

# EXHIBITIONS AS RESEARCH

*Exhibitions as Research* contends that museums would be more attractive to both researchers and audiences if we consider exhibitions as *knowledge-in-the-making* rather than platforms for disseminating already-established insights. Analysing the theoretical underpinnings and practical challenges of such an approach, the book questions whether it is possible to exhibit knowledge that is still in the making, whilst also considering which concepts of “knowledge” apply to such a format. The book also considers what the role of audience might be if research is extended into the exhibition itself.

Providing concrete case studies of projects where museum professionals have approached exhibition-making as a knowledge-generating process, the book considers tools of application and the challenges that might emerge from pursuing such an approach. Theoretically, the volume analyses the emergence of exhibitions as research as part of recent developments within materiality theories, object-oriented ontology and participatory approaches to exhibition-making.

*Exhibitions as Research* will be of interest to academics and students engaged in the study of museology, material culture, anthropology and archaeology. It will also appeal to museum professionals with an interest in current trends in exhibition-making.

**Peter Bjerregaard** holds a PhD in anthropology and works as program manager at Danish Museum for Science and Technology. Until recently he was senior adviser of exhibitions at Museum of Cultural History, University of Oslo. His recent interest has been on exhibitions as a particular mode of research and in developing experimental approaches to exhibition-making that allow research to materialize in non-textual forms. He has been project leader and curator for a number of exhibitions, among them *COLLAPSE – human being in an unpredictable world* and *Letting go*. Together with Anders Emil Rasmussen and Tim Flohr Sørensen he edited *Materialities of Passing: Explorations in Transformation, Transition and Transience* (2016).

# ROUTLEDGE RESEARCH IN MUSEUM STUDIES

23 **The Private Collector's Museum**

Public Good Versus Private Gain

*Georgina Walker*

24 **Museums as Cultures of Copies**

*Edited by Brenna Brita*

25 **The Personalization of the Museum Visit**

Art Museums, Discourse, and Visitors

*Seph Rodney*

26 **Narratives of Vulnerability in Museums**

American Interpretations of the Great Depression

*Meighen Katz*

27 **Museum and Gallery Publishing**

From Theory to Case Study

*Sally Hughes*

28 **Museums and Centers of Contemporary Art in Central Europe after 1989**

*Katarzyna Jagodzińska*

29 **Exhibitions as Research**

Experimental Methods in Museums

*Edited by Peter Bjerregaard*

For more information about this series, please visit: [www.routledge.com/Routledge-Research-in-Museum-Studies/book-series/RRIMS](http://www.routledge.com/Routledge-Research-in-Museum-Studies/book-series/RRIMS)

# EXHIBITIONS AS RESEARCH

Experimental Methods in Museums

*Edited by Peter Bjerregaard*

First published 2020  
by Routledge  
2 Park Square, Milton Park, Abingdon, Oxon OX14 4RN

and by Routledge  
52 Vanderbilt Avenue, New York, NY 10017

*Routledge is an imprint of the Taylor & Francis Group, an informa business*

© 2020 selection and editorial matter, Peter Bjerregaard; individual chapters, the contributors

The right of Peter Bjerregaard to be identified as the author of the editorial material, and of the authors for their individual chapters, has been asserted in accordance with sections 77 and 78 of the Copyright, Designs and Patents Act 1988.

All rights reserved. No part of this book may be reprinted or reproduced or utilised in any form or by any electronic, mechanical, or other means, now known or hereafter invented, including photocopying and recording, or in any information storage or retrieval system, without permission in writing from the publishers.

*Trademark notice:* Product or corporate names may be trademarks or registered trademarks, and are used only for identification and explanation without intent to infringe.

*British Library Cataloguing-in-Publication Data*

A catalogue record for this book is available from the British Library

*Library of Congress Cataloging-in-Publication Data*

Names: Bjerregaard, Peter.

Title: Exhibitions as research : experimental methods in museums / edited by Peter Bjerregaard.

Description: London ; New York : Routledge, 2020. |

Includes bibliographical references and index.

Identifiers: LCCN 2019013690 (print) | LCCN 2019014428 (ebook) |

ISBN 9781315627779 (master ebook) | ISBN 9781317239048 (pdf) |

ISBN 9781317239024 (mobi) | ISBN 9781317239031 (epub3) |

ISBN 9781138646063 (hardback : alk. paper)

Subjects: LCSH: Museum exhibits--Planning. |

Museum buildings--Designs and plans. Classification: LCC AM151 (ebook) |

LCC AM151 .E9657 2020 (print) | DDC 069/.5--dc23

LC record available at <https://lccn.loc.gov/2019013690>

ISBN: 978-1-138-64606-3 (hbk)

ISBN: 978-1-315-62777-9 (ebk)

Typeset in Bembo Std  
by Newgen Publishing UK

Visit the eResources: [www.routledge.com/9781138646063](http://www.routledge.com/9781138646063)

# CONTENTS

<i>List of figures</i>	<i>vii</i>
<i>List of contributors</i>	<i>ix</i>
<i>Acknowledgements</i>	<i>xii</i>
Introduction: Exhibitions as research <i>Peter Bjerregaard</i>	1
<b>PART I</b>	
<b>Cross-disciplinary collaboration</b>	<b>17</b>
1 Sketches for a methodology on exhibition research <i>Henrik Treimo</i>	19
2 Joining transdisciplinary forces to revive the past: Establishing a Viking Garden at the Natural History Museum, Oslo <i>Anneleen Kool and Axel Dalberg Poulsen</i>	40
3 Ethnography, exhibition practices and undisciplined encounters: The generative work of amulets in London <i>Nathalia Brichet and Frida Hastrup</i>	53
<b>PART II</b>	
<b>Sensing knowledge</b>	<b>65</b>
4 Exhibitions as philosophical carpentry: On object-oriented exhibition-making <i>Adam Bencard</i>	67

vi Contents

- 5 Museum objects in the marketplace 80  
*Kari K. Aarrestad*
- 6 Exhibition-making as aesthetic inquiry 95  
*Peter Bjerregaard*
- 7 Object-spaces? Sensory engagements and museum experiments 109  
*Elizabeth Hallam*

**PART III**

**Collaborating with audiences 129**

- 8 Exhibitions, engagement and provocation: From Future Animals to Guerilla Archaeology 131  
*Jacqui Mulville*
- 9 Developing and promoting research in a museum thirdspace: Breaking barriers where people walk 148  
*Ellen T. Bøe, Hege I. Hollund, Grete Lillehammer, Bente Ruud and Paula U. Sandvik*
- 10 Visitor dialogue and participation as knowledge generating practices in exhibition work: What can museum experts learn from it? 164  
*Guro Jørgensen*
- 11 How the exhibition became co-produced: Attunement and participatory ontologies for museums 181  
*Helen Graham*
- Index* 195

# FIGURES

1.1	The Thing exhibition	24
1.2	Layout of the LAB	24
1.3	Gathering at the Thing	25
1.4	Models in the zone of “space”, available for the museum visitors	26
1.5	Multi-disciplinary collaboration around objects	26
1.6	Multi-disciplinary collaboration on models	27
1.7	The curator giving a public talk on the “Hitler stone” in the LAB	29
2.1	Viking plant selection	41
2.2	Interdisciplinarity and the creative process	42
2.3	The ship-shape	44
2.4	Viking Garden symbolism	45
2.5	Vikings around the world	46
2.6	Design inspirations	48
2.7	Research	50
3.1	Still from <i>Charmed Life in Contemporary London</i>	59
3.2	Still from <i>Charmed Life in Contemporary London</i>	60
4.1	<i>Landscape Epithelia</i> by Naja Ryde Ankarfeldt, 2017	76
5.1	The Post-it note on our front door the day after we closed the museum for renovation in 2013	82
5.2	One of the three exhibition spots at the mall, The Lagoon	85
5.3	Discussing objects with the audience	86
5.4	Sales products were presented in a similar fashion as the museum objects were, with a small text plate	86
5.5	The costume used by a Norwegian slave and a collection of ethnographica from the exhibition “Imageries from the Colonies”	87
5.6	Outside the Wine Monopoly	88
5.7	Beads from West Africa displayed outside the jewellery store to the right, presented like sales products	92

**viii** List of figures

6.1	Constructing in order to avoid collapse	100
6.2	The three themes organised as a Venn diagram	102
6.3	The board game workshop	103
6.4	The lashing workshop	105
6.5	<i>COLLAPSE: human being in an unpredictable world</i> . Detail from the Stone Age part of the exhibition	106
7.1	“Designing Bodies”, exhibition, Qvist Gallery, Hunterian Museum, RCS, 2015–16	114
7.2	Materials used in trials to develop MARTYN, display case	116
7.3	Models of the foot, display case and photographs	118
7.4	Installation in the “Rooms Experiment”, 2017: “Locked Rooms: walking through rooms two floors below the dissecting room including workshop and mortuary”	122
7.5	Installation in the “Rooms Experiment”, 2017: “Bird Staircase: walking through locked rooms, one floor below the dissecting room, including pipes”	123
8.1	Future Animals, created by the young people	133
8.2	Future Animals, created by the museum audience	134
8.3	Back to the Future at Einstein’s Garden	138
8.4	Shamanic Street Preachers 2012	142
8.5	Data gathered from consultation with the public at Wilderness Festival 2016, Oxfordshire	145
9.1	The expert group experimented with ideas, and improvised a variety of approaches to public involvement in the working process of the project “Where People Walk”	152
9.2	Pupils doing archaeology in a restoration excavation at the Hellvik elementary school grounds	154
9.3	Research partners in a palaeodiatory study: Sampling hair in the high school lab., Stavanger	155
9.4	A “story plate” event: Historic food tasting tests at the Research Days in Stavanger	156
9.5	The first “Meet the researcher” event in the museum in/out box: Sean Dexter Denham explains the mysteries of ancient human bones	157
10.1	The Laboratory Room, with the Agdenes wolf in front and the board game “Survival of the fittest” at the back of the picture	169
10.2	Selfie with the black listed boar	172
10.3	Final exhibition: “Continuous Change – From the Ice Age to the Future. 12,000 Years in Norway”	174
10.4	In the laboratory zone in the final exhibition, you can use dendrochronological method to find the age of old wood samples	175
11.1	The introductory panel for the In Our Own Words: Stories of Croydon’s Day Centres exhibition	182
11.2	People at work in the Waylands Day Centre laundry	184
11.3	The Garden Centre was another place people worked in the Day Centres	185
11.4	The History of Day Centres project and exhibition took place in the wake of quite radical change in people’s lives	191

# CONTRIBUTORS

**Kari K. Aarrestad** is an archaeologist and works as head of the Department of Exhibitions, Learning and Public Services at University Museum of Bergen. She is concerned with the role of the modern museum in modern society, specifically how the older museum institutions can adapt to modern expectations.

**Adam Bencard** is Associate Professor in Medical Humanities at the Medical Museion, University of Copenhagen, and also affiliated with The Novo Nordisk Foundation Center for Basic Metabolic Research. His research interest includes philosophies of materiality and presence, as well as the philosophical and cultural ramifications of contemporary microbiome research and what it means to be human in a post-genomic world. He has also curated several exhibitions at the Medical Museion, including the award-winning *Mind the Gut* (alongside Associate Professor Louise Whiteley) which opened in the fall of 2017.

**Peter Bjerregaard** holds a PhD in anthropology and works as program manager at Danish Museum for Science and Technology. Until recently he was senior adviser of exhibitions at Museum of Cultural History, University of Oslo. His recent interest has been on exhibitions as a particular mode of research and in developing experimental approaches to exhibition-making that allow research to materialize in non-textual forms. He has been project leader and curator for a number of exhibitions, among them *COLLAPSE – human being in an unpredictable world* and *Letting go*. Together with Anders Emil Rasmussen and Tim Flohr Sørensen he edited *Materialities of Passing: Explorations in Transformation, Transition and Transience* (2016).

**Ellen T. Bøe** is consultant and museum teacher at Museum of Archaeology, University of Stavanger. She is responsible for the museum's school service and the planning of school visits to archaeological excavations in close collaboration with project managers of fieldworks, schools and other regional actors. She is interested in the development of visitor standards where participation and involvement in archaeological fieldwork are a priority area.

**Nathalia Brichet**, PhD, is a postdoc at the University of Aarhus where she is part of the collective research group "Aarhus University Research on the Anthropocene". She is also part of the research project "Natural Goods? Processing Raw Materials in Global Times". Her research is focused on extractive

**x** List of contributors

industries in Greenland and Denmark. Brichet uses her fieldwork to collect and exhibit anthropological analyses in collaboration with the people she engages with, and curators and colleagues from museums in Denmark, Great Britain, the United States and Ghana. She has curated collaborative exhibitions at the National Museum of Denmark, National Museum of Ghana and at Moesgaard Museum in Denmark.

**Helen Graham** teaches museum and heritage studies at the University of Leeds. Spending time in Croydon's Resource Bases and slowly developing the exhibition that ultimately emerged was formative in her current research approaches. Since then Helen has come to use collaborative and action research methods to experiment with participatory approaches to museums, heritage and local democracy.

**Elizabeth Hallam** is a research associate in the School of Anthropology and Museum Ethnography, University of Oxford, and an Honorary Senior Research Fellow at the Department of Anthropology, University of Aberdeen. Her books include *Making and Growing: Anthropological Studies of Organisms and Artefacts* (edited with Tim Ingold), *Designing Bodies: Models of Human Anatomy from 1945 to Now* (edited volume) and *Anatomy Museum: Death and the Body Displayed*, which won the 2016 Wellcome Medal for Anthropology as Applied to Medical Problems. She is currently the editor of the *Journal of the Royal Anthropological Institute*.

**Frida Hastrup**, PhD, is Associate Professor in Ethnology at the Saxo Institute, University of Copenhagen. She is the leader of a research project about natural resources by the name of *Natural Goods? Processing Raw Materials in Global Times* (funded by the Danish Council for Independent Research's Sapere Aude programme), which has exhibition work as part of its output. This has resulted in co-curated exhibitions at the National Museum of Denmark and at Moesgaard Museum.

**Hege I. Hollund** is Associate Professor and Conservation Scientist at Museum of Archaeology, University of Stavanger. She specializes in degradation processes and preservation issues concerning buried skeletal remains using microscopic and chemical analytical techniques. Her research interests also include bioarchaeology, particularly the information potential of archaeological skeletons.

**Guro Jørgensen** has an MA in archaeology and is working on a PhD thesis in museology, on the social and political role of the Norwegian University Museums. She has 13 years of experience from archaeological excavations, museum collections management and museum outreach projects as an employee at the NTNU University Museum in Trondheim. She is currently teaching archive and collections management as well as social studies at the NTNU's Department of Teacher Education.

**Anneleen Kool** is a botanist and senior lecturer at the Natural History Museum, University of Oslo. Her research focuses on ethnobotany, plant systematics, and ancient DNA in Viking Age plants and animals. Anneleen is an award-winning educator who engages her students, both at the university and in public seminars and events, and helps them to explore the connection between human culture and various plants species that have been used for food, medicine and other daily activities both recently and in the distant past.

**Grete Lillehammer** is Emerita Professor and Archaeologist at the Museum of Archaeology, University of Stavanger. She specializes in cultural heritage, landscape and museum archaeology studies. Research interests include social archaeology, in particular children and childhood studies, and gender and burial ritual studies.

**Jacqui Mulville** is Reader (Assistant Professor) in Bioarchaeology at Cardiff University. She has published widely on animal:human relationships in the past, from prey to pets to pests, and has a particular interest in the insular archaeologies of Britain and beyond. She combines her interests in archaeology, science, art and music by taking archaeological research out to reach new audiences at festivals.

**Axel Dalberg Poulsen** is a tropical forest botanist who has carried out research focusing on systematics, ecology and evolutionary aspects in all the major equatorial regions of the world. When collecting plant material in the field, he documents ethnobotanical information whenever possible. He is a world authority on the ginger family (Zingiberaceae) and has contributed to several exhibitions and public events on plant diversity, conservation or ethnobotany. In 2010, he got the idea to establish a Viking Garden in the Botanical Garden in Oslo, where he was Director between 2011 and 2015.

**Bente Ruud** is Exhibition Designer and Project Manager at Museum of Archaeology, University of Stavanger. She is responsible for the planning, design and production of new exhibitions and dissemination facilities, and internal and external exhibition and dissemination projects. Bente specializes in developing new forms of presentations in exhibition technology, in particular sound and light design, and interactive design and visualization.

**Paula U. Sandvik** is Emerita Associate Professor and Palaeoecologist at Museum of Archaeology, University of Stavanger. She specializes in environmental studies and especially botanical macroscopic and microscopic sub fossil and preservation of information potential in these.

**Henrik Treimo** holds a PhD in social anthropology and works as Senior Curator at The Norwegian Museum of Science and Technology in Oslo. He is particularly interested in how the arts, humanities and sciences can meet, cooperate and generate knowledge, understanding and new insights through the making of museum exhibitions. He has been the curator of several exhibitions, such as *Mind Gap* (2011) and *Thing – Technology and Democracy* (2014). Lately, he has been investigating practical museum methods aiming to bring together the understanding of museums as knowledge institutions with their societal role as inclusive and democratic arenas. He has led two related collaborative research projects: *The Thing's Method* (2015–2018) and *Museums' Knowledge Topography* (2018–2020).

# ACKNOWLEDGEMENTS

This book is based on a collaboration between the six Norwegian university museums entitled “Exhibitions as knowledge generating activity” (RCN project no. 229176). The project was the last part of the larger project “Joint Research”, through which the Research Council of Norway aimed at strengthening research in and collaboration between the six university museums: The Arctic University Museum of Norway in Tromsø, the NTNU University Museum in Trondheim, the University Museum of Bergen, the Archaeological Museum at University of Stavanger, the Museum of Natural History at University of Oslo and the Museum of Cultural History at University of Oslo. We want to thank the Research Council of Norway, and in particular Solbjørg Rauset and Ian Gjertz, for their support throughout the project. We also want to thank Håkon Glørstad who, as project leader for “Joint Research”, was pivotal in making “Exhibitions as knowledge generating activity” happen.

“Exhibitions as knowledge generating activity”, or “The Colonisation Project” as it ended up being called, gathered staff from all disciplines in the six university museums for four workshops where challenges in incorporating research in exhibition and outreach activities were not merely discussed but also faced head-on through actually *making* installations and performances. We want to thank all the museum staff and the invited speakers at our workshops for playing along in what sometimes appeared to be ridiculous tasks. In particular, we want to thank Laura Bunse and Line Breian who decided not to contribute to this volume but did a great job as local project leaders at The Arctic University Museum of Norway in Tromsø.

