begun to address the ethical issues involved in datafication and corporate platformisation (Pruulmann-Vengerfeldt & zu Hörste, 2020).

Processes of experimentation and exploration are most successful when they are practised on a basis of equity and trust, because all parties involved enter uncharted territory in a physical and mental sense. Yet, the structural conditions of such processes often rest on inequities of power with museums having the upper hand. The possibility of conflicts between processes and their foundations put extra ethical demands on the museum to act with due diligence, including exerting public accountability about the processes, the choices made along the way and the outcomes.

This volume provides a number of illustrations of how ethical dilemmas are handled. For example, Haitham Eid, in Chapter 8, stresses that public admittance of experimentation failures is actually a major means for museums to build public trust, because it affirms values of transparency and fairness. Similarly, the contribution by Jennifer Carter and Christina Lleras, in Chapter 3, shows what

happens when ‘process becomes praxis’ and they explore how museums may benefit when their staff engages in continuous reconsiderations of the conceptual foundations and framework of their museum in addressing a contentious past. By providing audiences with a narrative of Columbia’s armed conflict that revealed the structural dimensions of the conflict while also encouraging deeper personal introspection and interpretive responsibility in terms of the conflict, the museum offered its audiences a different kind of understanding, and it became responsive to public dialogues on the evolving peace process. A similar ambition is clearly at stake in Erika Grasso’s and Gianluigi Mangiapane’s contribution, in Chapter 4, on how a museum institution reflects on collections as bearers of critical memories and unfair relations between cultures as an opportunity to enhance social inclusion. Finally, Anne Scott Sørensen, in Chapter 11, demonstrates how the continuous involvement of young people in developing museum initiatives through continuous participation, evaluation and feedback not only increases their ownership and representation, it also adds to the multi-vocality of researchers, survey-respondents, activists and visitors who both reinforce and challenge each other, thus shaping a joint engagement with burning questions and a will to change.

The ethical implications of museum experimentation call on museums to actively promote principles of ethical interaction with the outside world. Such principles should go beyond general statements of accountability and be specific principles that can guide practice. An obvious first start is to learn from existing work, for example in qualitative research and citizen science (Rasmussen & Cooper, 2019; Miller et al., 2012), and draft written procedures, or letters of understanding, when partnering with local communities, underserved groups or NGOs. Such procedures should, as a minimum, spell out all participants’ basic rights and responsibilities, including informed consent on data generation, storage and use, decision-making procedures and copyright to results, accurate expectations for participation, means of protection, possible remuneration and resolution of conflicts.

## **Developing diversity of communication**

Museums experiment for different reasons. Some may act on political priorities to demonstrate potential of public innovation; some may wish to challenge their own received notions of proper museum work; and others may seek adjustment to changed financial, political or technological circumstances through reimagining their interactions with the outside world. Whatever the reasons, much museum experimentation focusses on developing a greater diversity of communication than museums have done before. Underpinning these developments is a widening recognition that museums are not neutral institutions and impartial spaces of representation. Museums are always enmeshed in socio-cultural, economic and political processes, which may not be of museums’ own making but which nevertheless colour their worldview and range of actions. European museums, with a long tradition of public funding and ideals of public good, operate under

very different conditions from museums in regions with more recent, or more restrictive, notions of public good and equitable access; and museums in the U.S.A., in their turn, are more dependent on corporate and private sponsorships and individual visitor satisfaction. While macro-level ramifications of museums differ markedly, their micro-level effects are that museums around the world attend to their surroundings as rarely before; and they increasingly realise that one size of communication does not fit all. Importantly, this focus on communicative diversity does not merely involve an incremental widening of existing tools – providing spectacular exhibitions on popular themes or launching flashy and user-friendly websites. Experimenting to capture a greater communicative diversity basically involves more radical forms of innovation where new communicative tools are applied and where existing tools are combined in unfamiliar ways. Importantly, such experiments equally reshuffle taken-for-granted perceptions and professional knowledge claims, because communication is always about something for somebody. So, experimenting to reach wider and more diverse audiences fundamentally serves to defamiliarise substance as much as forms of communication.

