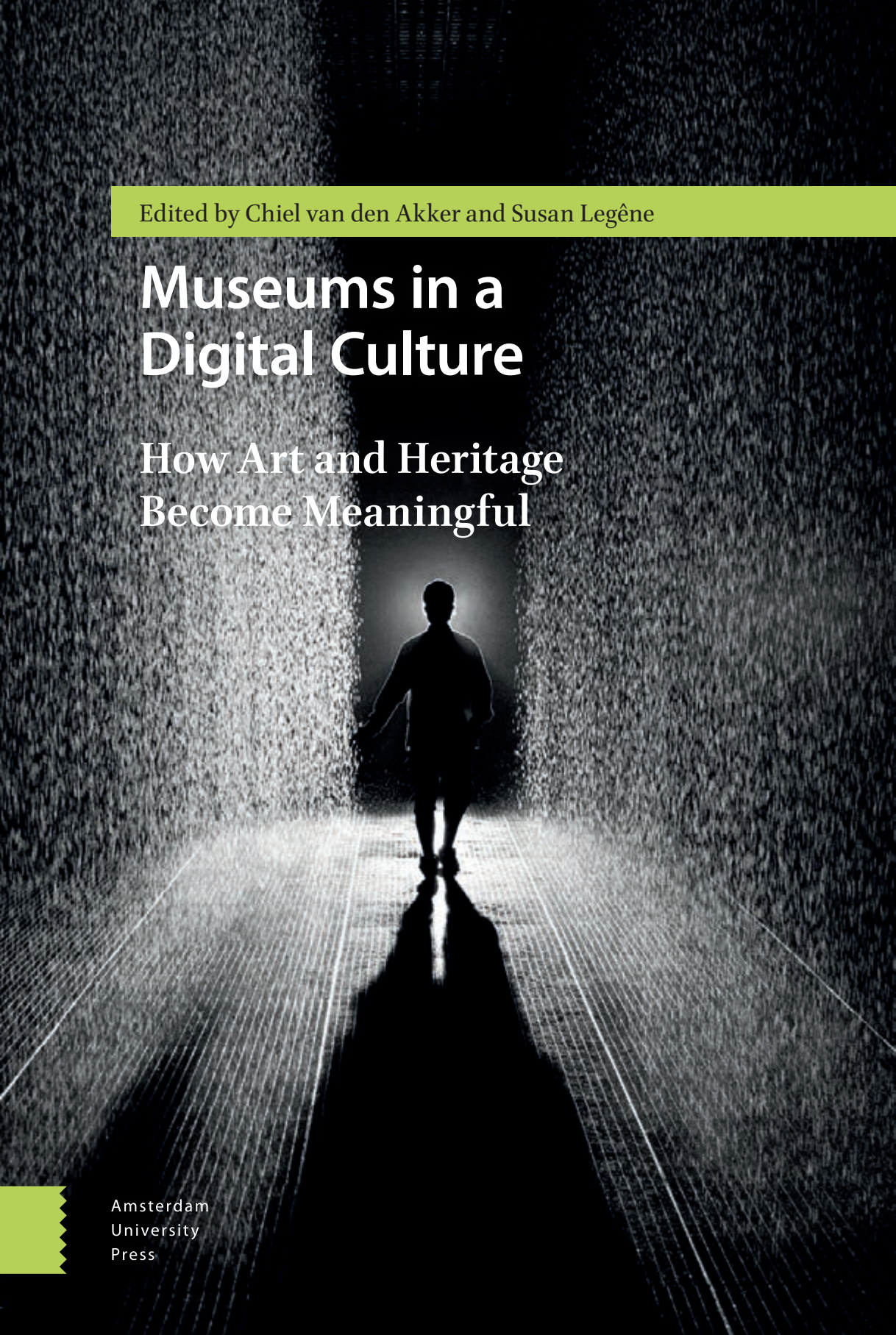

Edited by Chiel van den Akker and Susan Legêne
Museums in a Digital Culture
How Art and Heritage Become Meaningful
Amsterdam University Press

Museums in a Digital Culture

Museums in a Digital Culture

How Art and Heritage Become Meaningful

Edited by
Chiel van den Akker and Susan Legêne

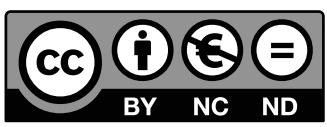
Amsterdam University Press

Cover illustration: Photograph of "Rain Room" by Random International, at The Curve, Barbican Centre, London 2012; with kind permission of Random International

Cover design: Coördesign, Leiden
Lay-out: Crius Group, Hulshout

Amsterdam University Press English-language titles are distributed in the US and Canada by the University of Chicago Press.

ISBN 978 90 8964 661 3
e-ISBN 978 90 4852 480 8 (pdf)
DOI 10.5117/9789089646613
NUR 657



Creative Commons License CC BY NC ND (http://creativecommons.org/licenses/by-nc/3.0)

© Chiel van den Akker & Susan Legêne / Amsterdam University Press B.V., Amsterdam 2016

All rights reserved. Without limiting the rights under copyright reserved above, no part of this book may be reproduced, stored in or introduced into a retrieval system, or transmitted, in any form or by any means (electronic, mechanical, photocopying, recording or otherwise) without the written permission of both the copyright owner and the author of the book.

Every effort has been made to obtain permission to use all copyrighted illustrations reproduced in this book. Nonetheless, whosoever believes to have rights to this material is advised to contact the publisher.