Five of the chapters in this book are based in cases from “The Colonisation Project”. Six other chapters are written by invited authors who shared our interest in exhibitions as research. We want to thank Henrik Treimo, Nathalia Brichet, Frida Hastrup, Adam Bencard, Elizabeth Hallam, Jacqui Mulville and Helen Graham for extending the scope of our Norwegian project.

Finally, we want to thank the staff at Routledge, in particular Heidi Lowther and Marc Stratton, for their patience and constant support. The book was long underway, but Heidi and Marc kept an eye on the project all the way through.

# INTRODUCTION

## Exhibitions as research

*Peter Bjerregaard*

This volume argues that museum exhibitions can effectively work as a particular way of doing research, a way of exploring the world around us rather than mirroring it. More than that, while this may not at first glance seem to be a particularly revolutionary statement, we contend that, if taken seriously, it does shake a number of the basic pillars of museum practice.

If the exhibition *is* research and not merely a way of communicating research, a number of questions arise: Can we exhibit something, which we do not know the end result of, which is still in the making? Which concepts of “knowledge” apply to such a format? How do we conceive of the roles between the partakers in an exhibition process if this is not a matter of giving shape to a given content? How do we conceive of the role of audiences in exhibitions if research is extended into the exhibition itself? Why, indeed, should we even think of exhibitions as research rather than a platform to communicate the results of research to a wider audience?

These are all questions that we will touch upon in the volume.

### **The idea of exhibitions as research**

Museums and exhibitions have increasingly been referred to as “laboratories” (MOMA, 2014; Heller, Scholz and Wegner, 2015; Treimo, this volume; Jørgensen, this volume) or “experiments”, respectively (Healy and Witcomb, 2006; Macdonald and Basu, 2007). These terms point to a move away from understanding the museum as a site for representing the world to perceiving the museum, instead, as an agent that produces its own particular effects. The museum does not simply mirror the world, but constructs new perspectives and ideas that are generated through the particular mechanisms and qualities of the very institution (Bjerregaard and Willerslev, 2016, pp. 226–235; Thomas, 2016, p. 9). One effect of this approach to museums has been a focus on the capacity of exhibitions to generate research in and through themselves (Macdonald and Basu, 2007; Lehman-Brauns, Sichau and Trischler, 2010; Herle, 2013; O’Neill and Wilson, 2015). 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 insight 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, as we will explore further

towards the end of the introduction, 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 (Rauff, 2010; Herle, 2013).

The question remains, however, how museums in their daily work may take advantage of such observations. How can museums practically activate exhibitions as part of their research? This question begs not only considerations on what kind of methods may be put in play, but also how we deal with the institutional framework through which museums operate.

This volume is based in a collaborative project between the six Norwegian university museums, entitled “Exhibitions as knowledge generating activity”, which will be referred to by its colloquial name, *The Colonization Project*, throughout the volume.<sup>1</sup> As part of this project, all six museums have engaged in audience related activities that, each in their own way, have been designed to generate a *research surplus*. That is, they were all asked not only to base their projects in ongoing research, but to design the projects in such a way that we could expect to *know more* by allowing our knowledge to be processed through an audience-related project. In order to achieve this, all six museums had to develop methods that went beyond their ordinary exhibition activities.

*The Colonization Project* was the last part of a five year emphasis on developing the university museums in Norway, supported by the Research Council of Norway (RCN). Within the *Joint Research* framework the RCN invited the university museums to develop models to strengthen their research collaboration and to engage the public in what was actually going in the university museums. *Joint Research* started out with a relatively small grant, but as the university museums responded constructively to the invitation more funds were added over the coming years. Thus, it is fair to say that, while pushing the university museums to think in new directions, the RCN actually put a lot of trust in letting the university museums develop their own perspectives and practices rather than having them answer to strictly defined political thematics. This trust and openness on behalf of the RCN has been crucial in generating the engagement and willingness to go beyond established practices that *The Colonization Project* entailed.

The volume presents five of the six cases from *The Colonization Project*. In addition, we have invited contributions from seven authors who have all been developing new practices and have theorised about how we may think of exhibitions as research. Some of these authors are people we knew well from our ongoing discussions on exhibitions as research and who have been invited in to take part in our discussions. Others are people who made themselves noted by engaging not only in a theoretical debate on the themes we were working on, but who have also realised their ideas in various kinds of audience-related projects. We hope that these invited authors will show that the question of how to engage exhibitions in research is far from a local Norwegian concern but a challenge that is taken up in various ways in museums and research institutions on an international scale.

The volume has three overarching aims: First, we want to pause and reflect on the existing literature and consider more closely what *exhibitions as research* may entail; secondly, we want to place such efforts in concrete institutional settings, taking seriously not only the theoretical potentials but also the institutional challenges related to working deliberately with exhibitions as a kind of research; thirdly, we want to suggest some methods that may be of use for other museums, sharing our own successes and failures from *The Colonization Project*. It is our hope that such an approach will qualify in what sense we may think of exhibitions as research and what it requires from museums to implement and elaborate on the kind of experimental museology that seems to emerge from this approach.

To concretise our approach somewhat we will approach the overarching theme through three sub-themes in which we find exhibitions and exhibition-making have particular potentials for creating

a research surplus: the interdisciplinary collaboration involved in all exhibitions, the concrete physical engagement with objects and space, and the direct relation and access to a lay audience. Each of these sub-themes will be presented in some detail below, but first I will try to trace where the idea of exhibitions as research comes from, and reflect on the literature that has appeared on the topic within recent years.

## A critique of the critique

The notion of the exhibition as research emerged after a couple of decades where the main academic interest in the museum institution came in the shape of critique (Haraway, 1984; Lumley, 1988; Karp and Lavine, 1991; Vergo, 1993). Towards the end of the 20th century it seemed as if the museum was facing the end of a particular museum paradigm (Hooper-Greenhill 1992, pp. 197–215). The role of the museum as an authoritative institution that would present the encyclopaedic ordering of the world to its audiences (ibid., pp. 2, 190) was challenged by a critique of the museum's authority, of its alleged contribution to the maintenance of colonial world views, and a call for democratisation.

The critical approach to the museum basically had two fronts. On the one hand was the question of political representation: How could museums represent other cultures – past or distant – and thereby take authorship of the way these very cultures were presented to contemporary Western audiences? This front effectuated a number of experiments in collaborations not only with what came to be termed “source communities” but also with local communities, the public the museums catered for (Clifford, 1997; Karp, Kreamer and Lavine, 1992).

The other front dealt with forms. Based particularly in Foucauldian analyses of the museum (Hooper-Greenhill, 1992; Bennett, 1995) the purpose of the museum was revealed as not simply presenting knowledge, but shaping *how* to know something. Thus, the design of installations and organisation of objects were not merely a matter of making things available to an audience in an intelligible and attractive way, but active parts of how the museum presented what was “real”. Therefore, the critical approach to museums gave rise to numerous experiments in museum display that broke with more or less positivistic approaches taking inspiration from contemporary art, the surrealist movement of the 1920s and 1930s as well as indigenous ritual and folklore (Heinich and Pollack, 1996; Karp and Wilson, 1996; Shelton, 2001).

The results of the changes going on in museums since the 1970s have by now, to some extent at least, become commonplace (Thomas, 2016, pp. 30–35). Still, while acknowledging these contributions to museum practice, it is fair to say that the attention to exhibitions as research can be conceived as a critique of the critique of the museum. While the critical museology made clear how the institution of the museum was in many ways “out of sync” with (postcolonial, democratising) developments outside the museum, the solutions offered often ended up de-constructing the truths of the past without offering new suggestions on how the museum could work productively as a knowledge institution. Or, in other words, while the outdated collection based research of most museums had left museum research harking behind university based research (Sturtevant, 1969; Bouquet, 2001), the critical approach to museums did not help defining a new approach to museum research but somehow left the museum in a politicised maelstrom that seemed hard to get out of.

We believe that the orientation towards exhibitions as research is exactly an effort to formulate new constructive potentials for museum based research and thereby reclaim the museum as a research institution (Basu and Macdonald, 2007; Bjerregaard and Willerslev, 2016; Thomas, 2016). But what does this particular and somewhat strange institution have to offer if we go beyond encyclopaedic representations of the world or a deconstruction of the same?

## The museum as experimental site

One of the early volumes to spark the debate on exhibitions as research was Sharon Macdonald and Paul Basu's anthology, *Exhibition Experiments*. In the introduction to the volume Macdonald and Basu trace the history of the museum back to the scientific theatres where experiments were carried out in front of an audience (Basu and Macdonald, 2007, p.2). They suggest that the contemporary museum might profit from returning to a state where experiment and process, rather than finalised displays, are at the centre of our attention. Indeed, the chapters of the volume are based in exhibitions within art and social sciences that have been consciously designed and planned as experiments (see for instance Cummings and Lewandowska, 2007; Weibel and Latour, 2007).

Most of the experiments presented in *Exhibition Experiments* are singular projects that to a certain degree work as exceptions to the regular practices at the museums involved. However, increasingly, we see the laboratory concept used to describe an ongoing practice within the museum institution (Porto, 2007; Heller, Scholz and Wegner, 2015; Treimo, this volume).

The concept of the laboratory points both to a move towards intellectual experimentation as well as to a kind of social experimentation. Intellectually, the laboratory is, in its various guises, often conceived as a place for risk taking. As contemporary exhibition-making often involves large sums of money these processes tend to be highly regulated and developed according to specific goals. In such an institutional landscape the laboratory becomes a place with a liberty to follow more loosely defined goals, go for more radical themes and questions, and act on an ad hoc basis as ideas develop. Hence the laboratory is an activity that consciously "opens up to the possibility of failure" (von Bose et al., 2015, pp. 46, 51) and a more daring intellectual pursuit of problematics.

The laboratory work mode will be strange to most of the museum staff involved in the processes (see for instance Jørgensen, this volume). Therefore, the laboratory also becomes a kind of social experiment in the sense that it challenges the usual division of expertise in the museum. Most often, laboratory processes are carried out in a close collaboration between participants from different disciplinary backgrounds, which can in itself be challenging. But more than that, the laboratory often involves groups outside the museum, and often the regular hierarchies are muddled so that non-researchers are involved in pursuing research questions (Heller et al., 2015). As such, the laboratory experiments with how various groups outside the institution may be productively involved, not merely as representatives of this or that community or social group, but as active participants in the intellectual process (von Bose et al., 2015, pp. 46–48).

In sum, the idea of the laboratory points to an understanding of research and knowledge as dynamic entities. If the museum used to be the place we would go to know things "for sure" the idea of the museum as laboratory suggests that the museum should be a space where we (a true "we" including both museum staff and audiences) engage in *knowledge-in-the-making*. As a knowledge-producing technology, the laboratory negates the authority of the museum to suggest final truths for its objects. Instead, the laboratory suggests that the research produced in the museum and objects taken care of by the museum should continuously be challenged and be inserted within processes inspired from and affecting the world outside the museum (Heller, 2015, pp. 25–26).

## Art as a way of knowing

As mentioned above, part of the critical museology was concerned with how knowledge and experiential forms are intricately entwined. Making a display is not merely about making established knowledge tangible and accessible. Any kind of materialisation is in itself a way of knowing, a particular way of relating to the world (Vogel, 1991; Hooper-Greenhill, 1992, pp. 191–197; Rogoff, 2003).

A central tool to destabilise the taken-for-granted approach of most museums was the inclusion of art and artists in the making of exhibitions. Early on, anthropological and historical museums collaborated with artists who questioned the museum's exclusive authority to truth claims and unearthed the untold parts of the histories of museums and collections.<sup>2</sup> More recently, installations playing in a realm between cabinets of curiosity and conceptual art have emerged in museums of natural history creating displays that defy our usual expectations of the museum as a site for ordering.<sup>3</sup>

However, when thinking of exhibitions as research it is not only the critical potential of art making that is important. The material turn in both the humanities and social sciences spurred a renewed interest in the materiality of objects and the capacity of material things to affect the social world (Gell, 1998; Latour, 1999, 2005; Ingold, 2007). Suddenly art and research found a common ground for exploring non-semiotic qualities of objects and materials.

In the article from which this volume has borrowed its title, Anita Herle (2013) describes how collaborations with artists affected the results of the exhibition, *Assembling Bodies*, at the Museum of Archaeology and Anthropology at the University of Cambridge. *Assembling Bodies* became a common ground for researchers and artists to collaborate on the main theme of what makes up a body and what counts as a body. By engaging in ways of assembling and juxtaposing new art works and objects from the collections, artists and museum staff engaged in making new interpretations of both bodies of materials (ibid., 125–129).

Ken Arnold (2016) has suggested another role that art may play in “reviving museum research”. Arnold argues that art establishes a relation to objects that goes beyond mere recognition. The special way museums ask us to look at things (Alpers, 1991), turns everything on display into an art object, breaking the fixed and commonsensical approach through which we normally approach the world around us. Thus, the exhibition urges us to look for another kind of expressiveness in things (Arnold, 2016).

What the collaboration with art and artists seems to bring into exhibition-making is a capacity to break our conventional understanding of objects (Bouquet, 2000) and search for new constellations offering new meanings. In this sense, “art” can be considered a strategy to activate what Benjamin has called a vertical relation to childhood (Andersson, 2014, p. 61); a state where we are able to view the world as open and still unsettled rather than fixed and ordered. This effect introduces a dynamic to the exhibition medium, which has often been lost. If the classical modernist display argued for a stable relation between knowledge and the object on display, the critical approach pointed to the constructed character of such alleged truths. What is suggested by the new kind of art-science relations is that knowledge is constantly changing. This is not to say that expertise is trivial or that all truth claims are equal, but rather to point out that the task of research is not to protect established knowledge positions, but to constantly seek out new things to be known. Thus, a presentation of research also has to be an enactment of the dynamics of research.

## A museum method?

While exhibitions, as the public window of museums, have naturally been a major concern for analyses of the museum, another strand of analysis has been concerned with the way in which knowledge is created in the museum, that is, the methods at work in museum work.

Nicholas Thomas (2016, pp. 65–114) has argued that museum work, based in collections, constitutes a method of its own. Thomas focuses on the work leading up to a display; selecting objects and deciding which objects are deemed relevant and for what reason. He identifies three steps in curatorial work: *discovery*, searching for objects and relations in collections and archives; *captioning*, putting words to objects; and *juxtaposition*, displaying an object together with other objects (ibid., pp. 100–114). While these

“moments” may seem like tedious tasks, Thomas argues that they urge the curator to explore some of the basic categories we understand our world from:

The method is the use of the object in the exploration of what these categories and distinctions might mean, where they come from, where they mislead and where they remain useful or unavoidable.

(*ibid.*, p. 106)

What is interesting about Thomas’s argument is that whereas most methodological approaches to research would stress structure and rigour, the museum as method seems to systematically let research drift into new directions. Working with and through collections, the researcher will continuously be distracted by the possibilities offered by the objects. Hence, the museum researcher is constantly led away from abstract theoretical frameworks and into the questions and possibilities imposed by the objects and the archival material related to them (Thomas, 2010, p. 8; Bjerregaard, 2019). This means that the museum as a method evokes a plethora of questions *because* it takes its departure in the limitations of the collection. It is exactly this limitation and the concrete quality of objects that allow the curator to develop new questions and insights that transgress the theoretical frameworks we often ask research questions from.

While Thomas focuses on the curatorial work going on while making the exhibition, anthropologist Nikolai Ssorin-Chaikov has described how the exhibition, *Gifts to Soviet Leaders*, presented at the Kremlin Museum in 2006, facilitated an unexpected body of data emerging from the public engagement evoked by the exhibition (Ssorin-Chaikov, 2013). As the title indicates, the exhibition displayed gifts presented to various Soviet leaders, being both a portrait of the Soviet system and a commentary on gift-giving (which, with reference to the famous work of Marcel Mauss, is a central topic in anthropological theory).

But what the curators could never have imagined was the attraction that the exhibition’s guest book had for the audience. Not only did the guest book attract a large number of entries, it also turned out to become a public discussion of the transition Russian society had gone through from the Soviet Union to contemporary Russia (*ibid.*, pp. 167–168). In this sense, the museum, as a social meeting place, generated an independent research field. While this field was obviously constructed, in the sense that it did not exist before the intervention of the researcher, it was none the less capable of generating a particular kind of data in a particular format that would not have been available had it not been for the exhibition.

Thus, both Thomas and Ssorin-Chaikov argue for the exhibition as a method to overcome our own preconceived framings as researchers; one may ask, then, how we may work more consciously with the museum as a scientific method.

Another approach to exhibitions as method has been in terms of applying exhibitions to test theoretical validity. Bruno Latour and Peter Weibel have argued along such lines with reference to their exhibition, *Making Things Public* (Latour, 2005; Weibel and Latour, 2007). The curators argue that it is “the un-realistic nature of exhibitions” that makes the museum a good space for experimenting in a way that may potentially turn into a failure. Thus, the exhibition should ask questions that can ultimately be proven or falsified (Weibel and Latour, 2007, p. 96):

Once this question is raised, the only way to experiment with it is by conducting a *real experiment* with *real* images brought into the imaginary space of the museum.

(*ibid.*, 104)

*Making Things Public* was above all a rejection of modernist science. However, the final installation in this exhibition was conceived as a modernist art object. Thus, Weibel and Latour suggest, the overall argument could be validated by the audience's attraction to this final installation. If the modernist art work still seemed more convincing to the audience than the other, more open-ended and performative works presented in the exhibition, the show would have failed in its argumentation (ibid., p. 106).

This way of challenging the way research expresses itself and may be valued by an audience of non-peers also seems to allow research to engage in other kinds of reasoning and to pose questions which may be lost to more conventional scientific practice. What is often thought of as the intrinsic problem of exhibitions – that they are always interpreted differently by audiences from what was intended by the makers, and that they express themselves through less precise media than text – can be turned into a creative element that allows exhibitions to let in new perspectives and ideas.

## The organisation of the volume

At the very first workshop in *The Colonization Project*, we identified three elements involved in exhibition-making that seemed to us to be particularly salient for our efforts to develop new methods to integrate exhibitions in the museums' research: the cross-disciplinary nature of exhibition work; the physical and sensate engagements with objects and space upon which exhibitions are built; and the access to a lay audience.

While these three areas are obviously closely integrated in all the case studies presented in this volume we decided to try to focus on one theme at a time both in our three joint workshops during the project's lifetime and in our writings for this book. So, while we present the three themes as individual subsections of the volume they should really be considered as integrated parts of a process.

## Cross-disciplinarity

Cross-disciplinarity<sup>4</sup> has been one of the most central buzzwords in research and education over the recent 10–15 years. The call for cross-disciplinary research has been grounded in the assessment that most of the central applications of science and research – as for instance the consequences of climate change – are of such complexity that they cannot be solved within individual disciplines but need to be approached through a variety of methods and analytics.