This volume offers several illustrations of such radical experiments. For example, Line Nicolaisen, Marianne Achiam and Tina Ibsen, in Chapter 10, stress how established notions of astrophysics and its implied audiences are questioned and transformed when designing for a gender-inclusive exhibition which departs from joint modes of interaction. Similarly, Sarah Kenderdine, in her Chapter 1 turns the hidden power of commodified datafication on its head and shows how museums can experiment with interactive, multimodal designs that visualise and embody data as material representations. She stresses how these material modes of meaning-making help shift the power back to audiences and away from mostly commercial platform data providers.

Furthermore, Rodrigo Tisi Paredes, in Chapter 2, illuminates how the deliberative visualisation and materialisation of ‘impossible objects’ in immersive environments is used as a means of having citizens’ connect with otherwise invisible and intangible heritage and thus increase accessibility. Another strategy is employed in the case unravelled by Mieke Bal, in Chapter 6, discussing the use of shock as a deliberate attempt to push audiences out of a consumerist attitude. By slowing down visitors, mixing media and creating ‘temporal turbulence’ in the use of chronology traditional modes of representation are shaken so that museum visitors are activated to think for themselves in order to bring art to live in the museum.

As these examples indicate, experimentation to achieve more diverse modes of communication works best when the museum has the foresight to set down and follow certain principles of operation. Importantly, these principles must encompass and align internal as well as external means of communication. Internally, staff members involved with communication design must acknowledge and follow priorities in terms of thematic focus, technical affordances and audience address. Externally, similar principles need to be evident to audiences, for example with

regard to the professional choices made about selecting certain themes and angles rather than others. Illuminating such principles is an important pathway to advance the relevance of museum experimentation to museum audiences.

## Promoting cultural citizenship

For, at the end of the day, experimental museology is of fundamental importance not because it helps innovate museum organisations or museum output, but because it helps museums in developing actual and potential audiences' knowledge resources as means of action. As several chapters in this volume illustrate, museum experimentation often involves audience groups as co-developers and co-designers. Such involvement is a way of testing whether new approaches and solutions work well with actual and potential audiences. But, more importantly, it is a means for the museum to apply people's everyday experiences, affinities and values as resources of change and to rethink how the museum can help strengthen such resources.

So, an important implication of experimental museology is that museums are invited to reconsider whether their work ultimately promotes private gain or public value, as described in the introduction to this volume. Working to sustain citizen empowerment as a public value is fundamental to democratic processes. Hence, experimental museology offers a key inroad to develop and sustain cultural citizenship.

Traditionally, the notion of citizenship is associated with universal political rights to be acquired (and often fought for); or, it is associated with individual affinities and identifications with particular communities. What chapters in this volume clearly illustrate is that culture is key to the formation of citizenship. This is because cultural processes and practices within and beyond cultural institutions are fundamental training grounds for democracy (Dahlgren, 2006; Isin & Nielsen, 2002). As we have seen through this volume, involving groups of actual and potential audiences in museum experimentation helps advance their cultural citizenship as 'a capacity for action and for responsibility' which 'entails both personal and cognitive dimensions that extend beyond the personal to the wider cultural level of society. (...) [A]s citizenship is an ongoing process that is conducted in communicative links' (Delanty, 2003, p. 602).

Designing for dialogue is key to form these communicative links as several chapters show. They demonstrate what it takes to create 'a dialogic museum' (Tchen, 1992) and transform lofty policy work, which assumes that museums and heritage sites supporting dialogue mark a direct route to intercultural understanding and social harmony (Galani et al., 2020).

As discussed above, both Sørensen, in Chapter 11, and Carter and Lleras, in Chapter 3, show how museum institutions can actively adapt this role as a facilitator of dialogue through the design process. Moreover, Rodanthi Tzanelli, in Chapter 5, documents that a starting point for such dialogues can be museums challenging their established focus on tradition-authenticity-learning. Such a

challenge affords new relational and reflexive narratives about humans and their (non-human) cohabitants on planet Earth because it fosters dialogues across generations and across a diversity of diasporic communities on the impact of our current environmental crisis and shared planetary futures. Also, Wesley Xavier, Diana Castro and Vanessa Brulon, in Chapter 7, stress how experimentation involving actual and potential museum audiences can challenge physical, social and mental barriers so as to produce a joint awareness of the world, its structures and oneself as an agent of transformation; and hence constitute local residents as democratic citizens. Finally, as Palmyre Pierroux, Birgitte Sauge and Rolf Steier clearly demonstrate, in Chapter 9, museum exhibition spaces may also be rethought as spaces of joint knowledge production transgressing the boundaries between universities and museums in order to establish a joint research space for deliberative collaboration, design-based methods and exhibition research. The result of such experimental knowledge production is a more precise identification of professional values and objectives in service of the public good which, naturally, is a fundamental precursor of cultural citizenship.