Contents

Introduction 7
Museums in a Digital Culture: How Art and Heritage Become Meaningful
Chiel van den Akker and Susan Legêne

1 Touched from a Distance 13
The Practice of Affective Browsing
Martijn Stevens

2 Visual Touch 31
Ekphrasis and Interactive Art Installations
Cecilia Lindhé

3 Breathing Art 41
Art as an Encompassing and Participatory Experience
Christina Grammatikopoulou

4 Curiosity and the Fate of Chronicles and Narratives 57
Chiel van den Akker

5 Networked Knowledge and Epistemic Authority in the Development of Virtual Museums 75
Anne Beaulieu and Sarah de Rijcke

6 Between History and Commemoration 93
The Digital Monument to the Jewish Community in the Netherlands
Serge ter Braake

7 From the Smithsonian's MacFarlane Collection to Inuvialuit Living History 109
Kate Hennessy

Conclusion 129
Chiel van den Akker

Notes on Contributors 135

Index 139

List of Figures

Figure 1	Philip James De Loutherbourg. *The Vision of the White Horse* 1798	28
Figure 2	Char Davies. Breathing and balance interface used in the performance of immersive virtual reality environments *Osmose* (1995) and *Ephémère* (1998)	47
Figure 3	Char Davies. Forest Grid, *Osmose* (1995). Digital still captured in real-time through HMD (head-mounted display) during live performance of the immersive virtual environment *Osmose*	49
Figure 4	George Khut. *Cardiomorphologies v.2* (2005). Interactive installation	51
Figure 5	Christa Sommerer and Laurent Mignonneau. *Mobile Feelings II* (2003). Interface devices	53
Figure 6	Anton Raphael Mengs (1772/73). *The Triumph of History over Time: Allegory of the Museum Clementinum*. Ceiling fresco in the Camera dei Papiri, Vatican Library	59
Figure 7	Screenshot from the Digital Monument to the Jewish Community	95
Figure 8	Albert Elias and team members discussing an Inuvialuit hunting bow in the Smithsonian's MacFarlane Collection at the National Museum of Natural History 2009	111
Figure 9	Handwritten label in the MacFarlane Collection 2009	117
Figure 10	Screenshot from *Inuvialuit Living History*	121

Introduction

Museums in a Digital Culture: How Art and Heritage Become Meaningful

Chiel van den Akker and Susan Legêne

With museum-based case studies as a starting point, this collection of essays addresses the overall changes in the access to and experience of art and heritage in our digital culture. Information and communication technology is changing the museum on different levels. It changes the relations a museum maintains with other institutions and organizations, methods and practices of collection management, and the relation that museums maintain with an increasingly diverse public. The use of information and communication technology affects means of display, research, and communication and may involve issues of power and authority, of ownership and control over access to heritage and information, both physically and intellectually.

Apart from being cultural institutions that collect, store, and exhibit artefacts with a significant aesthetic, historic, cultural, or scientific value, museums are places in which, over time, artefacts acquire and change meaning as a result of the triangular relationship between artefact, the way it is displayed, and the affective and cognitive response of the audience. The very fact that today's museums – or at least those museums that are located in postindustrial societies – operate in a digital culture, implies that this process of meaning-making involves a growing variety of uses of information technology. The case studies in this volume address this development, ranging from the relationship between on-site and online visits, to immersing oneself in a digital mediated art installation, and from recoding the existing collection to hosting a virtual mnemonic community.

Two themes run through this approach to museums in a digital culture. The first is a discussion of new modes of sensory experience that are offered by information technology in on-site and online museums with respect to displays of both existing and new works of art and heritage objects. The second investigates the new knowledge infrastructure provided by information and communication technology, which extends the role of museums as cultural institutions and as "hosts" for new communities. These two themes resonate through all the essays in this collection; the first does so more prominently in the first part, the second in the last chapters. The case

studies thus specifically zoom in on museums in a broader reflection on the question of how art and heritage become meaningful in a digital culture.[1]

In addition to offering new tools to visualize objects, information technology supports new modes of experiencing and perceiving art and artefacts, and this requires a specific vocabulary. This volume argues that the experience and understanding of art and heritage in a digital culture are best understood in relation to a series of related concepts: interaction, haptic experience, *ekphrasis* (the description of an object or artwork that evokes its image), immersion, "thinking with the eye" (curiosity), and the image as interface. This focus on experience and perception inscribes the museum in contemporary visual culture while at the same time it questions the ocular centrism of Western culture inasmuch as it departs from the conception of art and artefacts on display as "things to be looked at." Over the past decades, the visitor has gone from being a passive observer to being a user (someone who interacts with the object) and participant (someone who is involved in the meaning-making process of art and artefacts). Information and communication technology strengthens this development, not only on-site, but increasingly also in online display, and this obviously affects the museum professional preparing an exhibition and designing displays, the artist making a work of art, and the person visiting the museum.

With some telling examples, this volume shows how the new knowledge infrastructure of on-site and online museums provided by information and communication technology redefines what we take to be objects and collections, allowing new forms of curation and co-creation within the museum space. The new knowledge infrastructure may challenge existing power relations and offer opportunities for new forms of self-representation and communication. It is no longer self-evident that museums reflect and reinforce established frames of classification and interpretation developed in art history, ethnology, archaeology, and other academic disciplines. Information technology strengthens the ease with which master narratives are broken open, and it may multiply the possible relations between art and artefacts from different times and places, both on-site and online. The

1 There is an abundance of literature on art and heritage in the age of new media, showing a wide variety of interests and concerns. See for example the essays assembled by R. Parry ed., *Museums in a Digital Age* (London: Routledge, 2010). The two themes that run through this collection follow a path laid out by Eilean Hooper-Greenhill and others. See in particular E. Hooper-Greenhill, *Museums and the Interpretation of Visual Culture* (London: Routledge, 2000). Recently, and further down the path, attention to the experiential and affective appeal of artefacts in museums in relation to new media is emphasized by Michelle Henning and others. See M. Henning, *Museums, Media and Cultural Theory* (New York: Open University Press, 2006).

museum in a digital culture is what Eilean Hooper-Greenhill has called a post-museum, a site of mutuality rather than a site of authority, where the museum is the visitor's partner in the creation of meaning,[2] hosting on-site and online communities. In a digital culture, museums work *with* rather than *for* their community.[3]

Against the backdrop of these two themes, we will now briefly introduce the individual essays and anticipate the general conclusion that can be drawn from them.

Digital technology offers new sensory experiences and may invoke affective responses to works of art and artefacts. These are examined by Martijn Stevens in what he refers to as haptic experiences, a concept that enables him to explain intuitive and affective surfing, interaction with digital content, immersion, and the epistemic shifts that these activities bring about. Where optic vision is characterized by distance and disembodiment, haptic vision is the "experience of proximity in terms of affinity, connectivity, and attraction." This haptic experience does not necessarily depend on the material presence of an object. Using the Tate website as an example, Stevens explains the centrality of the haptic experience in digital driven environments by referring to the power of the database, which "consists in the possibility of establishing multiple connections between items that are historically and geographically far removed." Stevens emphasizes, like Beaulieu and De Rijcke in their contribution to this volume but in the different vocabulary of haptic experience, that the image functions as an interface, that is, "as a link or a passageway to a diversity of associated objects, people, and events."