But cross-disciplinarity has other kinds of connotations in the museum. If we look back, not that long ago, actually, the museum did not house the range of expertise we see today. The turn of the 20th-century curator would not only make exhibitions, but also study the collections and take care of objects (Arnold, 2015). But within the last 30–40 years the broad expertise of the museum curator has increasingly been split up into sub-disciplines. Most remarkable, perhaps, has been the degree of specialisation taking place within museum communication (Alberti, 2009, pp. 153–188) and within conservation, which has placed itself no longer as a craft, but as a science in and of itself (Alberti, 2009, pp. 123–152; Arnold, 2015).

While this increasing specialisation and professionalisation has undoubtedly developed a productive set of skills within the museum it has also, in many instances at least, caused a lack of clarity of the purpose of the museum as an institution that deals with research, collection management and public outreach *at one and the same time*. Indeed, one of the common experiences of the six museums involved in *The Colonization Project* was that it was quite difficult to organise collaboration across departmental divides within the museum.

The challenge that cross-disciplinarity poses to contemporary museums may therefore be stated as *how do we utilise the potential of the many branches of disciplinary expertise working in the museum in such a way*

*that we produce something that transgresses each of the disciplines, but without losing the expertise?* The answer to this question is obviously not a nostalgic retreat to the old curator-function. Rather it seems to be a matter of organisation.

The aim could, however, very well be measured by the ideal of the old kind of museum curator. In that sense the museum could represent a vibrant, un-disciplined way of doing research, which focuses on the question to be explored, rather than on the question's disciplinary belonging, and applies the specific means made available by the museum (Bjerregaard, 2014; Brichet and Hastrup, this volume).

In Henrik Treimo's opening article in this volume we are presented with a concrete suggestion for how to reinvigorate the cross-disciplinary potential of the museum. The *LAB* at the Norwegian Museum of Science and Technology consists of three separate zones; one for conservators, one for designers and one for researchers. In the middle of this space a large table makes up the physical meeting space between the zones. This permanent spatial construct allows museum staff from different departments to meet and exchange ideas related to ongoing projects. The cross-disciplinary collaboration in the *LAB* includes a number of actors from outside the museum (basically, all interested parties showing interest during the progression of a project), and it ultimately aims for the *LAB* to become the museum's favoured work mode rather than an exceptional experiment. Thus, the *LAB* works as a laboratory for developing particular museum-perspectives across disciplinary divides.

Anneleen Kool and Axel Dalberg Poulsen's case of *the Viking Garden* at the Botanical Garden of the Museum of Natural History in Oslo (Chapter 2) shows how cross-disciplinary collaboration can lead to new approaches within one scientific discipline. The *Viking Garden* started out as informal exchanges between archaeologists and biologists on the spread of plant and animal species through Viking travels and ended up as a new installation in the Botanical Garden. This case shows that we should not limit our understanding of exhibitions as research to the individual exhibition as product. From the original collaboration with archaeologists and the making of the garden as such, an idea emerged for a new research project on genetic material from the archaeological collections, a project that was eventually granted a generous sum of approximately €800,000 from the Research Council of Norway. This shows how the cross-disciplinary collaboration involved in exhibition-making should not necessarily be seen as the end result in itself, but can work effectively as a way to generate original ideas for more conventional monodisciplinary projects.

One notorious challenge in cross-disciplinary collaborations is that even while, on the surface, we may seem to talk about the same theme, it often turns out that established disciplinary frameworks and perspectives hinder any true dialogue. In their chapter on the making of a film for an exhibition on amulets, Nathalia Brichet and Frida Hastrup argue that exhibition work can, in effect, create a kind of "un-disciplined" research where multiple parties are engaged in an extended discussion on the meaning and value of specific concepts (Chapter 3). Following the interviews with people whom Brichet would meet during her making of a film in London, the chapter investigates what an "amulet" actually is and what it may mean to a diverse group of people. Thus "the amulet" does not exist as a defined category from the beginning, but emerges through an extended conversation, not only between museum professionals, but also with people Brichet would meet more or less coincidentally. What is interesting here is that this dialogue between various interlocutors is made possible by avoiding an interpretation and definition of what an amulet is beforehand, turning, instead, the making of the film (and the exhibition) into a truly explorative process.

These cases show us that cross-disciplinarity is not merely a matter of distributing labour, but a particular kind of enquiry that challenges the concepts we construct knowledge on and through.

## Sensing knowledge

The return of academic interest in museums in recent years reflects the huge interest in objects and materials that has appeared across a wide range of disciplines (Gell 1998; Latour and Weibel, 2005; Classen and Howes, 2006; Macdonald and Basu, 2007; Herle, Elliott and Empson, 2009; Dudley, 2010, 2012). Constance Classen and David Howes (2006) have argued for a more extended use of sensate means in order to better grasp the worlds we represent in museums. According to this approach smells, sounds and tactile experiences can be applied to generate a comprehension of life in a certain time period or a particular place in the world. Several of the cases in the present volume have a similar interest in the capacity of what we may call material and sensate experiences. However, the focus is not so much on the representational qualities of such material experiences, but on engagements with objects and materials as a productive way of discovering new perspectives. If Thomas' approach to the museum as method focussed on the way in which antiquarian work will lead the researcher astray, searching for information beyond established categories, several of the cases here consider what happens when we focus on objects not for their capacity to carry information but for their material qualities and potentials as such.

Focussing on objects from such a perspective obviously begs the question of what kind of knowledge we are actually dealing with. Can we talk about knowledge which cannot be expressed through language and text? And if so, what status will such knowledge have, not only within academia, but also in the museums' interaction with audiences?

Ulrich Rauff has argued that it is exactly the non-textual quality of objects that makes them accessible to interrogation:

[Exhibitions] bring up problems. They ask questions. [...] The simple reason for this is that the objects on display are material objects put together in juxtaposition or in any other spatial order [...] they haven't been reduced to mere descriptions. They haven't been flattened down to print lines. They still possess their full expressiveness, their aesthetic power.

(2010, p. 70)

Adam Bencard (Chapter 4) draws on Ian Bogost's notion of "alien objects" in arguing that engaging with (and creating new) objects can work as a mode to transgress our everyday view of things. Objects and relations between objects have a capacity to sustain a degree of complexity that affords a holistic perspective on things, where parts can be present at the same time without being causally related. Based in the presentation of an art work made for *Mind the Gut*, an exhibition on current research on mind-gut relations, Bencard argues that interrogating into things allow us to make leaps and connections we would not have achieved through a kind of research aimed for establishing semiotic "meaning".

In Chapter 5, Kari K. Aarrestad reflects on the changing status of objects moving between museum and market. As the University Museum in Bergen was shut down for renovation the staff decided to experiment with alternative display venues. As a result an exhibition was organised in a local shopping mall. This spatial displacement turned out to have effects akin to the ones described by Bencard. Being exposed to objects that were alien to the setting in the mall made people in the mall pause in their everyday flow of life and engage in discussions with the museum staff present in the mall. In this way both audiences' and the museum staff's conceptions of the objects on display were explored through these encounters.

In Chapter 6, I return to the traditional setting of the museum. Reflecting on the making of a cross-disciplinary exhibition entitled *COLLAPSE – human being in an unpredictable world*, I argue that exhibition-making enacts a kind of knowledge-making process which we may term "collapsology". The

participants in *COLLAPSE* were challenged to look beyond their expert knowledge and engage in a number of workshops focussed on solving challenges through working with objects and materials. In this sense the making of the exhibition generated a process of de-construction and re-constructing, whereby new orders in the collections were suggested.

Elizabeth Hallam (Chapter 7) traces recent experiments in anthropological and museological research where the status of objects and spaces has been challenged. Based in two cases (“Designing bodies” and “Room experiments”) she points to the “conceptually emergent” character of objects and space in these projects. Thus, she suggests the term “object-spaces” as a concept that points our attention to how objects and space constitute each other in the development of exhibitions. In this sense, the exhibition is never fixed as visitors are also enrolled in these ongoing transformative processes.

## Collaborating with audiences

If there is one major trend that has struck museums in recent years it must be collaboration with audiences. Coined as “inclusion” or “outreach”, as “co-design” or “userdriven development”, the turn towards engaging with people outside the museum not only as audiences but as creative agents in the making of exhibitions has evolved into an integrated practice in many museums. Nina Simon’s *The Participatory Museum* (2010) has become a landmark in the debate on participation. Simon’s central contribution was probably that she did not simply celebrate participation, but critically engaged with when and how participation makes sense to both the museum and its audiences and that she did not simply consider the effects of participation in abstract, politico-theoretical terms but grounded it in concrete experiences and requirements.

However, in museums the focus has primarily been on the political, democratising effects of engaging with audiences, while only little has been written on the merits of participation in terms of developing new research (see Ssorin-Chaikov, 2013 for an exception). We have a considerable body of literature that will verify the value of such participatory projects to the audience and to the popularity of the museum. But how may they enhance the museum’s research?

Graham (Chapter 11) engaged with people with learning disabilities who attended two Day Centres in Croydon, London, prior to their closing due to changes in the political environment. The aim of the collaboration was to stage an exhibition on life in the Day Centres. As Graham rejects a simple “representation” of how life was in the Day Centres she ends up in what resembles an ethnographic fieldwork, where the worlds of the people she engages with slowly open to her. In this way, the collaborative task of identifying objects to be displayed and identifying narratives to be told generates not only a deep knowledge of the history of the Day Centres but also what Graham calls a “participatory ontology”, an understanding of what it means to live with a learning disability, by taking part in the material, social and political relations through which this worldview emerges.

Jørgensen (Chapter 10) traces how the NTNU University Museum in Trondheim tried to establish a laboratory where various audience groups could engage in developing a new cross-disciplinary exhibition on colonisation processes in mid-Norway. Jørgensen demonstrates how new ideas came about through this engagement, but she also shows how the museum’s researchers felt little inclination to take part in the laboratory phase of the project. It was only as the project reached the exhibition phase, with a given deadline and “natural” responsibilities distributed, that the researchers engaged fully in the process. As a result, the potential spin-offs from the engagements in the laboratory were not fully integrated in the exhibition and the museum’s ongoing research. The experiences from this project reveal some of the difficulties involved in exhibitions as research as new, and perhaps less predictable, work models are required.

But the focus on engagement with audiences also forces the museum to act as an active agent beyond the confines of the museum building. Hege Hollund and her colleagues from AMS, the Museum of Archaeology at the University of Stavanger (Chapter 9), describe a number of engagements between the museum and different groups of children and youths in the Stavanger area. In contrast to the other museums in *The Colonization Project*, AMS did not focus on one single exhibition. Starting out simply trying to identify relevant collaborators, a network soon expanded, engaging the museum with high schools and other educational institutions in town. Eventually, the project generated new data as school children were asked to keep a dietary diary and analyse hair samples, which were compared to genetic data from excavations from a medieval churchyard in the centre of town.

Jacqui Mulville's case of the "Guerilla archaeology" group at University of Cardiff (Chapter 8) describes how interaction with young people at music festivals has created a somewhat anarchistic approach to involving the public in questions of science. Mulville demonstrates how thinking of ways to approach and engage non-archaeologists in archaeological questions forces the guerrilla archaeologist to come up with projects that transgress established archaeological reasoning. Hence, engaging with audiences at music festivals brings to the fore questions that would never have been raised with archaeological peers.

### Exhibitions as research – but not *that* kind of research

It may be noticed that none of the chapters in this volume talk about research in the conventional sense of the term: systematic data gathering and careful observation and analysis in order to test a hypothesis. One may certainly imagine ways of carrying out research on these terms through exhibitions, but the exhibition does not promise to be neither particularly efficient nor particularly attractive to an audience if its main aim is to copy the way research is undertaken outside the museum.

In fact, all the cases presented in this volume call for research to do "otherwise" (Bouquet, 2000); to work in different ways than usual, to engage with other groups than usual, to think and discuss in other ways than usual. So, one may ask – does it really make sense to talk about exhibitions as research if what they do is to negate most of the procedures we would normally think of as characteristic to research?

We would argue that it does make sense, and further that – given the way in which contemporary frameworks for research increasingly focus on the production of "results" in terms of peer reviewed articles, research funding, and so on – we think that the processes presented in this volume actually help us to focus on what research is *about*. The focus on the *products* of research has a tendency to undermine the less tangible effects of research to constantly challenge the limits of our thinking and ask new questions about the constitution of the world.

It is exactly through the request to "do otherwise" that the process of making exhibitions (and other kinds of audience related activities) adds to research. By bringing researchers and non-researchers together, by asking people to think through objects and space, and by asking research to transgress its internal jargon and formulate questions that can be shared by a general audience, the exhibition inserts a layer of playful imagination to the research process that has the potential to guide research in new directions.

Therefore, while exhibitions may not produce research results as such they may be productively introduced as part of the larger cycles of research that the museum undertakes. In order to be fulfilled, these potentials need to be ingrained in an institutional framework that is open to this way of working. And as this volume shows us, turning exhibitions into research does not always go as smoothly as intended. Several of the cases in the book demonstrate how such ways of "doing otherwise" breaks with the museum's sense of normality. In fact, it goes against most of the central pillars of modern organisational models in museums.

If we allow ourselves to paint a somewhat simplified picture, most modern museums adhere to an organisational model, adapted from private enterprise, that stresses efficiency. In order to create a rational and efficient organisation, staffs are divided according to professional expertise and their responsibilities distributed accordingly. Projects, like exhibitions, are organised with clear-cut aims, exact progression plans and milestones and, as far as possible, a plan for the involvement of the various participants that allows for predictability so that the engagement in exhibition-making can go along with all the other various tasks that the staff are dealing with (see for instance Hein, 1990, pp. 142–145; Lord and Lord, 2002; Matassa, 2014).

There is nothing wrong with this as such. Careful planning of activities is a necessity for any organisation and as most museums rely on public funding they should not close in on themselves, but be truly engaged in making themselves relevant – although what is deemed relevant is obviously something to be discussed (see for instance Nielsen, 2015; Simon, 2016).

However, 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*. If we consider an exhibition as research we cannot plan how it will develop before we engage in searching out – in selecting, discovering and captioning, as Nick Thomas (2016, pp. 100–114) would say.

Moreover, we cannot rely on the routine division of labour involved in exhibition work. Most of the laboratory projects emerging nowadays are based in bringing participants out of their regular work mode to engage in processes that they will consider beyond his or her core competency. In a sense, we may say that in the laboratory, expertise is floating. This does not mean that the researcher should be turned into a designer, the conservator into an interpreter or the interpreter into a researcher. It does mean, however, that expertise consists in facilitating a productive collaboration between these different experts with a common question in mind, which will often bring staff out of their routines and into more uncertain ground.

Finally, approaching exhibitions as research also means that we cannot decide beforehand what is relevant in each of our projects. As Thomas (2010, p. 7) points out, relevance can “happen upon” us, which means that you have to be open and alert to what may actually happen and to change direction accordingly: What comes out of the collections, what comes out of the collaborations across disciplines, what comes out of engaging with various audience groups in the process?

Therefore, practising exhibitions as research is not merely one mode of exhibition-making. It is, in practice, a re-modelling of the museum as an institution. This is also what the cases presented in this volume show us. Probably, looking back today, some of the institutions that took part in *The Colonization Project* would declare that they would never go down that alley once again, while others continue to work out models that will accommodate these unpredictable processes within the larger museum machinery.

## Conclusion

In a review of an exhibition, Walter Benjamin once observed that “the visitor is not expected to leave the exhibition feeling learned, but smarter ...”, and, he continued, “[t]he task of a genuine, effective presentation is exactly to *detach knowledge from the limitations of specialism* and make it practical” (Benjamin in Korff, 1999, p. 6, my emphasis).

On the basis of the contributions to this volume we may argue that one modality of this detachment comes from the way the exhibition requires us to (at least partly) detach ourselves from “knowledge” as based in text and turn knowledge into something that works independent from text in its material and spatial configuration. As such, the exhibition works as a creative imposition that demands that research

releases itself from its “specialism” (or, exclusivity, one might say) and engage in an associative play of possibilities. As Ulrich Rauff (2010) has argued, being based in objects the exhibition defies in a forceful way any attempt to make strong claims on the world. Released from the text, research is thrown back into the world, having to find practical solutions to materialise itself as spatial situations audiences will be willing to engage in.

Therefore, we suggest that the status of the exhibition as research needs to be considered not as an end product, but as part of a larger process. It is imperative to understand this playful, challenging and associative approach to research if one wants to embrace exhibitions as research. If we used to think of the role of the exhibition as conveying, in the most accessible and attractive way, what had already been found out, this new approach urges us to see the exhibition as a bridgehead (Runia, 2006, pp. 21–22), a means for identifying new questions, new ways of interrogation.

As a consequence, working with exhibitions as research is not just a matter of including researchers in the organisation of a singular exhibition project. Exhibition as research must be understood as a moment in a longer impregnation of research that entails working consciously with how ideas emerging through exhibition work may be integrated in larger cycles of research within the institution and beyond.

For some, this may mark the final loss of scientific authority, a kind of post-modern final killing off of the virtues of modern science. However, we believe that the chapters of the present volume show that this is in fact not the case. Approaching exhibitions as research in and of themselves does not reflect a loss of faith in research, but it asks for research to go even further and turn its problems into material, experiential consequences.

## Notes

- 1 The six Norwegian university museums are: The Arctic University Museum of Norway in Tromsø, The Science Museum at University of Science and Technology in Trondheim, the University Museum in Bergen, the Archaeological Museum at University of Stavanger, Natural History Museum at University of Oslo, and Museum of Cultural History at University of Oslo. As part of the project all six museums were challenged to make an audience related activity that: (1) defined a research topic that the project should develop *more* insight on; (2) included collaboration with groups outside the museum; (3) took up colonisation as its theme.
- 2 See for instance Fred Wilson’s exhibitions in the Maryland Historical Society in Baltimore (Karp and Wilson, 1996) and Museum of World Culture in Gothenburg, Anthony Shelton’s work at the Horniman Museum in London (Shelton, 2001) or the exhibitions at Musée d’Ethnographie Neuchâtel.
- 3 See for instance the ongoing work at Museum für Naturkunde in Berlin, Musée de la Chasse et de la Nature in Paris, and the installations of Mark Dion in various museums.
- 4 I am aware of the various definitions of «cross-disciplinarity», «inter-disciplinarity», «multi-disciplinarity» etc. (see for instance Stember, 1991). However, as the cases presented in this volume did not clearly define the nature of their collaboration across disciplinary divides, I have decided to use “cross-disciplinarity” as a general term here.
- 1 This chapter is a result of several years of discussions related to the question of research in museums at the Norwegian Museum of Science and Technology. Some preliminary ideas emerged at the conference “Museale og arkivale praksiser”, University of Oslo, 29–30 November 2012. My thanks are due to all of my colleagues with whom I have discussed and been inspired by, and encouraged to continue this, indeed, collaborative endeavour. The research for this chapter is partially supported by the Arts Council Norway under the programme on the societal role of museums (“Museenes samfunnsrolle”). Regarding the present text, I am immensely grateful to the museum librarian, Relsen Larsen, for her support, Olav Hamran for reading and commenting on the text, and Ketil Gjølme Andersen and Ageliki Lefkaditou for their involvement in the whole experiment, insightful comments and perspectives, and compassionate help with the English language. Thanks also to the anonymous reviewer, for their insightful comments and engagement with the text.