As these examples indicate, promoting dialogue to strengthen cultural citizenship is an ongoing, and often contentious, social process. It may figure as a tool when a museum experiments with new designs, it may be applied as a guideline of narration and as a means of address. Whatever the approach, certain key principles stand out. When museums promote dialogue, it is more than an invitation to voice opinions or concerns. So, museums should frame dialogues as processes of commitment, whether the dialogue partners be audiences communicating with museum staff, audiences experiencing multivocal representations at an exhibition or groups of actual or potential audiences communicating amongst themselves online or on site. Promoting dialogue is also more than individual participation and visible listening. So, museum professionals need to scaffold dialogue as an inclusive social practice. Such scaffolding must mediate between institutional authority and audience authority, thus avoiding the pitfalls of assuming that professionals know what is right and pretending that audiences know what is best. Finally, the outcome of dialogue need not be consensus, it may be a shared acknowledgement of difference. Since cultural citizenship is a key resource in democratic societies, it must also share one of its fundamental tenets: to agree to disagree. So, museums have a responsibility to make room for difference in substance as well as form. There is not one right way of arguing or expressing oneself and not one correct solution or outcome. This responsibility is particularly important, because dialogue as a tool of democracy is often focussed on rational argumentation on public issues.

Taken together, the implications of experimental museology are of fundamental importance for the future of museums as dynamic and relevant resources and pillars of public value. This importance stems from the perspective of experimental museology: it moves museums beyond having conversations about change in terms its what, who and why and unto questions of how change may be practised and pursued so as to transform traditions of audience exclusion, of collusion with past colonialism and limited relevance to the majority of people's lives.

An understanding of museum experimentation as a diverse set of practices that are enmeshed with wider processes of value and power implies that museums cannot limit experimentation to discrete and short-term ‘projects’ in a particular domain. An experimental museology does not limit itself to experiments within the exhibition halls, on the management floor or in outreach activities. As this volume testifies, an experimental museology entails self-reflexive professional strategies. Such strategies allow for sustained exploration that embraces failures while making sure that particular experiments are systematically monitored and evaluated and that practices and outcomes are understood as part of wider societal contexts of use.

## Bibliography

- Dahlgren, P. (2006). Doing citizenship: The cultural origins of civic agency in the public sphere. *European Journal of Cultural Studies*, 9(3), 267–286.
- Delanty, G. (2003). Citizenship as a learning process: Disciplinary citizenship versus cultural citizenship. *International Journal of Lifelong Education*, 22(6), 597–605.
- Galani, A., Markham, K., & Mason R. (2020). Problematising digital and dialogic heritage practices in Europe: Tensions and opportunities. In A. Galani, K. Markham, & G. Arrigoni (Eds.), *European heritage, dialogue and digital practices* (pp. 9–36). Routledge.
- Granovetter, M. (1983). The strength of weak ties: A network theory revisited. *Sociological Theory*, 1, 201–233.
- Isin, E. F., & Nielsen, G. (2002). *Acts of citizenship*. Zed Books.
- Marstine, J. (2011). The contingent nature of the new museum ethics. In J. Marstine (Ed.), *The Routledge companion to museum ethics: Redefining ethics for the twenty-first-century museum* (pp. 3–25). Routledge.
- Miller, T., Birch, M., Mauthner, M., & Jessop, J., (Eds.). (2012). *Ethics in qualitative research* (2nd ed.). SAGE.
- Pruulmann-Vengerfeldt, P., & zu Hörste, H. M. (2020). Reimagining audiences in the age of datafication. In M. Filimowicz & V. Tzankova, V. (Eds.), *Reimagining communication: Experience* (vol. 2, pp. 179–195). Routledge.
- Rasmussen, L. M., & Cooper, C. (2019). Citizen science ethics [Special issue]. *Citizen Science: Theory and Practice*, 4(1), 1–3.
- Tchen, J. K. W. (1992). Creating a dialogic museum: The Chinatown history museum experiment. In I. Karp, C. M. Kreamer, & S. D. Lavine (Eds.), *Museums and communities: The politics of public culture* (pp. 285–326). Washington, DC: Smithsonian Institution Press.

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