Starting with a description of Camille Utterback's and Romy Achituv's interactive installation *Text Rain*, which requires physical and imaginative participation, Cecilia Lindhé observes that we need to rethink the relation between descriptions and artefacts. Therefore Lindhé closely examines the notion of ekphrasis, the (poetic) description of an object or a piece of art with the goal of evoking its image, and argues that the ancient oratory or rhetorical concept of ekphrasis is better suited to account for digital installations than its modern equivalent. This is so because the rhetorical concept of ekphrasis emphasizes the *effect* of evoking images on the audience. In what Lindhé refers to as digital ekphrasis, the process of visualization is central and emphasizes how installations with their combination of visual, verbal,

2 Hooper-Greenhill, *Museums*, xi.

3 S. Bautista, *Museums in the Digital Age: Changing Meanings of Place, Community, and Culture* (Landham: Altamira Press, 2014), 27.

auditory, and kinaesthetic elements afford multisensory, participatory, and vivid experiences. Her argument thus supports the analysis of experience presented by Stevens.

The haptic experience introduced by Stevens is further explored by Christina Grammatikopoulou in the context of installation art. Grammatikopoulou, taking a phenomenological approach, discusses four interactive artworks – Char Davies's *Osmose*, George Khut's *Cardiomorphologies v.2*, Christa Sommerer's and Laurent Mignonneau's *Mobile Feelings II,* and Thecla Schiphorst's *Exhale* – which all "come to life" through controlled body movements. These interactive installations provide biofeedback, making use of motion tracking technology measuring breathing rhythm, temperature, and/or heart rate. This allows Grammatikopoulou to emphasize "the role of the public as co-creators of interactive artworks involving participation through the body." Interactive installations transform museums and other art spaces, according to Grammatikopoulou, into a new kind of art laboratory "where artists and visitors meet and create meaning together." Rather than being works to be admired from a distance, interactive biofeedback art reveals to the visitor/participant an inner space for self-reflection, making them aware of the unity of mind and body, as both Indian philosophy and twentieth-century phenomenology maintain.

Current developments in museums prompt us to reflect on how we relate to the past in a digital culture. Chiel van den Akker argues that although the use of digital technology may be innovative, the models used to present (art) history determine whether on-site and online (art) history museums are to be labelled "old" or "new." In a historical-philosophical critique of in context and in situ exhibition practices, he distinguishes between the classic chronicle and modernist master narrative and three alternative models to represent the past: the display of objects in small discontinuous historical series; the presentation of objects from different times in an order of co-presence; and displays evoking a sense of immersion into the past. Van den Akker argues that these three alternative models of presenting (art) history, while stimulating curiosity, favor the contemporaneous point of view above the retrospective point of view which is typical of historical narratives. It thus seems that in a digital culture, the insight of late eighteenth-century German Romanticism not to measure the past by contemporary standards – the founding insight of modern historical consciousness – no longer applies to the new on-site and online museum.

Anne Beaulieu and Sarah de Rijcke emphasize the importance of the database in understanding the multiple possibilities for (re-)ordering collections: "The database not only shapes much of the institutional work

processes within the museum, but it also (re)defines what counts as the collection and how other users can interact with the museum collection via digital images." Their central thesis is that digital images become active objects; rather than mere representations of objects to be seen, images function as interfaces. The image as interface explains its interactive functionality: it can be an interactive object of study in itself, allowing to zoom in and out for example, and most importantly through the metadata attached to it, it functions as a point of entrance to other aligned and networked images and information. As a consequence, it is the image as interface that determines what and how we know, resulting in what Beaulieu and De Rijcke describe as "windowed" and networked modes of viewing and knowing. New museum practices associated with the concept of images as interfaces are studied in the context of the ethnographic Tropenmuseum in Amsterdam. Combining new media studies and science and technology studies, they are able to connect new museum practices to contemporary visual and digital culture.

Serge ter Braake discusses the emergence of a mnemonic community "hosted" by the museum: the Digital Monument to the Jewish Community in the Netherlands, for which the Jewish Historical Museum in Amsterdam is responsible. The Digital Monument consists of a "canvas of colored dots" where each dot represents a victim of the Nazi genocide in the Netherlands during its occupation in 1940-1945. By clicking on a dot, the user is directed to the personal page of a victim with biographical information and (when available) a photograph. The monument thus is an interface which allows it in addition to function as an information provider. Ter Braake, who was an editor for the monument between 2007 and 2012, reflects on the many difficulties the project encountered, stemming from the tensions between "commemoration (which often is not helped by precision and objectivity), history (which aims at being precise and objective), memory (which often claims to be precise and objective, but is not), [and] the large set of data (which is not precise and does not claim to be so)." Interestingly, it was the unforeseen and overwhelming response of visitors who wanted to adjust and add information, indicate their relation with victims, or contact other visitors, that eventually turned the monument into a participatory, interactive, collaborative, and dynamic online mnemonic community.

Kate Hennessy starts from the other end from Ter Braake, taking a critical stance towards power relations implied in collections. She emphasizes the possibilities offered by information technology to share curatorial and ethnographic authority with Aboriginal communities, connect tangible and intangible heritage, and readdress issues of ownership, (virtual) control over, and actual or virtual repatriation of cultural property. Hennessy discusses

work she has done on the *Inuvialuit Living History* project, a virtual museum project of the Inuvialuit Cultural Resource Centre in Inuvik, Northwest Territories, Canada, in collaboration with researchers, curators, and media producers. The virtual museum uses the Smithsonian MacFarlane Collection and aims to reconnect this collection to the intangible heritage associated by the community with the collection's objects. Hennessy argues that such "digital ethnology" stimulates collaboration between researchers and originating communities, revealing power relations in ethnographic, curatorial, and digital practices. The *Inuvialuit Living History* project not only enables the interaction of originating communities and heritage collection, but, more importantly, it "represents an opportunity for originating communities to re-contextualize their cultural heritage in museums in new digital forms, potentially shifting power over representation from institution to Aboriginal publics." It is "a tool for Aboriginal self-representation and reclamation of ethnographic authority."