- 2 LAB is our short term for laboratory. Capital letters are used to underline that it is a particular practice and method at the Norwegian Museum of Science and Technology.
- 3 Organization Todt (1938–1945) was a semi-state-owned civil and military engineering organisation answering to Hitler only. It was a tool for the expansion plans of the Third Reich, to establish a large space under German control, referred to as “das Grossraum”. OT controlled a workforce of 1.5 million people. The vast majority were forcibly recruited (Andersen, 2017).
- 4 Other inquiries into issues of academic research in museums show that research that has been going on since the early 1980s takes different forms and is experienced differently by museums. For example, the situation for many natural history museums is quite different (see Anderson, 2008).
- 5 Attempts have been made to construct “research exhibitions” (meaning exhibition that present and record research outcomes) with a thorough contextual framing to secure an authorial interpretation (as in, ideas communicated unambiguously) and even peer-reviewing of these shows. The result did not turn out to be very successful (see Rust and Robertson, 2003; Niedderer, Biggs and Ferris, 2006).
- 6 The exhibition was set up at the Museum of Archaeology and Anthropology at the University of Cambridge, in 2009.
- 7 “Thing – Technology and Democracy” was a celebration of the foundation of the Norwegian Museum of Science and Technology – NMST – in 1914 and the 200<sup>th</sup> Anniversary of the Norwegian Constitution. The exhibition was on from April 2014 to December 2015, and it was awarded for its experimental inclusion of visitors with the ASTC, Leading Edge Award 2015 and the Mariano Gago ECSITE creativity award 2015. A presentation of the exhibition is available here: [www.youtube.com/watch?v=Usj7VOTcYRg](http://www.youtube.com/watch?v=Usj7VOTcYRg).
- 8 The research project “The Political Economy of Forced Labor: Organization Todt in Norway during World War II” is financed by the Research Council of Norway (2010–2017). It was initially developed by the NMST research curator, Ketil Gjolme Andersen. In 2011 the Museum decided to produce an exhibition alongside the research project. From then on, Andersen played the double role of a researcher and curator. The project involves a total of 22 researchers and its academic home is at the Norwegian University of Science and Technology in Trondheim.
- 9 The site where the stone is taken from has just recently, in 2009, been protected by the Ministry of Cultural Heritage. It happened all of a sudden, due to an incident where a load of carved stones were “stolen”, as it said in the local newspapers and media, and shipped to Cambridge, England, to build a war memorial ([www.nrk.no/ostfold/sjokkert-over-inngrep-i-kulturminne-1.6830786](http://www.nrk.no/ostfold/sjokkert-over-inngrep-i-kulturminne-1.6830786), accessed 28 Mar 2016).
- 1 There has also been renewed interest in materialisms within more established academic disciplines, and there have been in the last decade materialist and ontological turns in areas such as literary studies, anthropology, political theory, and history.
- 2 Also, the actual newness of these philosophies are worth discussing – how do they differ from earlier traditions of thinking about materiality and objects? These discussions are pertinent, as the new interest in the ontologies of things begins moving beyond the initial rush of newness and into a more considerate phase of sorting out which of these speculative approaches and ideas that might have lasting value. Such discussions will not fit into the confines this paper, but at this stage in their academic trajectory they are worth attention, not least because they are symptomatic of a historical moment in which these themes seem to have particular significance and urgency.
- 3 Quoted from <https://philosophyinatimeoferror.com/2010/05/25/jane-bennett-the-interview/>, accessed 18 March 2018.
- 4 Quoted from [http://bogost.com/writing/seeing\\_things\\_1/](http://bogost.com/writing/seeing_things_1/), accessed 18 March 2018.
- 5 Predictably, this has led to a number of critiques of OOO, one of them being that it seems to prefer aesthetics over reasoning, practicing philosophy as ‘riffing’ on themes and suggestive metaphors, rather than sustained attempts to reason – an process more akin to artistic production of half-glimpsed intuited insights over more deliberate, carefully logical constructions. This critique, as raised for example by Nathan Brown who writes of the object-oriented ontology that it collapses “into absurdity, irrelevance, and infinite regress”, ([www.parrhesiajournal.org/parrhesia17/parrhesia17\\_brown.pdf](http://www.parrhesiajournal.org/parrhesia17/parrhesia17_brown.pdf) – see also Peter Wolfendales extended critique in Object Oriented Philosophy: The Noumenon’s New Clothes) must be taken into account when attempting to gauge its usefulness. However, I find that it is a productive in a museum context, in which aesthetics and half-glimpsed connections is a vital force in what attracts us to museums in the first place. They are, as I have written about elsewhere, sites of presence (Bencard, 2014), places where things and history is experienced with a fullness that cannot be captured

in meaning, logic or reasoned narrative. In some sense, all exhibitions are ‘riffs’ on particular themes, concepts, historical periods and episodes, and so on, conjured into space, with all the strangeness and unexpected (good or bad) qualities that arises from such contingency. This might also explain why OOO has been taken up most forcefully within the art world and in fields sensitive to poetry and aesthetics such as literary theory (see Object-oriented environs, etc.).

- 6 It can be found online at [http://bogost.com/writing/blog/latour\\_litanizer/](http://bogost.com/writing/blog/latour_litanizer/).
- 7 From ontography, Bogost moves on to what he calls metaphorism, which I shall only briefly mention here: Where ontography describes and enacts relations between objects, metaphorism is a form of creative distortion for revealing how objects perceive and experience relations. A completely speculative and weird practice, which uses “the clarity of distortion” to characterize the alien experience.
- 8 Similarly, philosopher Levy Bryant has suggested that these lists create a sort of epoché, as described by Husserl, a moment of suspension of judgment about the external world. Following Husserl, the epoché is a way of breaking with our fundamental “captivation-in-an-acceptedness.” Husserl argues that we can’t help but live in an unquestioning and unbroken belief in our customary life in the world, and that the epoché is a moment of bracketing this immanence, this taking for granted of the structures of our normal existence. The ontographical list aims, in a small way, at this sort of rupture.
- 1 See Bjerregaard, 2015b and 2015c for theoretical developments of this idea.
- 2 The report was written in Danish and not in Norwegian. This was due to the fact that the report was written by two post-doctoral researchers – Anders Emil Rasmussen and the author of this chapter – who were both working on a research project led by KHM’s director Rane Willerslev.
- 3 “White Christ” or “*Kvitekrist*” was the old Norwegian name for Jesus Christ, stressing the purity connected to the colour white in opposition to the darkness related to Norse mythology.
- 4 For instance, in Lewis White’s neo-evolutionism, a culture’s development can be measured by its capability to bind energy, and thereby control the entropic flow of energy, in order to create stability and predictability (White, 1959). In Bateson’s famous idea of “information” as “the difference that makes a difference” (Bateson, 2000[1972], 271–273, 315–320, 454–471), this difference is equaled to negative entropy, that is, information is a way of turning the meaningless flow of entropy into internal information in a system (ibid., 504).
- 5 In an earlier exhibition at the museum, “The Value of ‘X’”, the ethnographic curator in *COLLAPSE*, Arne Perminow, and Tongan artist Filipe Tohi, had followed how such cross-patterns had developed.
- 6 A Venn diagram is a diagram that shows all possible relations in a given set. So, in our case, having three cases, the diagram would show each case as a circle, and the three circles would create overlapping zones between Pioneer–Polynesia, Pioneer–Urban gardening, and Polynesia–Urban gardening, as well as a central zone where all three cases would overlap.
- 7 Anja came in late to the project as the first Stone Age expert had to withdraw from the project due to other project responsibilities.
- 8 *Kava* is a drink made from the root of the *kava*-plant, *Piper methysticum*. Kava is used throughout Polynesia.
- 1 If the printed word has formed a predominant medium for the communication of anthropology (Boyer et al., 2016; Schneider and Pasqualino, 2014), nevertheless, work with a range of media is expanding; see for example curatorial projects by the Ethnographic Terminalia Collective, <http://ethnographicterminalia.org>; and by the network Colleex – a collaboratory for ethnographic experimentation, <https://colleex.wordpress.com>. Laboratories, convened at the Association of Social Anthropologists’ annual conferences (for example ASA2018 in Oxford) and at the European Association of Social Anthropologists biannual conferences, are also an expanding forum for developing experimental modes of anthropology.
- 2 I curated and produced the “Rooms experiment: a fast installation” in collaboration with a team: Ray Lucas, Jen Clarke, Marc Higgin, and Elishka Stirton, with Dani Landau as production technician. Conducted with permission from the Estates department at the University of Aberdeen.
- 3 Mark Brown, “Gunther von Hagens’ Body Worlds to open London Museum”, *The Guardian*, online 6 September 2018.
- 4 “Body Worlds London”, [www.bodyworlds.com](http://www.bodyworlds.com), accessed October 2018.
- 5 As the guest curator of the exhibition I wrote all of the graphics panels (and selected images for these), case labels, object captions, and textual headings for sections of the display. These were then edited by curatorial staff at the RCS before I approved the final version.

- 6 For relevant approaches to curating, see, for example, Graham and Cook (2010), Obrist (2014), O'Neill (2016).
- 7 For example the further generation of MARTYN under development for pediatric surgery (see Royal College of Surgeons of England 21 November 2016; Craven et al., 2018), and a number of iterations of MARTYN were being testing for functionality and potential utility in testing robotic surgery (see Marcus, Darzi and Nandi, 2013, Marcus et al., 2014).
- 8 J.H. Hicks, "Mechanics of the Foot: The posterior hinge movement", p. 15, typescript, c. 1955, MS0186/3/2, RCS Archive.
- 9 J.H. Hicks, "Mechanics of the Foot III: The 'windlass'", p. 12, manuscript, early 1950s, MS0186/3/3, RCS Archive.
- 10 Quoted in Oliver Wainwright, "The V&A's £55m new courtyard: 'Like a Marbella beach bar airlifted to South Ken'", *Guardian*, online, 28 June 2017.
- 11 For example, "Alexander McQueen: Savage Beauty", and "David Bowie is", both at the Victoria and Albert Museum, London.
- 12 Ellis Woodman, "The V&A's new £48m Exhibition Road Quarter is a triumph – review", *Telegraph*, online, 28 June 2017.
- 13 Ellen Himelfarb, "10 new museums opening in 2018: fresh additions to the world's archaeology, art and design scenes", *Spaces*, online, 1 January 2018.
- 14 ArtScience Museum, website, [www.marinabaysands.com](http://www.marinabaysands.com), accessed 15 August 2018.
- 15 The Museum of the Future, [www.museumofthefuture.ae](http://www.museumofthefuture.ae), accessed 9 December 2018.
- 16 Kim O'Connell, "Dubai's Museum of the Future Is Shaping Up as the World's Most Complex Building", *Redshift*, online, 13 February 2018.
- 17 Sam Bridge, "Dubai's Museum of the Future shortlists firms for tech innovation", *Arabian Business*, online, 10 August 2018.
- 18 The team, drawing on anthropology, architecture and art, included Elizabeth Hallam (acting as curator) with Jen Clarke, Marc Higgin, Ray Lucas, Elishka Stirton, and production technician Dani Landau.
- 19 "Rooms experiment: a fast installation" comprised four mixed-media interventions in the publicly accessible Anatomy Rooms, Marischal College, located in the lecture theatre's projection box, the vacated store of the anatomy museum, the dissecting room, and an external staircase.
- 20 The installation was displayed during a week-long gathering of the "Knowing From the Inside" (KFI) project, led by Tim Ingold, Department of Anthropology, University of Aberdeen.
  - 1 In English: Where people walk.
  - 2 In English: *It was once a man*.
  - 3 Such a comparison allows active contributions from people of the region by sampling body tissue (hair) of people living in the city/region today. Stable isotope analysis for palaeodietary reconstruction provides an ideal opportunity to invite a wider audience to be both research objects and research partners. Obtaining modern isotope chemistry data allows testing of palaeodietary theory (you become what you eat), since their diet is known.
- 1 The concept of "workshop" is here defined as a period of discussion and practical work on a particular subject by a group of people.
  - 2 The complex collaboration processes going on in the making of an exhibition at NTNU Vitenskapsmuseet are described by Steffensen (2012, pp. 65-83) and Rokne (2012, pp. 85-103) in Maurstad A. and Hauan, M.A. (2012). *Museologi på norsk – universitetsmuseenes gjøren*. Trondheim: Akademisk forlag.
  - 3 Apart from my personal field diary notes, these documents are digitally archived as internal institutional documents in connection to "The Colonising Project" at the NTNU University Museum.
  - 4 Traditionally, the Norwegian University Museums manage collections in relation to the research disciplines of archaeology, cultural history, ethnology, geology, paleo geology, natural history and biology. Despite a broad range of collections, the overall research focus at the NTNU University Museum today is within archaeology and biology. Long-term exhibitions relate to these disciplines, while short-term exhibitions and travelling exhibitions are more varied.
  - 5 According to M. Bucchi (2008), cornerstones of the conception of diffusionist science communication are first, that science is hard to understand for the general public, but that their deficits, ignorance or hostility to science can be counteracted by appropriate injections of science communication. Second, that science therefore needs mediation to be transferred from the scientists to the general public. The professionals singled out to bridge the gap between experts and lay people and make science democratically available for all are, e.g., science journalists

or museum staff. Third, that scientific facts are transferable without significant alterations from the scientific sphere to the popular sphere, if the mediators translate it correctly. This links to the authorisation of scientists to proclaim themselves extraneous to the processes of science communication and free to criticize errors, such as, for instance, sensationalist framing. Fourth, that a deficit model of science communication is a linear process, where the scientific source, context and the popular target context can be sharply separated, with only the former influencing the latter (Bucchi, 2008, pp. 58–59).

- 6 According to Ursula Plesner, “the knowledge society” can be described as a field of discursivity, where discourses are constituted through constant articulatory practices. Hegemonic struggles between Humboldtian ideals of pure research and Mode 2 ideals of research (e.g., Nowotny, Scott and Gibbons, 2003) as practices in mutual interplay with society, take place within the knowledge society. These ideals acquire their position in relation to one another and are never fully fixed (Plesner, 2009, p. 233).
- 7 The four departments at NTNU University Museum are Section for Exhibitions and Events; Department of Archaeology and Cultural History; Department of Natural History, and the National Laboratory of Age Determination.
- 8 The wolf is red listed as a threatened species in Norway, but is often considered as a problematic intruder in local communities dependant on livestock farming. Official permission to hunt individuals that causes trouble can be approved and the media debates nourish the tension between stakeholders such as environmentalists and local sheep farmers. This was also the case for the Agdenes wolf. Norwegian media followed it day after day, for months, and 300 licensed hunters were chasing it. When it was finally killed, at the border between two municipalities, there was a local dispute over its dead body, as both parties wanted it stuffed and displayed at the municipality building. Instead, it was sent to the University Museum in Trondheim, which is the delegated authority to take care of the game in such cases in mid-Norway. The taxidermist immediately mounted it, and the museum was obliged to display it, as representatives from both local communities had expressed displeasure over the current situation and were eager to reencounter “their” wolf.
- 9 See Skavhaug, R.S., 2015: *Samlerapport – Kampen om tilværelsen*. (The document is digitally archived as an internal institutional document in connection to “The Colonising Project” at the NTNU University Museum.)
- 10 See Jørgensen, 2014: *Rapport – Hvem skal ut? En workshop om dyr på rødlista og svartlista. NTNU Vitenskapsmuseets sommerskole, Sommerlarm 2014*. (The document is digitally archived as an internal institutional document in connection to “The Colonising Project” at the NTNU University Museum, along with photos and videos from the workshops.)
- 11 See Jørgensen, 2014: *Rapport – Hva skulle vi gjort uten jern? Workshop med deltakere på NTNU Vitenskapsmuseets sommerskole 2014*. (The document is digitally archived as an internal institutional document in connection to “The Colonising Project” at the NTNU University Museum, along with photos, videos and soundtracks, and a summary soundtrack transcript from the workshops.)
- 12 In Norwegian, “Forskerspiren”. This programme includes a systematic approach to the natural sciences and nature studies throughout primary and lower secondary education. Pupils are inspired to observe nature, ask questions, develop and test hypotheses, make assessments and form arguments about their results and finally, to disseminate their work to others. These skills fit in well with the university museums` practices of both research and research communication. See for example the website: [www.naturfag.no/tema/vis.html?tid=1994599](http://www.naturfag.no/tema/vis.html?tid=1994599).
- 13 See Jørgensen, 2014: *Rapport – Workshop med lærerstudenter om hvordan temaet kolonisering av natur og kultur kan gå inn i læreplan tilpassede undervisningsopplegg i grunnskolen*. (The document is digitally archived as an internal institutional document in connection to “The Colonising Project” at the NTNU University Museum, along with a soundtrack from the plenum discussion and a summary soundtrack transcript.)
- 14 See Jørgensen, 2014: *Rapport – Kampen for tilværelsen? Et spill om balansen i naturen. Workshop med skolestartere fra Midtbyen Barnehage*. (The document is digitally archived as an internal institutional document in connection to “The Colonising Project” at the NTNU University Museum.)
- 15 The Norwegian title was “*Hvem skal ut?*” The title referred to a popular TV show, “*Nytt på nytt*” (NRK).
- 16 The Norwegian Biodiversity Information Centre’s webpage: [www.biodiversity.no/](http://www.biodiversity.no/)
- 17 J. Rosvold, personal communication, 31 May 2016.
- 18 The exhibition’s webpage is no longer available.
- 19 J. Rosvold, personal communication, 31 May 2016.

## References

- Alberti, Samuel J.M.M. (2009). *Nature and Culture: Objects, Disciplines and the Manchester Museum*. Manchester: Manchester University Press.
- Alpers, Svetlana. (1991). The museum as a way of seeing. In: Ivan Karp and Steven D. Lavine, eds., *Exhibiting Cultures: The Poetics and Politics of Museum Display*. Washington, DC: Smithsonian Institution Press, pp. 25–32.
- Andersson, Dag T. (2014). Salvaging images. *Scandinavian Psychoanalytic Review* 37(1), pp. 61–68.
- Arnold, Ken. (2015). From caring to creating. In C. MacCarty, ed., *Museum Practice*. Chichester: Wiley Blackwell, pp. 317–339.
- . (2016). Thinking things through: Reviving museum research. *Science Museums and Research*, Spring 2016. Available at: <http://dx.doi.org/10.15180/160505>. [Accessed 13 July 2018].
- Basu, Paul, and Sharon Macdonald. (2007). Introduction: Experiments in exhibition, ethnography, art and science. In: Sharon Macdonald and Paul Basu, eds., *Exhibition Experiments*. Malden, MA: Blackwell, pp. 1–24.
- Bennett, Tony. (1995). *The Birth of the Museum: History, Theory, Politics*. London: Routledge.
- Bjerregaard, Peter. (2013). Assembling potentials, mounting effects: Ethnographic exhibitions beyond correspondence. In: Christian Suhr and Rane Willerslev, eds., *Transcultural Montage*. New York: Berghahn Books, pp. 243–261.
- . (2014). A house for untamed thinking: Re-connecting research and display at the Museum of Cultural History. In: Francesca Lanz and Elena Montanari, eds., *Advancing Museum Practices*. Turin: Umberto Allemandi & C., pp. 115–123.
- . (2015). Dissolving objects: Museums, atmosphere and the creation of presence. *Emotion, Space and Society*, 15 (May 2015), pp. 74–81.
- . (2019). Exhibitions as research, curator as distraction. In: Malene Vest Hansen, Anne Folke Henningsen and Anne Gregersen, eds., *Curatorial Challenges: Interdisciplinary Perspectives on Contemporary Curating*. London: Routledge, pp. 109–119.
- Bjerregaard, Peter, and Rane Willerslev. (2016). Assembling “The Spark of Life”. In: Peter Bjerregaard, Anders Emil Rasmussen and Tim Flohr Sørensen, eds., *Materialities of Passing: Explorations in Transformation, Transition and Transience*. London: Routledge, pp. 221–237.
- von Bose, Friedrich, Harald Katzmair, Juri Steiner and Agnes Wegner. (2015). Productive energy through differences: The laboratory principle as a space for opportunities. In: Martin Heller, Andrea Scholz and Agnes Wegner, eds., *The Laboratory Concept: Museum Experiments in the Humboldt Lab Dahlem*. Berlin: Nicolaische Verlagsbuchhandlung, pp. 44–52.
- Bouquet, Mary. (2000). Thinking and doing otherwise: Anthropological theory in exhibitionary practice. *Ethnos*, 65(2), pp. 217–236.
- . (2001). Streetwise in Museumland. *Folk, Journal of the Danish Ethnographic Society*, 43, pp. 77–102.
- Classen, Constance, and David Howes. (2006). The museum as scenscape: Western sensibilities and indigenous artefacts. In: Elizabeth Edwards, Chris Gosden and Ruth B. Phillips, eds., *Sensible Objects: Colonialism, Museums and Material Culture*. Oxford: Berg, pp. 199–222.
- Clifford, James. (1997). Four North West Coast museums: Travel reflections. In: *Routes: Travel and Translation in the Late Twentieth Century*. Cambridge, MA: Harvard University Press, pp. 107–146.
- Cummings, Neil, and Marysia Lewandowska. (2007). From *capital* to *enthusiasm*: An exhibitionary practice. In: Sharon Macdonald and Paul Basu, eds., *Exhibition Experiments*. Malden, MA: Blackwell, pp. 132–153.
- Dudley, Sandra H., ed. (2010). *Museum Materialities: Objects, Engagements, Interpretations*. London: Routledge.
- . (2012). Encountering a Chinese horse: Engaging with the thingness of things. In: Sandra H. Dudley, ed., *Museum Objects: Experiencing the Properties of Things*. London: Routledge, pp. 1–15.
- Gell, Alfred. (1998). *Art and Agency: An Anthropological Theory*. Oxford: Clarendon Press.
- Haraway, Donna. (1984). Teddy bear patriarchy: Taxidermy in the Garden of Eden, New York City, 1908–36. *Social Text*, 11 (Winter 1984–85), pp. 20–64.
- Healy, Chris, and Andrea Witcomb, eds. (2006). *South Pacific Museums: Experiments in Culture*. Clayton, VIC: Monash University e-Press.
- Hein, Hilde (1990). *The Exploratorium: The Museum as Laboratory*. Washington, DC: Smithsonian Institution Press.
- Heinich, Nathalie and Michael Pollack. (1996). From museum curator to exhibition *auteur*: Inventing a singular position. In: Reesa Greenberg, Bruce W. Ferguson and Sandy Nairne, eds., *Thinking About Exhibitions*. London: Routledge, pp. 231–250.

- Heller, Martin. (2015). Looking for missed opportunities. In: Martin Heller, Andrea Scholz and Agnes Wegner, eds., *The Laboratory Concept: Museum Experiments in the Humboldt Lab Dahlem*. Berlin: Nicolaische Verlagsbuchhandlung, pp. 23–31.
- Heller, Martin, Stefan Kaegi, Tim Ventimiglia, Detlef Weitz and Nina Wiedemeyer. (2015). Shaping perception: On the potential of scenography. In: Martin Heller, Andrea Scholz and Agnes Wegner, eds., *The Laboratory Concept: Museum Experiments in the Humboldt Lab Dahlem*. Berlin: Nicolaische Verlagsbuchhandlung, pp. 55–63.
- Heller, Martin, Andrea Scholz and Agnes Wegner, eds. (2015). *The Laboratory Concept: Museum Experiments in the Humboldt Lab Dahlem*. Berlin: Nicolaische Verlagsbuchhandlung.
- Herle, Anita. (2013). Exhibitions as research: Displaying the technologies that make bodies visible. *Museum Worlds: Advances in Research*, 1, pp. 113–135.
- Herle, Anita, Mark Elliott and Rebecca Empson. (2009). *Assembling Bodies: Art, Science and Imagination*. Cambridge: Cambridge University Museum and Archaeology and Anthropology.
- Hooper-Greenhill, Eileen. (1992). *Museums and the Shaping of Knowledge*. London: Routledge.
- Ingold, Timothy. (2007). Materials against materiality. *Archaeological Dialogues*, 14 (1), pp. 1–16.
- Karp, Ivan, Christine Mullen Kreamer and Steven D. Lavine, eds. (1992). *Museums and Communities: The Politics of Public Culture*. Washington, DC: Smithsonian Institution Press.
- Karp, Ivan, and Steven D. Lavine, eds. (1991). *Exhibiting Cultures: The Poetics and Politics of Museum Display*. Washington, DC: Smithsonian Institution Press.
- Karp, Ivan, and Fred Wilson. (1996). Constructing the spectacle of culture in museums. In: Reesa Greenberg, Bruce W. Ferguson and Sandy Nairne, eds., *Thinking About Exhibitions*. London: Routledge, pp. 251–268.
- Korff, Gottfried. (1999). Exhibitions as constructed mnemonic worlds. In: Frank R. Wehrner, ed., *Hans-Dieter Werner: In-Between. Exhibition Architecture*. Stuttgart: Edition Axel Menges, pp. 6–11.
- Latour, Bruno. (1999). *Pandora's Hope: Essays on the Reality of Science Studies*. Cambridge, MA: Harvard University Press.
- . (2005). From Realpolitik to Dingpolitik, or how to make things public. In: Bruno Latour and Peter Weibel, eds., *Making Things Public: Atmospheres of Democracy*. Cambridge, MA: MIT Press, pp. 14–43.
- Lehman-Brauns, Susanne, Christian Sichau and Helmuth Trischler, eds. (2010). *The Exhibition as Product and Generator of Scholarship*. Max Planck Institute for the History of Science. Available at: [www.mpiwg-berlin.mpg.de/sites/default/files/Preprints/P399.pdf](http://www.mpiwg-berlin.mpg.de/sites/default/files/Preprints/P399.pdf) [Accessed on 11 July 2018].
- Lord, Barry, and Gail Dexter Lord, eds. (2002). *The Manual of Museum Exhibitions*. Walnut Creek, CA: AltaMira Press.
- Lumley, Robert, ed. (1988). *The Museum Time-Machine: Putting Cultures on Display*. London: Routledge.
- Macdonald, Sharon, and Paul Basu, eds. (2007). *Exhibition Experiments*. Malden, MA: Blackwell.
- Matassa, Freda. (2014). *Organizing Exhibitions: A Handbook for Museums, Libraries and Archives*. London: facet publishing.
- MOMA. (2014). Museum as Laboratory: Artists Experiments. Available at: [www.moma.org/learn/moma\\_learning/blog/museum-as-laboratory-artists-experiment](http://www.moma.org/learn/moma_learning/blog/museum-as-laboratory-artists-experiment). [Accessed on 17 July 2018].
- Nielsen, Jane K. (2015). The relevant museum: Defining relevance in museological practices. *Museum Management and Curatorship*, 30(5), pp. 364–378.
- O'Neill, Paul, and Mick Wilson, eds. (2015). *Curating Research*. London: Open Editions/de Appel.
- Porto, Nuno. (2007). From exhibiting to installing ethnography: Experiments at the Museum of Anthropology of the University of Coimbra, Portugal, 1999–2006. In: Sharon Macdonald and Paul Basu, eds., *Exhibition Experiments*. Malden, MA: Blackwell, pp. 175–196.
- Rauff, Ulrich. (2010). Old answers, new questions – What do exhibitions really generate? In: Susanne Lehman-Brauns, Christian Sichau and Helmuth Trischler, eds., *The Exhibition as Product and Generator of Scholarship*. Max Planck Institute for the History of Science, pp. 69–77. Available at: [www.mpiwg-berlin.mpg.de/sites/default/files/Preprints/P399.pdf](http://www.mpiwg-berlin.mpg.de/sites/default/files/Preprints/P399.pdf). [Accessed on 11 July 2018].
- Rogoff, Irit. (2003). Was ist ein Theoretiker? In: Martin Hellmold, Sabine Kampmann, Ralph Lindner and Katharina Sykora, eds., *Was ist ein Künstler: Das Subjekt der modernen Kunst*. Berlin: Wilhelm Fink Verlag, pp. 273–283.
- Runia, Eelco. (2006). Presence. *History and Theory* 45(1): 1–29.
- Shelton, Anthony. (2001). Unsettling the meaning: Critical museology, art and anthropological discourses. In: Mary Bouquet and Nuno Porto, eds., *Academic Anthropology and the Museum: Back to the Future*. New York: Berghahn Books, pp. 142–161.
- Simon, Nina. (2010). *The Participatory Museum*. Santa Cruz, CA: Museum 2.0.
- . (2016). *The Art of Relevance*. Santa Cruz, CA: Museum 2.0.

## 20 References

- Ssorin-Chaikov, Nikolai. (2013). Gift/knowledge relations at the Exhibition of Gifts to Soviet Leaders. *Laboratorium*, 5(2), pp. 5–18.
- Stember, Marilyn. (1991). Advancing the social sciences through the interdisciplinary enterprise. *Social Science Journal*, 28(1), pp. 1–14.
- Sturtevant, William (1969). Does anthropology need museums? *Proceedings of the Biological Society of Washington*, 82, pp. 619–650.
- Thomas, Nicholas. (2010). The museum as method. *Museum Anthropology*, 33(1), pp. 6–10.
- . (2016). *The Return of Curiosity: What Museums Are Good for in the 21st Century*. London: Reaktion Books.
- Vergo, Peter, ed. (1993) [1989]. *The New Museology*. London: Reaktion Books.
- Vogel, Susan. (1991). Always true to the object, in our fashion. In: Ivan Karp and Steven D. Lavine, eds., *Exhibiting Cultures: The Poetics and Politics of Museum Display*. Washington, DC: Smithsonian Institution Press, pp. 191–204.
- Weibel, Peter, and Bruno Latour. (2007). Experimenting with representation: Iconoclasm and making things public. In: Sharon Macdonald and Paul Basu, eds., *Exhibition Experiments*. Malden, MA: Blackwell, pp. 94–108.
- Andersen, K.G. (2017). *Grossraum: Organization Todt and Forced Labour in Norway 1940–1945*. Oslo: Norwegian Museum of Science and Technology.
- . (2018). Et teknisk æresoppdrag av høyeste orden: Organisasjon Todt, NSB og byggingen av Hitlers polarjernbane. *Historisk tidsskrift* 3/2018. KGA.
- Anderson, R. (2008). Research in and out of museums: Do minds meet? In: G. Cavalli-Björkman and S. Lindqvist, eds., *Research and Museums*. Stockholm: Archives of the Nobel Museum, pp. 11–26.
- Arnold, K. (2015). From caring to creating. In: C. MacCarty, ed., *Museum Practice*. Chichester: Wiley Blackwell, pp. 317–339.
- . (2016) Thinking things through: Reviving museum research. *Science Museum Group Journal*. Available at: <http://dx.doi.org/10.15180/160505> [Accessed 8 June 2017].
- Arnold, K., and T. Söderqvist. (2011). Medical instruments in museums: Immediate impressions and historical meanings. *Isis*, 102(4), pp. 718–729.
- Arrhenius, B., G. Cavalli-Björkman and S. Lindqvist. (2008). Preface. In: G. Cavalli-Björkman and S. Lindqvist, eds., *Research and Museums*. Stockholm: Archives of the Nobel Museum, pp. 7–9.
- Arx, S. von. (2015). On scenography. In: C. Eeg-Tverrback and K. Ely, eds., *Responsive Listening: Theater Training for Contemporary Spaces*. New York: Brooklyn Arts Press, pp. 34–38.
- Bennet, T. (1996). The exhibitionary complex. In: R. Greenberg, B.W. Ferguson and N. Sandy, eds., *Thinking about Exhibitions*. London: Routledge, pp. 58–81.
- Bjerregaard, P. (2015). Dissolving objects: Museum, atmosphere and the creation of presence. *Emotion, Space and Society*, 15, pp. 74–81.
- Brenna, B. (2009). Hva gjør museologi? *Nordisk Museologi*, 1, pp. 63–75.
- . (2016). Museumsmaterialiteter: Ingenting, mange ting og ting som skaper historie. *Arr – idéhistorisk tidsskrift*, 1, pp. 63–71.
- Brummer, H.H. (2008). Concluding comments. In: G. Cavalli-Björkman and S. Lindqvist, eds., *Research and Museums*. Stockholm: Archives of the Nobel Museum, pp. 211–228.
- Conn, S. (2010). *Do Museums Still Need Objects?* Philadelphia: University of Pennsylvania Press.
- Coombes, A.E., and R.B. Phillips. (2015). *Museum Transformations*. Chichester: Wiley Blackwell.
- Costall, A., and O. Dreier. (2006). *Doing Things with Things: The Design and Use of Everyday Objects*. Aldershot: Ashgate.
- Daston, L., ed. (2004). *Things That Talk: Object Lessons from Art and Science*. New York: Zone Books.
- Dean, D.K. (2015). Planning for success: Project management for museum exhibitions. In: C. MacCarty, ed., *Museum Practice*. Chichester: Wiley Blackwell, pp. 357–378.
- Dewey, J. (1980[1934]). *Art as Experience*. New York: Berkley Publishing Group.
- Dudley, S. (2010). Museum materialities: Objects, sense and feeling. In: S. Dudley, ed., *Museum Materialities: Objects, Engagements, Interpretations*. London: Routledge, pp. 1–18.
- Dudley, S., A.J. Barnes, J. Binnie, J. Petrov and J. Walklate. (2012). *The Thing about Museums: Objects and Experience, Representation and Contestation*. London: Routledge.
- Eriksen, A. (2010). *Museum: En Kulturhistorie*. Oslo: Pax Forlag.

- Fleming, M. (2010). Thinking through objects. In: S. Lehmann-Brauns, C. Sichau and H. Trischler, eds., *The Exhibition as Product and Generator of Scholarship*. Preprint 399. Available at: [www.mpiwg-berlin.mpg.de/Preprints/P399.PDF](http://www.mpiwg-berlin.mpg.de/Preprints/P399.PDF) [Accessed 22 Aug 2017], pp. 33–47.
- Herle, A. (2013). Exhibitions as research: Displaying the technologies that make bodies visible. *Museum Worlds: Advances in Research*, 1, pp. 113–135.
- Ingold, T. (2010). Bringing Things to Life: Creative Entanglements in a World of Materials. Working paper #15. ESRC National Centre for Research Methods. Available at: [http://eprints.ncrm.ac.uk/1306/1/0510\\_creative\\_entanglements.pdf](http://eprints.ncrm.ac.uk/1306/1/0510_creative_entanglements.pdf) [Accessed 6 Sept 2017].
- Klein, J. (2010). What Is Artistic Research? Originally published in *Gegenworte 23, Berlin-Brandenburgische Akademie der Wissenschaften 2010*. Available at: [www.researchcatalogue.net/view/15292/15293](http://www.researchcatalogue.net/view/15292/15293) [Accessed 20 Aug 2017].
- Latour, B. (2004). Why has critique run out of steam? From matters of fact to matters of concern. *Critical Inquiry*, 30, pp. 225–248.
- . (2005). From realpolitik to dingpolitik or how to make things public. In: B. Latour and P. Weibel, eds., *Making Things Public: Atmospheres of Democracy*. Cambridge, MA: MIT Press, pp. 14–43.
- Lehmann-Brauns, S., C. Sichau and H. Trischler, eds. (2010). *The Exhibition as Product and Generator of Scholarship*. Max-Planck-Institut für Wissenschaftsgeschichte. Preprint 399. Available at: [www.mpiwg-berlin.mpg.de/Preprints/P399.PDF](http://www.mpiwg-berlin.mpg.de/Preprints/P399.PDF) [Accessed 22 Aug 2017].
- Macdonald, S. (2002). *Behind the Scenes at the Science Museum*. Oxford: Berg.
- Macdonald, S., and P. Basu. (2007). Introduction: Experiments in exhibition, ethnography, art and science. In: S. Macdonald and P. Basu, eds., *Exhibition Experiments*. Malden, MA: Blackwell, pp. 1–24.
- Niederer, K., M.A.R. Biggs and M. Ferris. (2006). The research exhibition: Context, interpretation, and knowledge creation. In: K. Friedman, T. Love, E. Côte-Real and C. Rust, eds., *Design Research Society International Conference Proceedings*, vol. 0120. Hatfield: IADE, pp. 1–15. Available at: [http://researchprofiles.herts.ac.uk/portal/en/publications/the-research-exhibition-context-interpretation-and-knowledge-creation\(b8382b73-42e6-4157-9afb-7a914e732ca8\).html](http://researchprofiles.herts.ac.uk/portal/en/publications/the-research-exhibition-context-interpretation-and-knowledge-creation(b8382b73-42e6-4157-9afb-7a914e732ca8).html) [Accessed 25 Oct 2018].
- Nygaard, P. (2015) *Store drømmer og harde realiteter: Veghistorie 1912–1960*. Oslo: Pax Forlag.
- Olsen, B. (2010). *In the Defence of Things: Archaeology and the Ontology of Objects*. New York: AltaMira Press.
- Olwig, K.R. (2013). Heidegger, Latour, and the reification of things; the Inversion and the spatial enclosure of the substantive landscape of things – The Lake District case. *Geografiska Annaler: Series B, Human Geography*, 95(3), pp. 251–273.
- O’Neill, M. (2006). Essentialism, adaptation and justice: Towards a new epistemology of museums. *Museum Management and Curatorship*, 21(2), pp. 95–116.
- Poulot, D. (2013). Museums and research: A few thoughts. *Musées*, 31, pp. 4–11. Originally published as: *Musées et recherché: quelques perspectives*. Available at: [www.academia.edu/4937973/Museums\\_and\\_research\\_a\\_few\\_thoughts](http://www.academia.edu/4937973/Museums_and_research_a_few_thoughts). [Accessed 26 Feb 2016].
- Putnam, J. (2009). *Art and Artifact: The Museum as Medium*. London: Thames & Hudson.
- Roth, M. (2008). The future of museums lies in research. In: G. Cavalli-Björkman and S. Lindqvist, eds., *Research and Museums*. Stockholm: Archives of the Nobel Museum, pp. 39–50.
- Rust, C., and A. Robertson. (2003). Show or tell? Opportunities, problems and methods of the exhibition as a form of research dissemination. In: *Proceedings of 5th European Academy of Design Conference*, Barcelona, April 2003.
- Schnalke, T. (2010). Arguing with objects – The exhibition as a scientific format of publication. In: S. Lehmann-Brauns, C. Sichau and H. Trischler, eds., *The Exhibition as Product and Generator of Scholarship*. Berlin: Max-Planck Institut für Wissenschaftsgeschichte, pp. 103–110. Preprint 399. Available at: [www.mpiwg-berlin.mpg.de/Preprints/P399.PDF](http://www.mpiwg-berlin.mpg.de/Preprints/P399.PDF) [Accessed 22 Aug 2017].
- Scripps, S., S. Ghoshroy, L. Burgess and A. Marsh. (2013). Sharing credit: Public historians and scientists reflecting on collaboration. *Public Historian*, 35(2), pp. 46–71.
- Ssorin-Chaikov, N. (2013a). Ethnographic conceptualism: An introduction. *Laboratorium*, 5(2), pp. 5–18.
- . (2013b). Gift/knowledge relations at the exhibition of gifts to Soviet leaders. *Laboratorium*, 5(2), pp. 166–192.
- Svensson, B. (2008). Facts and artefacts in cultural history museums: The material turn in research. In: G. Cavalli-Björkman and S. Lindqvist, eds., *Research and Museums*. Stockholm: Archives of the Nobel Museum, pp. 175–192.
- Thomas, N. (2010). The museum as method. *Museum Anthropology*, 33(1), pp. 6–10.
- . (2016). *The Return of Curiosity: What Museums Are Good for in the 21st Century*. London: Reaktion Books.