The volume closes with a conclusion. After reaffirming Nelson Goodman's claim that museums ought to advance understanding in the sense of forming, re-forming, or transforming vision, Chiel van den Akker concludes that digital technology should enhance and extend the museum experience and function rather than replacing them with something else. One consequence of this is that we should think of digital technology in terms of *means* rather than in terms of goals. If this conclusion is correct, then we know in a general sense what museums and their on-site and online visitors may gain by using digital technology. Each chapter in this volume affords some concrete examples of such benefits, without losing sight of the possible pitfalls accompanying the implementation of this new technology.

Acknowledgments

The editors' initiative for this collection of essays originates in the CATCH-Agora project, funded by NWO (The Netherlands Organisation for Scientific Research), grant 640.004.801.

1 Touched from a Distance

The Practice of Affective Browsing

Martijn Stevens

In the late nineteenth century, the fabulously rich industrialist Henry Tate, who had accumulated an enormous fortune by taking out a patent on sugar cubes, financed the construction of an art gallery near the River Thames in London. By the beginning of the twenty-first century, Tate Gallery had grown into a group of four museums with a sizeable collection that embraced painting, drawing, sculpture, prints, photography, film, and installation and performance, ranging from early modern British art to contemporary works by internationally celebrated artists. In 2002 Susan Collins put forward a sensational plan to add another exhibition space to the Tate Group. Details of the artist's proposal were revealed by Sandy Nairne, who was then in charge of a large-scale reorganization of the existing galleries:

> The next Tate site should be in space. At this stage a number of practical aspects of the project are being tested and an early pre-opening programme is being taken forward. This will clearly continue the Tate tradition of innovation and exploration, and provide a radical new location for the display of the collection and for educational projects.[1]

Several years before, a former power station on the far side of the river had been renovated and brought into use for the permanent display of Tate's international collection of modern art, while the original gallery from 1897 was restored to function as the national gallery of British art. Collins wanted to lift the plans for the expansion of the Tate to an even higher level by establishing an additional museum in a satellite orbiting the Earth at a distance of approximately 400 kilometers that would also serve as a temporary workplace for artists. She created a website with relevant information on the ambitious project including comprehensive essays, details on the course of the satellite, an overview of vacancies for the new location, and a discussion forum to facilitate the exchange of ideas among scientists, architects, artists, and other interested parties on the possible uses of an art gallery in deep space. Furthermore, several building plans

1 *Tate in Space*, http://www2.tate.org.uk/space/. Last accessed 9 January 2014.

for the exhibition space were available online as scale models that could be downloaded, printed, and folded into miniature versions of the satellite.

The website was a huge success, but it turned out to be a commissioned work of Internet art instead of a genuine platform for audience involvement in developing a new space program. The satellite would actually never be launched, and the chart of the supposed course was completely fictitious. The images of the direct video connection were in fact recordings of a colored bouncy ball on the dining room table at the artist's home. Collins later explained that she eventually had to "slow the whole thing down to make it more authentic and deliberately put in fuzz every so often so that people would really feel that it's having difficulty connecting."[2] The art project had nevertheless clearly fired the audience's imagination since reported sightings of the satellite kept coming in. Many people were apparently swept away by the prospect of a museum in the expansive universe, which demonstrates that the website

> also works as interactive or immersive fiction, where each visitor is encouraged to engage with their own extra-terrestrial cultural fantasies. Some aspects of the work – such as the satellite sightings data – rely on participants 'wishing' or 'believing' the narrative into existence … And people pick up on it, their own imagination suddenly runs with the idea of what this new Tate might be.[3]

Collins's proposal might easily be understood as a piece of conceptual art that challenged the audience to rethink the very concept of the museum, but the project was actually not so much about the idea of expanding the Tate Group into outer space. The title of the artwork – *Tate in Space* – rather hinted at exploring the virgin territory of cyberspace, thereby touching upon a topical issue in the world of museums and heritage institutions. After all, at the turn of the millennium, many organizations were still trying to find their way in the virtual realm of the Internet in order to present their collections online. Merely concentrating on the means rather than the end, however, many institutions seemed to be neglecting the epistemological shifts that resulted from the digitization of museum and

2 S. Collins, "Tate in Space," in *DShed. Watershed's Showcase of Creative Work, Talks, Commissions, Innovation, Artist Journals, Festival Fiaries & Archive Projects*. Transcription of a conversation between Susan Collins and Jemima Rellie at Tate Modern on 20 February 2004. http://www.dshed.net/sites/digest/04/content/week2/tate_in_space.html. Last accessed 9 January 2014.

3 Collins, "Tate in Space."

heritage collections. Both the idea of the institution and the understanding of cultural heritage were nonetheless deeply affected by the process of digitization. This chapter will therefore elaborate on the new opportunities for the creation of meaning in a digital culture that are called into being by the online presentation of museum collections.

Responding to Change

The teasing subtitle of a critical review of Collins's project in a magazine for science and technology playfully referred to the challenges that came with the process of digitization: "Boldly going where no gallery has gone before."[4] Despite the mildly ironic undertone of the commentary, it may certainly be true that even today – more than a decade after the artwork was commissioned – the museums and heritage industry is still struggling to keep up with the rapid advance of ever new technologies. In early 2011, for example, the members of a so-called *Comité des Sages* who were invited by the European Commission "to provide a set of recommendations for the digitization, online accessibility and preservation of Europe's cultural heritage in the digital age" warned against the dawn of a digital Dark Age as the inevitable result of simply waiting and hence remaining inactive rather than taking full advantage of "the potential of bringing Europe's cultural heritage online."[5] In a similar vein, the American Association of Museums has established a research center to explore the future of museums and heritage institutions. Arguing that it would be careless to assume that someone else will struggle with the consequences of digitization, the founding director has advanced the thesis that organizations are required to counter the challenges of today's digital society so as to benefit from the emerging structural shifts as well as to avoid the harms of inaction.[6] While also emphasizing that digitization is no longer simply a matter of choice, a business report from the Dutch ABN AMRO Bank on digital strategies for art museums struck a somewhat lighter chord by focusing particularly on the social and economic benefits of using digital technologies in order to establish new connections between collections, exhibitions, activities, and

4 J. Kahn, "Art in Orbit. Boldly going where no gallery has gone before" *DISCOVER Magazine. Science, Technology, and The Future*, September Issue 2003.