## 22 References

- Treimo, H. (2013). Mind gap. *Interdisciplinary Science Reviews*, 38(3), pp. 259–274.
- Trischler, H. (2008). Modes, constraints and perspectives of research. The place of scholarship at museums of science and technology in a knowledge-based society. In: G. Cavalli-Björkman and S. Lindqvist, eds., *Research and Museums*. Stockholm: Archives of the Nobel Museum, pp. 51–67.
- Ulrich, L.T., I. Gaskell, S.J. Schechner and A.S. Carter. (2015). *Tangible Things: Making History through Objects*. New York: Oxford University Press.
- Weibel, P., and B. Latour. (2007). Experimenting with representation: Iconoclasm and making things public. In: S. Macdonald and P. Basu, eds., *Exhibition Experiments*. Malden: Blackwell, pp. 94–108.
- Westlie, B. (2015). *Fangene som Forsvant: NSB og Slavearbeiderne på Nordlandsbanen*. Oslo: Spartacus Forlag.
- Aalto, M., & Heinäjoki-Majander, H. (1997). Archaeobotany and palaeoenvironment of the Viking Age town of Staraja Ladoga, Russia. In: U. Miller and H. Clarke, eds., *Environment and Vikings. Scientific Methods and Techniques*. Stockholm: Birka Project, pp. 13–30.
- Behre, K.-E. (1983). *Ernährung und Umwelt der wikingerzeitlichen Siedlung Haithabu*. Kiel: Wachholtz Verlag.
- Grabowski, R. (2011). Changes in cereal cultivation during the Iron Age in Southern Sweden: A compilation and interpretation of the archaeobotanical material. *Vegetation History and Archaeobotany*, 20(5), pp. 479–494. Available at: <http://doi.org/10.1007/s00334-011-0283-5>.
- Hansson, A.-M. (2003). Borg in Lofoten. In: G. Stamsø Munch, O. Sverre Johansen and E. Roesdahl, eds., *A Chieftain's Farm in North Norway*. Lofotr:Vikingsmuseet på Borg, p. 309.
- Helbæk, H. (1977). The Fyrkat grain: A geographical and chronological study of rye. In: O. Olsen and H.W. Schmidt, eds., *Fyrkat. En jysk vikingeborg I. Borgen og bebyggelsen. Nordiske Fortidsminder (B)*, vol. 3. Copenhagen: Det Kgl. Nordiske Oldskriftselskab, pp. 1–41.
- Henriksen, P.S. (2014). Norse agriculture in Greenland – Farming at the northern frontier. In: H.C. Gulløv, ed., *Northern Worlds – Landscapes, Interactions and Dynamics, Research at the National Museum of Denmark. Proceedings of the Northern Worlds Conference*, Copenhagen, 28–30 November 2012, pp. 424–432.
- Jørgensen, L.B. (2012). The introduction of sails to Scandinavia: Raw materials, labour and land. In: R. Berge, M.E. Jasinski and K. Sognnes, eds., *Proceedings of the 10th Nordic TAG Conference at Stiklestad, Norway 2009*, pp. 1–11.
- Poulsen, A.D. (2015). Botanic garden profile: Botanical Garden of the University of Oslo, Norway. *Sibbaldia*, 13, 15–32.
- Boast, Robin. (2011). Neocolonial collaboration: Museum as contact zone revisited. *Museum Anthropology* 34(1), pp. 56–70.
- Briche, Nathalia. (2011). Charmed life in contemporary London. Last modified September 10, 2011. Available at: [www.wellcomecollection.org/charmed-life-contemporary-london](http://www.wellcomecollection.org/charmed-life-contemporary-london). [Accessed 6 October 2014].
- . (2018). *An Anthropology of Common Ground. Awkward Encounters in Heritage Work*. Manchester: Mattering Press.
- Briche, Nathalia, and Frida Hastrup. (2011). Figurer uden grund. *Tidsskrift for Antropologi* 64, pp. 119–135.
- Clifford, James, and George Marcus, eds. (1986). *Writing culture. The poetics and politics of ethnography*. Berkeley: University of California Press.
- Crapanzano, Vincent. (1986). Hermes' dilemma: The masking of subversion in ethnographic description. In: James Clifford and George Marcus, eds., *Writing culture. The poetics and politics of ethnography*. Berkeley: University of California Press, pp. 51–76.
- Frazer, James George. (1998 [1890]). *The golden bough. A study in magic and religion*. Oxford: Oxford University Press.
- Gabriel, Mille. (2015). Fortiden, fremtiden og det etnografiske museum. Samtidsindsamling, videndeling og medkuratering. In: Ulf Johansson Dahre and Thomas Fibiger, eds., *Etnografi på museum. Visioner og udfordringer for etnografiske museer i Norden*. Aarhus: Aarhus Universitetsforlag.
- Haraway, Donna. (2010). When species meet: Staying with the trouble. *Environment and Planning D: Society and Space* 28(1), pp. 53–55.
- Hastrup, Frida. (2011). Shady plantations. Theorizing shelter in coastal Tamil Nadu. *Anthropological Theory* 11(4), pp. 425–439.
- Henare, Amiria, Martin Holbraad and Sari Wastell. (2007). Introduction: Thinking through things. In: Amiria Henare, Martin Holbraad, and Sari Wastell, eds., *Thinking through things. Theorising artefacts ethnographically*. London: Routledge, pp. 1–31.

- Holbraad, Martin. (2007). The power of powder: Multiplicity and motion in the divinatory cosmology of Cuban Ifá. In: Amiria Henare, Martin Holbraad, and Sari Wastell, eds., *Thinking through things. Theorising artefacts ethnographically*. London: Routledge, pp. 189–225.
- Lassiter, Luke Eric. (2005). From ‘reading over the shoulders of natives’ to ‘reading alongside natives,’ Literally: Toward a Collaborative and Reciprocal Ethnography. In: *The Chicago guide to collaborative ethnography*. Chicago: University of Chicago Press, pp. 3–14.
- Latour, Bruno. (2002 [1993]). *We have never been modern*. Cambridge, MA: Harvard University Press.
- Marcus, George, and Fischer, Michael. (1986). *Anthropology as cultural critique. An experimental moment in the human sciences*. Chicago: University of Chicago Press.
- Munro, Eelasaïd. (2014). Doing emotion work in museums: Reconceptualising the role of community engagement practitioners. *Museum & Society* 12(1), pp. 44–60.
- Peers, Laura, and Alison Brown. (2003). Introduction. In: Laura Peers and Alison Brown, eds., *Museums and source communities. A Routledge reader*. London: Routledge, pp. 1–16.
- Pietz, William. (1985). The problem of the fetish, I. *RES: Anthropology and Aesthetics*, 9, pp. 5–17.
- . (1987). The problem of the fetish, II: The origin of the fetish. *RES: Anthropology and Aesthetics* 13, pp. 23–45.
- . (1988). The problem of the fetish, IIIa: Bosman’s Guinea and the Enlightenment theory of fetishism. *RES: Anthropology and Aesthetics* 16, pp. 105–124.
- Ronan, K. (2014). Native empowerment, the new museology, and the National Museum of the American Indian. *Museum & Society* 1, pp. 132–147.
- Schorch, Phillipp. (2013). Contact zones, third spaces, and the act of interpretation. *Museum & Society* 11(1), pp. 68–81.
- Simon, Nina. (2010). *The participatory museum*. Santa Cruz, CA: Museum 2.0.
- Vermeylen, Saskia, & and Pilcher, Jeremy. (2009). Let the objects speak: online museums and indigenous cultural heritage. *International Journal of Intangible Heritage* 4, pp. 59–78.
- Verran, Helen. (2001). *Science and an African logic*. Chicago: University of Chicago Press.
- . 2002. A postcolonial moment in science studies: Alternative firing regimes of environmental scientists and Aboriginal landowners. *Social Studies of Science* 32(5/6), pp. 729–762.
- Alaimo, Stacy. (2010). *Bodily natures, science, environment, and the material self*. Bloomington: Indiana University Press.
- Alaimo, Stacy, and Susan J. Hekman. (2008). *Material feminisms*. Bloomington: Indiana University Press.
- Appadurai, Arjun. (1986). *The social life of things: Commodities in cultural perspective*. Cambridge: Cambridge University Press.
- Barthes, Roland. (1980). *Roland Barthes*. Paris: Seuil.
- Bencard, Adam. (2014). Presence in the museum: On metonymies, discontinuity and history without stories. *Museum & Society* 12(1), pp. 29–43.
- Bencard, Adam, Louise Whiteley and Caroline Heje Thon. (2018). Curating experimental entanglements. In: Malene Vest Hansen, Anne Folke Henningsen and Anne Gregersen, eds. *Curatorial challenges: interdisciplinary perspectives on contemporary curating*. London: Routledge.
- Bennett, Jane. (2010). *Vibrant matter, a political ecology of things*. Durham, NC: Duke University Press.
- Bogost, Ian. (2012). *Alien phenomenology, or what it’s like to be a thing*. Minneapolis: University of Minnesota Press.
- Braidotti, Rosi. (2013). *The posthuman*. Cambridge: Polity Press.
- Brown, Bill. (2001). *Things*. Chicago: University of Chicago Press.
- . (2013). Alien phenomenology, or what it’s like to be a thing. *Common Knowledge* 19(3), pp. 554–556.
- Bryant, Levy R., Nick Srnicek and Graham Harman. (2011). *The speculative turn, continental materialism and realism*. Melbourne, VIC: re.press.
- Cameron, Fiona, and Sarah Mengler. (2009). Complexity, transdisciplinarity and museum collections documentation: Emergent metaphors for a complex world. *Journal of Material Culture* 14(2), pp. 189–218.
- Dolphijn, Rick, and Iris van der Tuin. (2012). *New materialism: Interviews & cartographies*. Ann Arbor, MI: Open Humanities Press.
- Dudley, Sandra H., ed. (2012). *Museum objects: Experiencing the properties of things*. Abingdon, Oxon: Routledge.
- Fineman, Joel. (1989). The history of the anecdote: Fiction and fiction. In: H. Aram Veeger, ed., *The new historicism*. New York: Routledge, pp. 49–76.
- Grusin, Richard. (2015). *The nonhuman turn*. Minneapolis: University of Minnesota Press.

## 24 References

- Gumbrecht, Hans Ulrich. (2008). Shall we continue to write histories of literature? *New Literary History: A Journal of Theory and Interpretation* 39(3), pp. 519–532.
- Harman, Graham. (2005). *Guerrilla metaphysics, phenomenology and the carpentry of things*. Chicago: Open Court.
- . 2012. *The third table*. Berlin: Hatje Canz.
- Hein, Hilde S. (2000). *The museum in transition: A philosophical perspective*. Washington, DC: Smithsonian Books.
- Henare, Amiria J.M., Martin Holbraad and Sari Wastell. (2007). *Thinking through things, theorising artefacts in ethnographically*. Milton Park: Routledge.
- Latour, Bruno. (1993). *We have never been modern*. New York: Harvester Wheatsheaf.
- Latour, Bruno, and Peter Weibel, eds. (2005). *Making things public, atmospheres of democracy*. Cambridge, MA, and Karlsruhe: MIT Press ZKM/Center for Art and Media in Karlsruhe.
- Meillassoux, Quentin. (2009). *After finitude, an essay on the necessity of contingency*. London: Bloomsbury.
- Mitchell, W.J.T. (2005). *What do pictures want? The lives and loves of images*. Chicago: University of Chicago Press.
- Morton, Timothy. (2011). Here comes everything: The promise of object-oriented ontology. *Qui Parle: Critical Humanities and Social Sciences* 19(2), pp. 163–190.
- . 2016. *Dark ecology: For a logic of future coexistence*. New York: Columbia University Press.
- Runia, Eelco. (2006). Presence. *History and Theory* 45(1), pp. 1–29.
- Stewart, Kathleen. (2007). *Ordinary affects*. Durham, NC: Duke University Press.
- Woolgar, Steve, and Javier Lezaun. (2015). Missing the (question) mark? What is a turn to ontology? *Social Studies of Science* 45(3), pp. 462–467.
- Appadurai, A., ed. (1986). *The social life of things*. Cambridge: Cambridge University Press.
- Augé, M. (2008). *Non-places: An introduction to supermodernity*. London: Verso.
- Dudley, S. (2012). Materiality matters: Experiencing the displayed objects. Working Papers in Museum Studies, Number 8. Ann Arbor: University of Michigan.
- Falk, J.H. (2009). *Identity and the museum visitor experience*. Walnut Creek, CA: Left Coast Press.
- Falk, J.H., and Dierking, L.D. (2012). *Museum experience revisited*. 2nd edition. Walnut Creek, CA: Left Coast Press.
- Flagestad, A. (2006). *Opplevelsesøkonomiens vei til Norge*. Oslo: Magma nr.3/2006.
- Lohman, J. (2013). *Museums at the crossroads? Essays on cultural institutions in a time of change*. Victoria: Royal BC Museum.
- Marx, K. (1867). *Capital*. New York: Modern Library.
- Pine, B.J., and Gilmore, J.H. (1999). *The experience economy*. Boston: Harvard Business School Press.
- Pine, B.J., and Gilmore, J.H. (2012). The experience economy. In: G. Anderson, ed., *Reinventing the museum: The evolving conversation on the paradigm shift*. Oxford: AltaMira Press, pp. 163–170.
- Simmel, G. (1978). *The philosophy of money*. London: Routledge and Kegan Paul.
- Simon, N. (2010). *The participatory museum*. Santa Cruz: Museum 20.
- Toffler, A. (1971). *Future shock*. New York: Random House.
- Twitchell, J.B. (2004). *Branded nation: The marketing of Megachurch, College Inc., and Museumworld*. New York: Simon & Schuster.
- Van Ulzen, P. (2011). International airport as stage for national cultural heritage: The case of Schipol Airport, The Netherlands. In: M. Halbertsma, Alex van Stipriaan and Patricia van Ulzen, eds., *The heritage theatre: Globalisation and cultural heritage*. Newcastle upon Tyne: Cambridge Scholars.
- Bateson, Gregory. (2000) [1972]. *Steps to an ecology of mind*. Chicago: University of Chicago Press.
- Bjerregaard, Peter. (2015a). A house for untamed thinking: Re-connecting research and display at *Museum of Cultural History*. In: Fransisca Lanz and Elena Montanari, eds., *Advancing museum practices*. Turin: Umberto Allemandi & C., pp. 115–123.
- . (2015b). Disconnecting relations: Exhibitions and objects as resistance. In: Øivind Fuglerud and Leon Wainwright, eds., *Objects and imagination: Perspectives on materialization and meaning*. New York: Berghahn Books, pp. 45–63.
- . (2015c). Dissolving objects: Museums, atmosphere and the creation of presence. *Emotion, Space and Society* 15 (May 2015), pp. 74–81.
- Diamond, Jared. (2011). *Collapse: How societies choose to fail or survive*. London: Penguin Books.
- Et hus for vilde tanker*. (2014). Available at: [www.khm.uio.no/om/et-hus-for-vilde-tanker/et-hus-for-vilde-tanker-1.pdf](http://www.khm.uio.no/om/et-hus-for-vilde-tanker/et-hus-for-vilde-tanker-1.pdf) [Accessed 2 November 2017].

- Gell, Alfred. (1995). Closure and multiplication: An essay on Polynesian cosmology and ritual. In: Daniel de Coppet and André Iteanu, eds., *Cosmos and society in Oceania*. Washington, DC: Berg, pp. 21–56
- Hallam, Elizabeth, and Tim Ingold. (2007). Creativity and cultural improvisation: An introduction. In: E. Hallam and T. Ingold, eds., *Creativity and cultural improvisation*. Oxford: Berg, pp. 1–24.
- Kulturhistorisk museum. 2013. *Funksjonsanalyse 2013*. Available at: [www.khm.uio.no/om/organisasjon/funksjonsanalyse/fa-rapoort-enedelig-med-vedlegg.pdf](http://www.khm.uio.no/om/organisasjon/funksjonsanalyse/fa-rapoort-enedelig-med-vedlegg.pdf) [Accessed 2 November 2016].
- Lévi-Strauss, Claude. (1966)[1963]. *The savage mind*. London: Weidenfeld and Nicolson.
- Mansrud, Anja. (2017). Untangling social, ritual and cosmological aspects of fishhook manufacture in the Middle Mesolithic coastal communities of NE Skagerrak. *International Journal of Nautical Archaeology* 36(1), pp. 31–47.
- Schuster, Carl, and Edmund Carpenter. (1996). *Patterns that connect: Social symbolism in ancient and tribal art*. New York: Harry N. Abrams.
- Sheikh, Simon. (2015). Towards the exhibition as research. In: Paul O’Neill and Mick Wilson, eds., *Curating research*. London: Open Editions/de Appel, pp. 32–46.
- White, Leslie A. (1959). *The evolution of culture: The development of civilization to the fall of Rome*. New York: McGraw-Hill.
- Wiseman, Boris. (2007). *Lévi-Strauss, anthropology and aesthetics*. Cambridge: Cambridge University Press.
- Alberti, S.J.M.M. (2010). *Morbid curiosities: Medical museums in nineteenth-century Britain*. Oxford: Oxford University Press.
- Alberti, S.J.M.M., and Hallam, E., eds. (2013). *Medical museums: Past, present, future*. London: Royal College of Surgeons of England.
- Arends, B., and D. Thackara, eds. (2003). *Experiment: Conversations in art and science*. London: Wellcome Trust.
- Bakke, G., and M. Peterson, eds. (2018). *Between matter and method: Encounters in anthropology and art*. London: Bloomsbury.
- Basu, P., and S. Macdonald. (2007). Introduction: Experiments in exhibition, ethnography, art, and science. In: S. Macdonald and P. Basu, eds., *Exhibition experiments*. Oxford: Blackwell, pp. 1–24.
- Bennet, T. (2018). *Museums, power, knowledge: Selected essays*. London: Routledge.
- Bjerregaard, P. (2015). Dissolving objects: Museums, atmosphere and the creation of presence. *Emotion, Space and Society*, 15, pp. 74–81.
- Boyer, D., J. Faubion, C. Howe and M. LaFlamme. (2016). Sound + Vision: Experimenting with the anthropological research article of the future. *Cultural Anthropology*, 31(4), pp. 459–463.
- Candlin, F. (2010). *Art, museums and touch*. Manchester: Manchester University Press.
- Chua, L., and M. Elliott, eds. (2013). *Distributed objects: Meaning and mattering after Alfred Gell*. Oxford: Berghahn.
- Classen, C. (2012). *The deepest sense: A cultural history of touch*. Champaign: University of Illinois Press.
- Clifford, J. (1997). *Routes: Travel and translation in the late twentieth century*. Cambridge, MA: Harvard University Press.
- Cooke, M. (2013). Surgical simulation: The way ahead. *Bulletin of the Royal College of Surgeons of England*, 95, p. 158.
- Craven, C., D. Baxter, M. Cooke, L. Carline, S.J.M.M. Alberti, J. Beard and M. Murphy. (2014). Development of a modelled anatomical replica for training young neurosurgeons. *British Journal of Neurosurgery*, 28(6), pp. 707–712.
- Craven, C.L., M. Cooke, C. Rangeley, S.J.M.M. Alberti and M. Murphy. (2018). Developing a pediatric neurosurgical training model. *Journal of Neurosurgery: Pediatrics*, 21(3), pp. 329–335.
- Daston, L., ed. (2007). *Things that talk: Object lessons from art and science*. Cambridge, MA: Zone Books.
- Daston, L., and P. Galison. (2007). *Objectivity*. Cambridge, MA: Zone Books.
- Dudley, S., ed. (2010). *Museum materialities: Objects, engagements, interpretations*. London: Routledge.
- . (2012). *Museum objects. Experiencing the properties of things*. London: Routledge.
- Duncan, C. (1995). *Civilizing rituals: Inside public art museums*. London: Routledge.
- Edwards, E., C. Gosden and R. Rhipils, eds. (2006). *Sensible objects: Colonialism, museums and material culture*. Oxford: Berg.
- Geismar, H., and W. Mohns. (2011). Social relationships and digital relationships: Rethinking the database at the Vanuatu Cultural Centre. *Journal of the Royal Anthropological Institute (NS)*, 17(1), pp. 133–155.
- Gell, A. (1998). *Art and agency: An anthropological theory*. Oxford: Clarendon Press.
- Gosden, C., and F. Larson with A. Petch. (2007). *Knowing things: Exploring collections at the Pitt Rivers Museum, 1884–1945*. Oxford: Oxford University Press.
- Graham, B., and S. Cook, eds. (2010). *Rethinking curating: Art after new media*. Cambridge, MA: MIT Press.
- Hallam, E. (2000). Texts, objects and “otherness”: Problems of historical process in writing and displaying cultures. In: E. Hallam and B. Street, eds., *Cultural encounters: Representing “otherness”*. London: Routledge, pp. 260–284.

## 26 References

- . (2009). Anatomist's ways of seeing and knowing. In: W. Gunn, ed., *Fieldnotes and sketchbooks: Challenging the boundaries between descriptions and processes of describing*. Frankfurt am Main: Peter Lang, pp. 69–107.
- . (2013). Anatomical design: Making and using three-dimensional models of the human body. In: W. Gunn, T. Otto and R.C. Smith, eds., *Design anthropology: Theory and practice*. London: Bloomsbury, pp. 100–116.
- . (2014). Anatomopoeia. In: E. Hallam and T. Ingold, eds., *Making and growing: Anthropological studies of organisms and artefacts*. Farnham: Ashgate, pp. 65–88.
- , ed. (2015a). *Designing bodies: Models of human anatomy from wax to plastics*. London: Royal College of Surgeons.
- . (2015b). Bodies, materials, design: Hands-on models in anatomy and surgery, 1920 to now. In: E. Hallam, ed., *Designing bodies: Models of human anatomy from wax to plastics*. London: Royal College of Surgeons, pp. 4–43.
- . (2016). *Anatomy museum. Death and the body displayed*. London: Reaktion.
- Hallam, E., and J. Hockey. (2001). *Death, memory and material culture*. Oxford: Berg.
- Hallam, E., and T. Ingold, eds. (2014). *Making and growing: Anthropological studies of organisms and artefacts*. Farnham: Ashgate.
- Harvey, P., E. Conlin Casella, G. Evans, H. Knox, C. McLean, E.B. Silva, N. Thoburn and K. Woodward, eds. (2014). *Objects and materials: A Routledge companion*. London: Routledge.
- Howes, D. (2014). Introduction to sensory museology. *Senses and Society*, 9(3), pp 259–267.
- Ingold, T. (2013). *Making: Anthropology, archaeology, art and architecture*. London: Routledge.
- . (2015). *The life of lines*. London: Routledge.
- Knoeff, R., and R. Zwijnenberg, eds. (2015). *The fate of anatomical collections*. Farnham: Ashgate.
- Kratz, C. (2011). Rhetorics of value: Constituting worth and meaning through cultural display. *Visual Anthropology Review*, 27(1), pp. 21–48.
- Latour, B. (1999). *Pandora's hope: Essays on the reality of science studies*. Cambridge, MA: Harvard University Press.
- Leahy, H.R. (2012). *Museum bodies: The politics and practices of visiting and viewing*. Farnham: Ashgate.
- Levent, N., and A. Pascual-Leone, eds. (2014). *The multisensory museum: Cross-disciplinary perspectives on touch, sound, smell, memory, and space*. Lanham, MD: Rowman & Littlefield.
- Lidchi, H. (1997). The poetics and the politics of exhibiting other cultures. In: S. Hall, ed., *Representation: Cultural representations and signifying practices*. London: Sage, in association with the Open University, pp. 151–208.
- Macdonald, S., ed. (2011). *A companion to museum studies*. Oxford: Wiley-Blackwell.
- Malinowski, B. (2013 [1935]). *Coral gardens and their magic*, Vol. 1. Hamburg: Severus Verlag.
- Marcus, G.E. (2010). Contemporary fieldwork aesthetics in art and anthropology: Experiments in collaboration and intervention. *Visual Anthropology*, 23(4), pp. 263–277.
- . (2014). Prototyping and contemporary anthropological experiments with ethnographic method. *Journal of Cultural Economy*, 7(4), pp. 399–410.
- Marcus, G.E., and M.J. Fischer, eds. (1999 [1986]). *Anthropology as cultural critique: An experimental moment in the human sciences*, 2nd edn. Chicago: University of Chicago Press.
- Marcus, H.J., A. Darzi and D. Nandi. (2013). Surgical simulation to evaluate surgical innovation: Preclinical studies with MARTYN. *Bulletin of the Royal College of Surgeons of England*, 95, p. 299.
- Marcus, H.J., A. Hughes-Hallett, P. Pratt, G-Z. Yang, A. Darzi and D. Nandi. (2014). Validation of MARTYN to simulate the keyhole supraorbital subfrontal approach. *Bulletin of the Royal College of Surgeons of England*, 96, pp. 120–121.
- Meyer, M. (2011). Researchers on display: Moving the laboratory into the museum. *Museum Management and Curatorship*, 26(3), pp. 261–272.
- Obrist, H.U. (in conversation with Vivian Rehberg, and Stefano Boeri). (2003). Moving interventions: Curating at large. *Journal of Visual Culture*, II, pp. 147–160.
- . (2014). *Ways of curating*. London: Penguin Books.
- O'Neill, P. (2016). *The culture of curating and the curating of culture(s)*. Cambridge, MA: MIT Press.
- Pandian, A., and S. McLean, eds. (2017). *Crumpled paper boat: Experiments in ethnographic writing*. Durham, NC: Duke University Press.
- Perec, G. (1974). *Species of spaces and other pieces*. London: Penguin Books.
- Royal College of Surgeons of England. (21 November 2016). Press release: *Lifelike model of child's skull and brain created using 3D printing, heralding breakthrough in surgical training*. Royal College of Surgeons of England. [www.rcseng.ac.uk/news-and-events/media-centre/press-releases/new-model-created/](http://www.rcseng.ac.uk/news-and-events/media-centre/press-releases/new-model-created/)

- Schneider, A., and C. Pasqualino, eds. (2014). *Experimental film and anthropology*. London: Bloomsbury.
- Schneider, A., and C. Wright, eds. *Anthropology and art practice*. London: Bloomsbury.
- Thomas, N. (2010). The museum as method. *Museum Anthropology*, 33(1), pp. 6–10.
- Tybjerg, K., ed. (2016). *The body collected: The raw materials of medical science from cadaver to DNA*. Copenhagen: Medical Museion.
- . (2017). Exhibiting epistemic objects. *Museum & Society*, 15(3), pp. 269–286.
- Were, G. (2013). On the materials of mats: Thinking through design in a Melanesian society. *Journal of the Royal Anthropological Institute*, 19, pp. 581–599.
- . (2014). Digital heritage, knowledge, and source communities: Understanding digital objects in a Melanesian society. *Museum Anthropology*, 37(2), pp. 133–143.
- Black, G. (2005). *The engaging museum: Developing museums for visitor involvement*. London: Routledge.
- Castell, S., A. Charlton, M. Clemence, N. Pettigrew, S. Pope, A. Quigley, J.N. Shah and T. Silman. (2014). *Public attitudes to science 2014*. London: IPSOS MORI Social Research Institute.
- Clark, G. (1954). *Excavations at Star Carr: An early mesolithic site at Seamer near Scarborough, Yorkshire*. Cambridge: Cambridge University Press.
- Coffield, F., Moseley, D., Hall, E. and Ecclestone, K. (2004). *Learning styles and pedagogy in post-16 learning: A systematic and critical review*. London: Learning and Skills Research Centre.
- Drury, J. (2013). The Festival Awards Market Report 2013. Available at: [www.festivalinsights.com/wp-content/uploads/UKFA2013\\_SHOWGUIDE\\_MarketReport.pdf](http://www.festivalinsights.com/wp-content/uploads/UKFA2013_SHOWGUIDE_MarketReport.pdf) [accessed 1 September 2014].
- Festival Awards. (2012). The Festival Awards Market Report 2012. Available at: [www.festivalinsights.com/wp-content/uploads/2012-UK-Festival-Market-Report.pdf](http://www.festivalinsights.com/wp-content/uploads/2012-UK-Festival-Market-Report.pdf) [accessed 1 September 2014].
- . (2015). The Festival Awards Market Report 2015. Available at: [www.festivalawards.com/wp-content/uploads/2015/07/UKFA2014\\_MarketReport.pdf](http://www.festivalawards.com/wp-content/uploads/2015/07/UKFA2014_MarketReport.pdf) [accessed 1 September 2016].
- Forward, F. (2015). The Norse manufacture and use of ‘Razor saws’ for composite antler comb decoration and manufacture. Unpublished Undergraduate Dissertation. Cardiff University.
- Guerilla Archaeology. Welcome! (2016). Available at: <https://guerillaarchaeology.wordpress.com/> [accessed 1 September 2016].
- House of Commons Briefing Paper. (2015). Available at: <http://researchbriefings.files.parliament.uk/documents/SN06705/SN06705.pdf> [accessed 1 September 2016].
- IPSOS MORI. (2011). *Public attitudes to science*. London: IPSOS MORI Social Research Institute.
- Mason, D., and C. McCarthy. (2006). The feeling of exclusion: Young people’s perceptions of art galleries. *Museum Management and Curatorship*, 21, pp. 20–31.
- Mirza-Davies, J., and J. Brown. 2016. NEET: Young People Not in Education, Employment or Training. House of Commons Library briefing paper no. 06705.
- Mulville, J. (2010). Wild things? The prehistory and history of Red Deer on the Hebridean and Northern Isles of Scotland. In: T. O’Connor and N. Sykes, eds., *Extinctions and invasions: A social history of British fauna*. Oxford: Windgather Press, pp. 43–50.
- . (2014). Changing people’s perceptions of the human:animal relationship. Impact Case Study for Cardiff University Unit of Assessment 17 REF 3b. Available at: [www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwj7vOHxi7neAhUop4sKHRO4DQEQFjAAegQICRAC&url=http%3A%2F%2Fresults.ref.ac.uk%2FdownloadFile%2FImpactCaseStudy%2Fpdf%3FcaseStudyId%3D3405&usq=AOvVaw1KJY88mZNd7g2dxcui7W1U](http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=2ahUKEwj7vOHxi7neAhUop4sKHRO4DQEQFjAAegQICRAC&url=http%3A%2F%2Fresults.ref.ac.uk%2FdownloadFile%2FImpactCaseStudy%2Fpdf%3FcaseStudyId%3D3405&usq=AOvVaw1KJY88mZNd7g2dxcui7W1U) [accessed on 3 November 2018].
- . (2015). Dealing with deer: Norse responses to Scottish Isles Cervids. In: J. Barrett, ed., *Maritime societies of the Viking and medieval world*. The Society for Medieval Archaeology Monographs. Leeds, UK: Maney Publishing, pp. 289–307.
- . (2017). Swin Music Museum. In: J. Mulville, J. Gregory and K. Harding, eds., *A spotlight on Swin Music Festival 2016*. Cardiff University Festivals Research Group Report, pp. 11–12. Available at: [www.cardiff.ac.uk/\\_\\_data/assets/pdf\\_file/0004/672529/Festivals-Research-Group-Report-March-2017.pdf](http://www.cardiff.ac.uk/__data/assets/pdf_file/0004/672529/Festivals-Research-Group-Report-March-2017.pdf) [accessed on 3 November 2018].
- Mulville, J., and M. Law. (2013). *Environmental archaeology and community engagement: Activities and advice*. Cardiff: The Association for Environmental Archaeology and Cardiff Osteoarchaeology Research Group. Available at: [www.envarch.net/publications/papers/Environmental%20Archaeology%20and%20Community%20Engagement.pdf](http://www.envarch.net/publications/papers/Environmental%20Archaeology%20and%20Community%20Engagement.pdf) [accessed on 3 November 2018].