5 E. Niggemann, J. De Decker and M. Lévy, *The New Renaissance: Report of the "Comité des Sages"* (Brussels: European Commission, 2003), 8.

6 E. Merritt, *Museums & Society 2034: Trends and Potential Futures* (The Center For the Future of Museums, 2008), 20.

audiences. John Stack, on the other hand, who is currently responsible for Tate's digital strategy, goes even further by bluntly stating that

> new technologies and online services, together with the proliferation of high-speed internet connections and mobile internet connectivity, have changed the web radically in the past few years. However, cultural and heritage organisations have been slow, by and large, to respond to these changes.[7]

Strongly believing that the process of digitization has penetrated to the core of everyday life in today's networked society, Stack argues that a digital mind-set evidently also needs "to become a dimension of everything that Tate does" – from the use of blogs and social media to ticketing, fundraising, and governance.[8] Such a holistic approach seems far removed from Tate's original policy to consider the website explicitly as a self-supporting and autonomous entity within the Tate Group.

Launched in 1998, Tate Online was primarily conceived as a concise catalogue of the museum's vast collection of paintings, sculptures, and sketches, but the website rapidly grew into a successful branch of the Tate Group that yearly received about twenty million unique visitors. Although the collection was still at the heart of the website, Tate Online gradually came to also include extensive modules for teaching and research, a large archive with audiovisual material, an award-winning application for visually impaired visitors, an online magazine, and a shop that offered customized replicas of original artworks as well as objects that were especially designed by renowned artists on the occasion of temporary exhibitions. Added to the acquisition of sponsorships, the sales of images to commercial parties, the joint income of four museum shops, the offering of catering services, and the profits of Tate's publishing house, the online activities generated an annual turnover of several million pounds, which were mostly ploughed back into the collection. They were nonetheless seen as disconnected from the core business of the museum until the spring of 2010 when Tate's online strategy for the next five years was presented to the trustees of the institution. The main ambition of the new plans was to move on from considering Tate Online as a separate part of the organization to integrating the digital, quite simply, into all of Tate's activities – both online and offline.

7 J. Stack, "Tate Online Strategy 2010-12," *Tate Papers* 13 (2010).
8 Stack, "Tate Online."

The proposed direction for the future indicated a fundamental shift in the view towards the position of digital technologies within the Tate Group. It necessarily involved radically different working methods, new modes of thought, and, as a consequence, a critical reassessment of the museum as a site for the production and dissemination of knowledge. After all, by introducing new means of documenting, ordering, and framing the various collections, Tate's holistic approach to digitization would undeniably lead to novel ways of interpreting and understanding artworks and historical artefacts, thus also changing the epistemological function of the museum.

Networked Knowledge

A closer look at the presentation of the collection on the Tate website is helpful to elucidate how digitization challenges the museum's established role in shaping a particular body of knowledge. Each work in the collection has an information page within a database that is accessible via the button "Art & artists" on the homepage, containing a digitized image and technical information such as title, artist's name, measurements, accession number, material, and year of acquisition. The list is further completed with links to the artist's biography, a summary of the work, related objects in the collection, and a set of keywords that are grouped in a thesaurus. The painting *The Billiard Players*, for example, is associated with the entry *billiards*, which in turn is part of the category *recreational activities* under the lemma *leisure and pastimes*. All keywords in the database are grouped accordingly in a tree diagram with countless bifurcations, thereby offering various possibilities to enter into the collection. Artworks can also be found by typing a query into the search field or doing a refined search by selecting a style or "-ism," date range, subject matter or type of object, thus enabling a visitor of the website to view all paintings currently on display at Tate Britain by Thomas Gainsborough and depicting a grasshopper or a scene at Berkeley Square in London. The results are then optionally sorted by title, reference number, artist or owner, date (oldest or most recent first), and number of views.

Despite being semantically rich, the businesslike inventory of the items in Tate's collection in terms of names, dates, and materials does not reveal anything about their perceived meaning or value.[9] Removed from galleries in brick-and-mortar institutions and stripped of their physical or tangible

9 B. De Baere and D. Roelstraete, "Mentaal Onderhoud". Bart De Baere en Dieter Roelstraete in Gesprek met Nico Dockx en Kris Delacourt," *AS Mediatijdschrift* 170 (2004), 101.

qualities, artworks appear on the Internet as virtual, hyperlinked objects with the fundamental properties or "crucial bits of art" essentially lost in the process.[10] The loss of substance is indeed often seen as a serious problem since preserving the original state of the physical objects in a collection is one of the main responsibilities of museums, archives, and libraries. Yet, in connection with the database of art on Tate's website, the question of substance is not simply a matter of "existing" in the sense of being physically present in a particular time and space. Because artworks are no longer necessarily material things that exist in three-dimensional space, the question is not simply to establish *that* they exist but rather *how* they exist or how they function within a given context.[11] After all, ever since the formation of the museum-as-institution, the interpretative framework for understanding a collection was determined by the spatial and temporal boundaries of the individual objects as well as the overarching structure of galleries and rooms, whereas the power of an online database consists in the possibility of establishing multiple connections between items that are historically and geographically far removed. Online presentations of museum collections are therefore to be considered as technologies of absent presence, which evidently has rigorous consequences for the creation of meaning.

The concept of absent presence is frequently used pejoratively with regard to the false impression of direct contact and "almost immediate presence" that is created by digital technologies.[12] According to Paul Virilio, one of the most-cited and best-known critics to have examined the effects of technological developments on contemporary society, the disappearance of tangible objects and their replacement by virtual substitutes that are only absently present amounts to a shift in experience towards being "telepresent" and reaching or feeling at a distance.[13] As digitization allows objects to be simultaneously present and absent, sensible reality is said to be doubled into the concrete reality of existing *in situ* – here and now – and the virtual elsewhere of telepresence.[14] Consequently, in Virilio's opinion, "a

10 W. Januszczak, "Re: http://bit.ly/hquMLO The basic assumption here is wrong. You can't online texture, scale, heft, contact – the crucial bits of art," 2 February 2011, http://twitter.com/JANUSZCZAK/status/32737315264659456. Last accessed 24 December 2014.