- Museum Marketing. (2012). How do you get young people excited about museums? Available at: [www.museum-marketing.co.uk/how-do-you-get-young-people-excited-about-museums/](http://www.museum-marketing.co.uk/how-do-you-get-young-people-excited-about-museums/) [accessed on 1 November 2015].
- National Co-ordination Centre for Public Engagement (NCCPE). (2015). What is public engagement? Available at: [www.publicengagement.ac.uk/](http://www.publicengagement.ac.uk/) [accessed 6 June 2019].
- Reynolds, F. (2009). Regenerating substances: Quartz as an animistic agent. *Time and Mind: The Journal of Archaeology, Consciousness and Culture*, 2(2), pp. 153–166.
- . (2011). Totemism and food taboos in the Early Neolithic: A feast of roe deer at the Coneybury “Anomaly”, Wiltshire. In: J. Thomas and H. Anderson-Whymark, eds., *Regional perspectives on Neolithic pit deposition: Beyond the mundane*. Neolithic Studies Group Seminar Papers, vol. 12. Oxford: Oxbow Books, pp. 171–186.
- . (2013). Tracing Neolithic worldviews: Shamanism, Irish passage tomb art and altered states of consciousness. In: C. Adams, D. Luke, A. Waldstein, B. Sessa and D. King, eds., *Breaking convention: Essays on psychedelic consciousness*. London: Strange Attractor Press, pp. 13–30.
- Robinson, R. (2015). *Music festivals and the politics of participation*. Ashgate Popular and Folk Music Series. Farnham: Ashgate.
- Sharples, N., and I. Dennis. (2016). Combs and comb production in the Western Isles during the Norse period. In: F. Hunter and A. Sheridan, eds., *Ancient lives: Object, people and place in early Scotland. Essays for David V Clarke on his 70th birthday*. Leiden: Sidestone Press, pp. 331–358.
- Tilden, F. (1957). *Interpreting our heritage*, 3rd edition. Chapel Hill: University of North Carolina Press.
- Wilson, A. (2008). *Punching our weight: The humanities and social science in public policy making*. London: British Academy.
- Xanthoudaki, M. (1998). Educational provision for young people as independent visitors to art museums and galleries: Issues of learning and training. *Museum Management and Curatorship*, 17(2), pp. 159–172.
- Augé, M. (1995). *Non-places: Introduction to anthropology of supermodernity*. London: Verso.
- Black, G. (2005). *The engaging museum: Developing museums for visitor involvement*. London: Routledge.
- Bøe, E.T. (2015). Spennende dager på Hellvik. *Frå haug ok heidni*, 2, pp. 11–14.
- Carbonell, B.M. ed. (2012). *Museums studies: An anthology of contexts*. 2nd edn. Oxford: Wiley-Blackwell.
- Carter, P. (2004). *Material thinking*. Melbourne: Melbourne University Press.
- Grewcock, D. (2014). *Doing museology differently*. London: Routledge.
- Guttormsen, T.S., and Hedeager, L. eds. (2015). *Public archaeology*. London: Routledge and Francis and Taylor.
- Hollund, H.I., van der Sluis, L., and Denham, S.D. (2013). Bevarte skjelett som arkiv for levd liv: Nye metodar for undersøking av beinmateriale frå Domkyrkja. *Stavangeren*, 3, pp. 95–100.
- Holtorf, C., and Högberg, A. (2007). Talking people: From community to popular archaeologies. *Lund Archaeological Review*, 2005–2006, pp. 79–88.
- King, L., and Marstine, J. (2006). The university museum and gallery: A site for institutional critique and a focus of the curriculum. In: J. Marstine, ed., *New museum theory and practice*. Oxford: Blackwell, pp. 266–291.
- Knell, S.J., Macleod, S., and Watson, S. eds. (2007). *Museum revolutions: How museums change and are changed*. London: Routledge.
- Lillehammer, G. (1999). Nature as resource: Curiosity killed the cat. In: L. Selsing and G. Lillehammer, eds., *Museumslandskap*. Stavanger: AmS-Rapport, 12A, pp. 23–36.
- Lillehammer, G. (2009). Historieformidling og historiebevissthet: Den utfordrende fortellingen om den fjerne fortiden. In: M. Nitter and E.S. Pedersen, eds., *Tverrfaglige Perspektiver*. Stavanger: AmS-Varia, 49, pp. 7–20.
- Lillehammer, G. (2012a). Travels into thirdspace: The archaeological heritage of children’s spaces. A view from beyond. *Childhood in the Past*, 5, pp. 7–19.
- Lillehammer, G. (2012b). “Ta den ring og la den vandre”. Fra fast kulturminne i landskapet til løst kulturminne i et magasin. In: A. Maurstad, and M. Hauan, eds., *Museologi på Norsk – Universitetsmuseenes Gjøren*. Trondheim: Akademika Forlag, pp. 169–191.
- Lowenthal, G. (1998). *The heritage crusade and the spoils of history*. Cambridge: Cambridge University Press.
- Marstine, J. ed. (2013). *New museum theory and practice*. Oxford: Blackwell.
- Maure, M. (1988). Ny museologi – En internasjonal bevegelse organiserer seg. In: J.A. Gjestrum and M. Maure, eds., *Økomuseumboka – Identitet, Økologi, Deltakelse*. Tromsø: Norsk ICOM, pp. 130–134.
- Maurstad, A., and Hauan, M. eds. (2012). *Museologi på Norsk – Universitetsmuseenes Gjøren*. Trondheim: Akademika Forlag.

- Sandvik, P.U. (2011). Levde liv – Undersøkingar av skelettmateriale frå grunnen under Stavanger Domkyrkje. *Frå haug ok heidni*, 2, pp. 8–10.
- Sandvik, P.U., and Petersén, A.H. (2010). Anthropogenic sediments as cultural heritage: An archive of objects, fossils or molecules? Poster 16th EAA, The Hague, the Netherlands.
- Schei, V., and Sverdrup, T.E. (2011). Når kreative team mangler kreativitet. *Magma*, 6, pp. 67–72.
- Skeates, R., McDavid, C., and Carman, J. eds. (2012). *The Oxford handbook of public archaeology*. Oxford: Oxford University Press.
- Soja, E.W. (1996). *Thirdspace: Journeys to Los Angeles and other real-and-imagined places*. Malden: Blackwell.
- Sorensen, M.L.S., and Carman, J. eds. (2009). *Heritage studies: Methods and approaches*. London: Routledge.
- Swain, H. (2007). *An introduction to museum archaeology*. Cambridge: Cambridge University Press.
- Synnestvedt, A. (2008). *Fornlämningsplatsen: Kärleksaffär eller Trist Historia*. GOTARC 51, Series B. Gothenburg: Department of Archaeology, Gothenburg University.
- Thomas, J. (2004). Archaeology's place in modernity. *Modernism/Modernity*, 11(1), pp. 17–24.
- Van der Sluis, L.G., Hollund, H.I., Kars, H., Sandvik Paula, U., and Denham, S.D. (2016). A palaeodietary investigation of a multi-period churchyard in Stavanger, Norway, using stable isotope analysis (C, N, H, S) on bone collagen. *Journal of Archaeological Science: Reports*, 9, pp. 120–133.
- Vergo, P. ed. (1989). *The new museology*. London: Reaktion Books.
- Binford, L.R. (1962). Archaeology as anthropology. *American Antiquity*, 28, pp. 217–225.
- Bjerregaard, P. (2013). *Forskning i fellesskap – Delprosjekt formidling som kunnskapsgenererende virksomhet*. Project Description. Submitted to the Research Council of Norway.
- Bucchi, M. (2004). *Science in society: An introduction to social studies of science*. London: Routledge.
- Bucchi, M. (2008). Of deficits, deviation and dialogues: Theories of public communication of science. In: M. Bucchi and B. Trench, eds., *Handbook of public communication of science and technology*. London: Routledge, pp. 57–76.
- Callon, M. (1999). The role of lay people in the production and dissemination of scientific knowledge. *Science, Technology & Society*, 4, pp. 81–94.
- Collins, H.M., and Evans, R. (2002). The third wave of science studies: Studies of expertise and experience. *Social Studies of Science*, 32(2), pp. 235–295.
- Collins, H.M., and Evans, R. (2003). King Canute meets the Beach Boys: Responses to the Third Wave. *Social Studies of Science*, 33(3), pp. 435–452.
- Davies, S.R. (2015). Deficit, deliberation and delight: STS and science communication. In: S.R. Davies, M. Horst and E. Stengler, eds., *Studying science communication*. Copenhagen: University of Copenhagen/Bristol: University of West England, pp. 7–11.
- Davies, S.R., McCallie, E., Simonsson, E., Lehr, J.L., and Duensing, S. (2009). Discussing dialogue: Perspectives of the value of science dialogue events that do not inform policy. *Public Understanding of Science*, 18(3), pp. 338–353.
- Dysthe, O., Bernhard, N., and Esbjørn, L. (2012). *Dialogbasert undervisning: Kunstmuseet som læringsrom*. Bergen: Fagbokforlaget.
- Falk, J.H., and Dierking, L.D. (2013). *The museum experience revisited*. Walnut Creek, CA: Left Coast Press.
- Gederaas, L., Moen, T.L., Skjelseth, S., and Larsen, L.K., eds. (2012). *Alien species in Norway – With the Norwegian Black List 2012*. Trondheim: Norwegian Biodiversity Information Centre.
- Gibbons, M. (1999). Science's new social contract with society. *Nature*, 402, pp. 81–84.
- Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott P., and Trow, M. (1994). *The new production of knowledge: The dynamics of science and research in contemporary societies*. Los Angeles: Sage.
- Hein, G.E. (2005). The role of museums in society: Education and social action. *Curator: The Museum Journal*, 48(4), pp. 357–363.
- Henriksen S., and Hilmo O., eds. (2015). *Norsk rødliste for arter 2015*. Trondheim: Artsdatabanken.
- Hilgartner, S. (1990). The dominant view of popularization: Conceptual problems, political uses. *Social Studies of Science*, 20(3), pp. 519–539.
- Jørgensen, G. (2011). Den vanskelige dialogen: Om universitetsmuseenes praktiske utfordringer i møtet med web 2.0-samfunnet. *Nordisk Museologi*, 1/2011, pp. 81–97.
- Kulturdepartementet. (1996). *NOU 1996:7. Museum. Mangfold, minne, møtestad*. Oslo: Statens forvaltningstjeneste.
- Kunnskapsdepartementet. (2006). *NOU 2006:8: Kunnskap for fellesskapet. Universitetsmuseenes utfordringer*. Oslo: Departementenes servicesenter.

### 30 References

- Latour, B. (1987). *Science in action: How to follow scientists and engineers through society*. Cambridge, MA: Harvard University Press.
- Latour, B. (2005). *Reassembling the social: An introduction to actor-network-theory*. New York: Oxford University Press.
- Macdonald, S. (2002). *Behind the scenes at the science museum*. Oxford: Berg.
- Nowotny, H. (2003). Dilemma of expertise: Democratising expertise and socially robust knowledge. *Science and Public Policy*, 30(3), pp. 151–156.
- Nowotny, H., Scott, P., and Gibbons, M. (2001). *Re-thinking science: Knowledge and the public in an age of uncertainty*. Cambridge: Polity Press.
- Nowotny, H., Scott, P., and Gibbons, M. (2003). Introduction: “Mode 2” revisited: The new production of knowledge. *Minerva*, 41(3), pp. 179–194.
- NTNU Vitenskapsmuseet. (2013). *Formidling som kunnskapsgenererende virksomhet – “Koloniseringsprosjektet”*. Project Description, NTNU Vitenskapsmuseet, December 2013. Internal document. Trondheim: NTNU University Museum.
- Plesner, U. (2009). *Disassembling the mass mediation of research – A study of the construction of texts, relations and positions in the communication of social science*. PhD dissertation, University of Roskilde, Denmark.
- Savery, J.R., and Duffy, T.M. (1996). Problem based learning: An instructional model and its constructivist framework. In: B.G. Wilson, ed., *Constructivist learning environments*. Englewood Cliffs, NJ: Educational Technology Publications, pp. 135–148.
- Simon, N. (2010). *The participatory museum*. Santa Cruz: Museum 2.0.
- Wilsdon, J., Wynne, B., and Stilgoe, J. (2005). *The public value of science. Or how to ensure that science really matters*. London: Demos.
- Wynne, B. (1995). Public understanding of science. In: S. Jasanoff, G.E. Markle, J.C. Peterson and T. Pinch, eds., *Handbook of science and technology studies*. Thousand Oaks, CA: Sage, pp. 361–389.
- Wynne, B. (2007). Public participation in science and technology: Performing and obscuring a political–conceptual category mistake. *East Asian Science, Technology and Society: An International Journal*, 1, pp. 99–110.
- Ames, M. (2003). How to decorate a house: The renegotiation of cultural representation at the University of British Columbia Museum of Anthropology. In: L. Peers and A. K. Brown, eds., *Museums and source communities: A Routledge reader*. London: Routledge, pp. 171–180.
- Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Durham, NC: Duke University Press.
- Barad, K., R. Dolphijn and I. van der Tuin. (2012). “Matter feels, converses, suffers, desires, yearns and remembers”: Interview with Karen Barad. In: R. Dolphijn and I. van der Tuin, eds., *New materialism: Interviews & cartographies*. Ann Arbor: Michigan Publishing, University of Michigan Library, Open Humanities Press. Available at: <http://dx.doi.org/10.3998/ohp.11515701.0001.001> [Accessed 9 January 2016].
- Boersma, H. (2011). *Heavenly participation: The weaving of a sacramental tapestry*. Grand Rapids, MI: William B. Eerdmans.
- Burns, D. (2007). *Systemic action research: A strategy for whole systems change*. Bristol: Policy Press.
- Burton, M., and C. Kagan. (2006). Decoding valuing people. *Disability & Society*, 21(4), pp. 299–313.
- Chatterton, P., D. Fuller and P. Routledge. (2007). Relating action to activism: Theoretical and methodological reflections. In: S. Kinson, R. Pain and M. Kesby, eds, *Participatory action research approaches and methods: Connecting people, participation and place*. London: Routledge, pp. 216–222.
- Croydon Advertiser*. (1967). Centre will cost 1d. rate – but let’s not count the cost. *Croydon Advertiser*, 19 May, p. 1.
- Department of Health. (2001). *Valuing people: A new strategy for learning disability for the 21st century*. London: HMSO.
- . (2009). *Valuing people now: A new 3-year strategy for people with learning disabilities*. London: HMSO.
- Devine, K., and R. Williams. (2011). Storytelling at Riverside. Museum Practice, 17 November. Available at: [www.museumsassociation.org/museum-practice/exhibition-labels/17102011-riverside-storytelling](http://www.museumsassociation.org/museum-practice/exhibition-labels/17102011-riverside-storytelling) [Accessed 9 January 2016].
- Edwards, A. (2012). The role of common knowledge in achieving collaboration across practices. *Learning, Culture and Social Interaction*, 1(1), pp. 22–32.
- Falk, J.H., and L.D. Dierking. (2013). *The museum experience revisited*. Walnut Creek, CA: Left Coast Press.
- Fals-Borda, O. (2013 [2007]). Action research in the convergence of disciplines. *International Journal of Action Research*, 9(2), pp. 155–167.

- Freire, P. (2000 [1968]). *Pedagogy of the oppressed*. Translated by M. Ramos, with an introduction by D. Macedo. New York: Continuum.
- Goodley, D. (2014). *Dis/ability studies: Theorizing disablism and ableism*. London: Routledge.
- Goodley, D., R. Lawthom and K. Runswick Cole. (2014a). Posthuman disability studies. *Subjectivity*, 7, pp. 342–361.
- . (2014b). Dis/ability and austerity: Beyond work and slow death. *Disability & Society*, 29(6), pp. 980–984.
- Graham, H. (2009). Oral history, “learning disability” and pedagogies of self. *Oral History*, 37(1), pp. 85–94.
- . (2010). How the tea is made; or, the scaling of “everyday life” in changing services for people with learning disabilities. *British Journal of Learning Disabilities*, 82(2), pp. 133–143.
- . (2016). The ‘co’ in co-production: Museums, community participation and science and technology studies. *Science Museum Group Journal*, 5. DOI: 10.15180/160502.
- . (2017). Horizontality: Tactical politics for participation and museums. In: B. Onciul, M.L. Stefano and S. Hawke, eds., *Engaging heritage: Engaging communities*. Suffolk: Boydell and Brewer.
- Heritage Lottery Fund. (2010). Thinking about...Community Participation. Available at: [www.hlf.org.uk/community-participation](http://www.hlf.org.uk/community-participation) [Accessed 9 January 2016].
- Heumann Gurian, E. (2010). A civically-minded contemporary art museum. A speech given at the invitation of the Museum of Contemporary Art in Chicago under the direction of Madeleine Grynsztejn in Autumn, 2010.
- Ingold, T. (2010). The textility of making. *Cambridge Journal of Economics*, 34, pp. 91–102.
- Kuppers, P. (2011). *Disability culture and community performance: Find a strange and twisted shape*. London: Routledge.
- Latour, B. (2005). *Reassembling the social: An introduction to actor-network-theory*. London: Routledge.
- Lynch, B., and Alberti, S. (2010). Legacies of prejudice: racism, co-production and radical trust in the museum. *Museum Management and Curatorship*, 25(1), pp. 13–35.
- Mitchell, D.T. (2014). Gay pasts and disability future(s) tense: Heteronormative trauma and parasitism in ‘Midnight Cowboy’. *Journal of Literary and Cultural Disability Studies*, 8 (1), pp. 1–16.
- Nind, M., R. Chapman, J. Seale and L. Tilley. (2015). The conundrum of training and capacity building for people with learning disabilities doing research. *Journal of Applied Research in Intellectual Disabilities*, 29(6), pp. 542–551.
- O’Neill, M. (2002). The good enough visitor. In: R. Sandell, ed., *Museums, society, inequality*. London: Routledge.
- In Our Own Words: Stories of Croydon’s Day Centres*, Museum of Croydon, Croydon Now, May–September 2008. An overview of the exhibition is available at: [www.open.ac.uk/hsc/research/living-with-disability/history-day-centres/exhibitions-ioow/ioow-introduction.php](http://www.open.ac.uk/hsc/research/living-with-disability/history-day-centres/exhibitions-ioow/ioow-introduction.php). Exhibition content available at: [www7.open.ac.uk/shsw/DaysGoneBy/ioow\\_a7\\_k5/a7\\_k5\\_menu.htm](http://www7.open.ac.uk/shsw/DaysGoneBy/ioow_a7_k5/a7_k5_menu.htm). [Accessed 9 January 2016]
- Poovey, M. (2002). The liberal civil subject and the social in eighteenth-century British moral philosophy. *Public Culture*, 14(1), pp. 125–145.
- Reason, P. (1998). A participatory world. *Resurgence*, 168, pp. 42–44.
- . (2005). Living as part of the whole: The implications of participation. *Journal of Curriculum and Pedagogy*, 2(2), pp. 35–41.
- Reason, P., and J. Heron. (2001). The practice of co-operative inquiry: Research with rather than on people. In: P. Reason and H. Bradbury, eds., *Handbook of action research: Participative inquiry and practice*. London: Sage, pp. 179–188.
- Rogoff, I. (2003). From criticism to critique to criticality. Transversal Texts. Available at: <http://eipcp.net/transversal/0806/rogoff1/en> [Accessed 9 January 2016].
- Samuel, R., ed. (1994). *Theatres of memory: Past and present in contemporary culture*, volume 1. London: Verso.
- Sandell, R. (2007). *Museums, prejudice and the reframing of difference*. London: Routledge.
- Schwartz, B. (2012). Foreward. In: R. Samuel, ed. *Theatres of memory: Past and present in contemporary culture, volume 1*. London: Verso.
- Scott, C.E. (2008). Sensibility and democratic space. *Research in Phenomenology*, 38, pp. 145–156.
- Seale, J., M. Nind, L. Tilley and R. Chapman. (2015). Negotiating a third space for participatory research with people with learning disabilities: An examination of boundaries and spatial practices. *Innovation: The European Journal of Social Science Research*, 28(4), pp. 483–497. DOI: 10.1080/13511610.2015.1081558.
- Serrell, B. (2015). *Exhibit labels: An interpretive approach*, 2nd edn. London: Rowman and Littlefield.
- Shakespeare, T. (2006). *Disability rights and wrongs*. London: Routledge.
- Stewart, K. (1996). *A space on the side of the road*. Durham, NC: Duke University Press.
- . (2011). Atmospheric attunements. *Environment and Planning D: Society and Space*, 29, pp. 445–453.

## 32 References

- Thrift, N. (2008). *Non-representational theory*. London: Routledge.
- Tilden, F. (1977 [1957]). *Interpreting our heritage*, 3rd edn. Durham, NC: University of North Carolina Press.
- Union of the Physically Impaired Against Segregation. (1976). Founding Statement. <https://disability-studies.leeds.ac.uk/wp-content/uploads/sites/40/library/UPIAS-UPIAS.pdf> [Accessed 9 January 2016].
- Welshman, J. (2006). Ideology, ideas and care in the community, 1948–1971. In: J. Welshman and J. Walmsley, eds., *Community care in perspective: Care, control and citizenship*. Basingstoke: Palgrave, pp. 17–37.
- Wendell, S. (2000). *The rejected body*. London: Routledge.