11 A.R. Galloway and E. Thacker, *The Exploit: A Theory of Networks* (Minneapolis, MN: University of Minnesota Press, 2007), 36.

12 D. Chandler and R. Munday, *Dictionary of Media and Communication* (Oxford: Oxford University Press, 2011), s.p.

13 P. Virilio, "Speed and Information: Cyberspace Alarm!" *CTHEORY*, 27 August 1995.

14 Virilio, "Speed and Information."

stereo-reality of sorts threatens" which inevitably leads to a fundamental loss of orientation, thereby further unsettling "the perception of what reality is."[15]

A contemporary of Virilio's and equally renowned for critically discussing the rise of electronic media and the socio-cultural effects of the ever-increasing use of communication technologies, Jean Baudrillard's impact on the burgeoning field of new media theory during the 1990s has also been profound. He is perhaps best remembered for suggesting a complete disappearance of the real in a world of virtual reality and pure simulation, which clearly resonates with the work of Virilio. Baudrillard's observations similarly end in an inescapable conclusion with regard to the experience of reality:

> When the real is no longer what it used to be, nostalgia assumes its full meaning. There is a proliferation of myths of origin and signs of reality; of second-hand truth, objectivity and authenticity. There is an escalation of the true … where the object and substance have disappeared.[16]

Having dominated the discourse surrounding digitization since the popularization of the Internet in the early 1990s, when virtual images of art works were first believed to "somehow compete with or detract from actual objects," the anxieties about loss and disappearance that were already voiced strongly by Virilio and Baudrillard more than two decades ago still reverberate in today's discussions surrounding the digitization of museum collections.[17] In view of the alleged disruption of settled practices in heritage institutions, the main reasons for concern include "a loss of aura and institutional authority, the loss of the ability to distinguish between the real and the copy, the death of the object, and a reduction of knowledge to information."[18] The opposing viewpoints in the debate – digitization is either a threat to museums or an opportunity to reinvent themselves – correspond with a dichotomy between virtual reality and "real" reality that is hardly ever questioned and is perhaps even unequivocally accepted. Nevertheless, since the beginning of the twenty-first century, scholarly work within both

15 Virilio, "Speed and Information."

16 J. Baudrillard, *Simulations* (New York: Semiotext[e], 1983), 12.

17 B. Graham and S. Cook, *Rethinking Curating: Art after New Media* (Cambridge, MA: MIT Press, 2010), 187, n12.

18 A. Witcomb, "The Materiality of Virtual Technologies: A New Approach to Thinking about the Impact of Multimedia in Museums" in *Theorizing Digital Cultural Heritage: A Critical Discourse*, eds. F. Cameron and S. Kenderdine (Cambridge, MA: MIT Press, 2010): 38-48 (35).

the humanities and the social sciences has witnessed an impelling motive to think against or beyond dualisms that are always necessarily (yet often implicitly) "structured by a negative relation between terms."[19] Notions of "negative relationality" are indeed widespread in mainstream cultural and media theory, which includes the work of Virilio and Baudrillard.[20] Underpinning the concept of telepresence and the corresponding possibility of being absently present, for example, is a binary opposition between a material, palpable, or real world and the supposedly intangible, disembodied, and abstract nature of digital environments. As a consequence, definitions of virtual reality are routinely grounded in the supposition that "the actual physical reality is disregarded, dismissed, abandoned."[21] The supposed discrepancy between both realms thus hence leads to a move "beyond and outside the body and its perceptual … or material limits in the mode of action-at-a-distance," thereby negating the interrelatedness of "the very real effects of virtuality and the virtual dimensions of reality."[22] However, rather than simply entailing a displacement from the physical to the immaterial, the ongoing and unstoppable process of digitization has demonstrated the need to complicate and rethink traditional notions "to accommodate what they seem to oppose."[23] Besides being merely the absolute opposite of actual reality, the concept of virtuality is also "the domain of latency or potentiality," which allows for a shift to affective and affirmative forms of relationality that perhaps also counterbalances the implicit or implied hierarchy between both terms.[24]

Continuing this line of thought, I specifically seek to rematerialize the virtual by aligning myself with Laura Marks, who likewise critiques "the assumption that what is virtual must be immaterial, transcendent" rather than "interconnected in many ways."[25] Furthermore, she employs the notion of "optic visuality" to conceptualize the habit of seeing objects as "distinct, distant, and identifiable, existing in illusionary three-dimensional space."[26]

19 R. Dolphijn and I. van der Tuin, *New Materialism: Interviews & Cartographies* (Ann Arbor, MI: Open Humanities Press, 2012), 86.

20 Dolphijn and Van der Tuin, *New Materialism*, 122.

21 L. Manovich, *The Language of New Media* (Cambridge, MA: MIT Press, 2001), 113.

22 E. Grosz, *Architecture from the Outside: Essays on Virtual and Real Space* (Cambridge, MA: MIT Press, 2001), 81, 84.

23 Grosz, *Architecture from the Outside*, 86.

24 Grosz, *Architecture from the Outside*, 86.

25 L.U. Marks, Touch: *Sensuous Theory and Multisensory Media* (Minneapolis, MN: University of Minnesota Press, 2002), 178.

26 L.U. Marks, "Haptic Visuality: Touching with the Eyes," *Framework: A Finnish Art Review* 2 (November Issue 2004).

Introduced in Western thought with the invention of linear perspective in Renaissance painting and recently "refitted as a virtual epistemology for the digital age," the notion of optic visuality presupposes "a form of representation that requires distance" and an understanding of vision as "disembodied and adequated with knowledge itself."[27] Haptic visuality, on the other hand, allows for a view on cultural heritage that acknowledges the materiality of digital objects by sustaining "a robust flow between sensuous closeness and symbolic distance."[28]

Contrary to the well-worn belief that absent presence will eventually cause a loss of a sense of reality, the notion of haptic vision suggests that getting in touch from a distance is not simply geared towards overcoming barriers in time and space. It rather hints at the experience of proximity in terms of affinity, connectivity, and attraction, which is not necessarily dependent on the material presence of an object. Haptic looking seems therefore particularly suited to the display of museum collections on the Internet, which is obviously

> a virtual reflection of the real world, but one that both mimics and is clearly different from the real spaces it reflects. The Internet is less a series of objects and spaces than a series of movements between them. This movement can be in 'logical' linear sequence … or it can take new pathways linked only by the random thoughts of the surfer, in that the surfer rides the movement.[29]

The concept of haptic visuality refers precisely to "a labile, plastic sort of look, more inclined to move than to focus."[30] Putting the surfer's personal preferences, expectations, and prior knowledge first, it favors the intuitive or affective browsing through digitized collections, whereby the various aspects of an object – color, material, year, theme – function as a link or a passageway to a diversity of associated objects, people, and events. Instead of using a list of factual data to denote and singularize a work of art that actually exists in time and space, haptic vision prefers connectivity and interrelatedness to the presumed uniqueness of a particular object. On the website of Tate, for example, the subject of boredom is used to describe *The Dining Room* (*Francis Place*), a photograph from 1997 by Sarah Jones that

27 Marks, *Touch*, xiii.
28 Marks, *Touch*, xiii.
29 D. Sutton and D. Martin-Jones, *Deleuze Reframed* (London: I.B. Tauris, 2008), 30.
30 Marks, *Touch*, 8.

shows three girls at a dining room table. Besides characterizing a discrete work of art, however, the theme of the picture also functions as a pathway to other works in the collection, such as Edward Francis Burney's *Amateurs of Tye-Wig Music* (*Musicians of the Old School*). The nineteenth-century painting depicts a group of musicians with the purpose of satirizing the conflicting attitudes of the day toward traditional and modern music. Through the person of George Frideric Handel, the oil painting is subsequently linked with a woodcut made in 2000 by Thomas Kilpper, who used a chainsaw and chisels to carve a portrait of the German composer into the mahogany parquet on the tenth floor of an abandoned building in London. The use of powerful, contrasting, and unnatural colors in Kilpper's work is also a distinctive feature of *Get Well Soon* by the recently deceased Craigie Aitchison, an abstract composition from 1969 that is screen-printed on paper in a lurid pink.

With the specific qualities of an object functioning as stepping stones to move between artworks from different centuries that are executed in various media, the act of clicking spontaneously or randomly through the collection database of Tate reveals unexpected and surprising correlations between objects that are normally not grouped together. Moreover, as the nature of the worldwide web is flexible and unstable, the connections between the different items in the database are constantly being made and unmade, thus incessantly giving new coherence to the collection and, consequently, offering new insights in objects, images, or documents that have become familiar over time.

Being Digital

Haptic vision and affective surfing appreciate the so-called "connective materialism" of Tate and thereby countenance the production of networked knowledge.[31] They are the threshold of a truly virtual museum, whereby the virtual is understood as

> the space of emergence of the new, the unthought, the unrealized, which at every moment loads the presence of the present with supplementarity, redoubling a world through parallel universes, universes that might have been.[32]

31 See also Marks, *Touch*, xi.

32 Grosz, *Architecture from the Outside*, 78.

Equally important as rematerializing the virtual, however, is a reassessment of the concept of the digital in relation to museums and heritage institutions. After all, in the same manner that cyberspace is not merely immaterial and discrete, "being digital" does not simply correspond with the physical presence of computers in the gallery space, the presentation of collections online, or the gradual incorporation of specific tools and applications such as collection management software into the daily routine of museum professionals. Rather, going far beyond "either discrete data or the machines that use such data," yet nonetheless entwined with software programs, electronic networks, or any other similar technology, the notion of the digital primarily "defines and encompasses ways of thinking and doing that are embodied within that technology."[33]

The logic of digitization is actually deeply rooted in social and cultural forces, which have been at least as important in shaping contemporary society – including museums, archives and libraries – as techno-scientific developments. It could even be argued that digital technologies are, possibly more than anything else, palpable expressions of "the social forms capable of producing them and making use of them."[34] They are, in other words, concrete manifestations of an underlying and already present digital culture that is characterized by modulation, distribution, and flexibility.[35] As a result, museums are currently in the midst of a so-called "epistemic break" between different ways of seeing and thinking, which poses a severe challenge for the production of institutional knowledge as well as the dissemination of specialist information to non-professional visitors.

An Epistemic Break

Indicating the fundamental shifts to new systems of knowing throughout history, epistemic breaks are basically tantamount to "the fact that within the space of a few years a culture sometimes ceases to think as it had been thinking up till then and begins to think other things in a new way."[36] The process of digitization has precisely caused a rupture in the museum and heritage sector, since discourses and institutional practices are now

33 C. Gere, *Digital Culture* (London: Reaktion Books, 2002), 11, 13.

34 G. Deleuze, *Negotiations 1972-1990* (New York: Columbia University Press, 1995), 180.

35 Galloway and Thacker, *The Exploit*, 31.

36 M. Foucault, *The Order of Things: An Archaeology of the Human Sciences* (London: Routledge, 2004), 56.

circulated "across distances with speeds unprecedented in world history" after having long changed and spread only gradually.[37] Concurrently, as digital technologies are becoming ever more pervasive in reshaping the social and cultural landscape of the twenty-first century, the ontology of the computer is projected onto the whole of society, and new metaphors or similes force themselves into play. Having already thoroughly restructured the discourses around human perception, memory, identity, history, politics, and ideology, the logic of digital networks and computerized databases is ineluctably also taking root in the field of museum and heritage studies.[38] Within many institutions, centralized forms of control are increasingly being affected by a flexible, dynamic, and networked view on power relations that is often both ideologically and architecturally placed in opposition to supposedly "retrograde structures like hierarchy and verticality."[39] Although the lively glance of haptic visuality appears to be more appropriate for digitized objects on a website than a contemplating or penetrating gaze, the history of collection display is nonetheless inextricably bound up with "the mastering, optical visuality that vision is more commonly understood to be."[40] After all, a museum collection is traditionally subdivided into partial collections that are subsequently displayed in separate rooms that are "neutralized by efforts to range and classify."[41] While internally coherent,

> each room is also insistently tied to the one before and the one after, organized through an obvious and apparent sequentiality. One proceeds … from space to space along a processional path that ties each of these spaces together, a sort of narrative trajectory with each room the place of a separate chapter, but all of them articulating the unfolding of the master plot.[42]

Moving from room to room along a prescribed route, the audience quite literally enacts or performs the temporal span of art history, the evolution of life on planet Earth, or a similarly linear process of gradual origination, transformation, and development. The creation of meaning is thus strongly

37 J. McKenzie, *Perform or Else: From Discipline to Performance* (London: Routledge, 2001), 186.

38 See also C. B. Farrell. s.a. "Réaction programmée," *Art Mûr,* http://artmur.com/en/artists/lois-andison/reaction-programmee. Last accessed 9 January 2014.

39 Galloway and Thacker, *The Exploit*, 25.

40 Marks, *Touch*, xvii.

41 R.E. Krauss, "Postmodernism's Museum without Walls," in *Thinking about Exhibitions*, eds. R. Greenberg, B. W. Ferguson, and S. Nairne (London: Routledge, 1996), 340-348 (342).

42 Krauss, "Postmodernism's Museum," 343.

associated with the setting and the architectural features of the museum building as well as the layout of the exhibition, the spatial arrangement of the objects on display, and the methods for guiding or directing the movements of visitors within the gallery.[43] By contrast, refusing to create a sequential and hierarchical ordering of a collection, a computerized database simply "represents the world as a list of items."[44] Furthermore, instead of drawing on the objects in a collection to narrate compelling and carefully edited stories, databases

> do not tell stories; they do not have a beginning or end; in fact, they do not have any development, thematically, formally, or otherwise that would organize their elements into a sequence. Instead, they are collections of individual items, with every item possessing the same significance as any other.[45]

As Tate's website clearly demonstrates, the cultural logic of the database allows for the incessant recombination of artworks and historical objects without necessarily systematizing a collection into a linear and unambiguous story or otherwise giving "meaningful coherence to … discontinuous elements."[46] On the contrary, digital databases offer an image of the world that is highly structured yet "intensive, zigzagging, cyclical and messy."[47] They foster the re-conceptualization of heritage collections as flexible networks with multiple entry points and innumerable connections, thereby simultaneously introducing time-based procedures into the spatial organization of museum collections:

> The traditional archive becomes deconstructed by the implications of digital techniques. Since antiquity and the Renaissance, mnemotechnical storage has linked memory to space. But nowadays the static residential archive as permanent storage is being replaced by dynamic temporal storage, the time-based archive as a topological place of permanent data transfer. Critically the archive transforms from storage space to storage time.[48]

43 S. Moser, "The Devil is in the Detail: Museum Displays and the Creation of Knowledge," *Museum Anthropology* 33 no. 2 (2010): 22-32 (24).

44 Manovich, *The Language of New Media*, 225.

45 Manovich, *The Language of New Media*, 218.

46 W. Ernst, "The Archive as Metaphor: From Archival Space to Archival Time," *Open* 7 (2004): 46-53 (48).

47 R. Braidotti, *Transpositions: On Nomadic Ethics* (Cambridge: Polity, 2006), 167.

48 Ernst, "The Archive as Metaphor," 50.

Although digital databases in themselves may indeed be "essentially a fairly dull affair, consisting of discrete units that are not necessarily meaningful," they do not necessarily neglect the sensuous aspects of an artwork or the effects of an object's physical presence in a gallery space.[49] Seemingly meaningless details designate specific qualities that relate an object to a variety of other objects, thus opening up "a space of affinity and correlation of elements."[50] Moreover, corresponding to haptic visuality and providing the means for unexpected couplings, the cultural logic of the database allows for a move away from accustomed practices of looking that are informed by the dichotomy between material reality and the space of the virtual.

Zero Gravity

As critical museum studies have shown, the dissemination of knowledge through exhibitions is a fundamentally interpretative act that clearly involves a variety of choices – either explicitly or implicitly – with regard to the information panels, the lighting, the spatial arrangement of the objects, the captions, the furniture, the press handouts, the catalogue, etc. The digital presentation of museum collections entails yet another set of choices that constitute "different possibilities of knowing" and therefore a new "epistemological context."[51]

As a result of the switch from analogue to digital, the twenty-first-century museum is indeed assuming a novel role or shape to the same extent as the space of knowledge in the seventeenth and eighteenth centuries was "arranged in a totally different way from that systematized in the nineteenth century."[52] Museum websites and digital archives add new dimensions to accustomed practices of looking, as the representation of a coherent story, a central theme, or a particular history is knitted together with exploring unknown dimensions and tracing hidden connections within a collection. As up until now primarily taking place online and therefore extending far beyond the museum-as-institution, the practice of "looking digitally" and "feeling at a distance" is nonetheless also changing the epistemological significance of collection display in brick-and-mortar galleries. From the

49 C. Paul, *Digital Art* (London: Thames and Hudson, 2003), 178.

50 Braidotti, *Transpositions*, 170.

51 E. Hooper-Greenhill, *Museums and the Shaping of Knowledge* (London: Routledge, 1992), 191.

52 Foucault, *The Order of Things*, xi.

autumn of 2005 until recently, Tate Britain in London offered a glimpse of connective materialism within the walls of a traditional museum. The collection display in most rooms still featured a selection of artworks that were "arranged in a broad chronological sweep from 1500 to the present," but the playful project "Your Collection" encouraged visitors to traverse the linear course of history along a series of alternative routes. Consisting of fifteen walks that ran crisscross through the gallery, the project appealed to audiences with a variety of moods and tastes. Each walk included an illustrated map with a brief introduction and light-hearted descriptions to accompany a limited selection of artworks, such as a painting by Philip James De Loutherbourg. After having been temporarily available at the information desk near the entrance of the gallery, the leaflets were downloadable from the museum's website.

Showing the first two of the four horsemen of the Apocalypse on a red and white horse, De Loutherbourg's *The Vision of the White Horse* 1798 (see figure 1) was originally designed for an illustrated Bible. The display caption at Tate Britain mentions that the depicted scene is characteristic of the last decade of the eighteenth century: "The French Revolution, the ensuing wars and the approaching millennium sparked a new trend for apocalyptic subjects. Artists explored themes of destruction and divine judgement and the end of mankind."[53] The painting was also incorporated in an alternative route called "The I'm An Animal Freak Collection" that offered a zoological journey through Tate Britain by focusing solely on pictures of sheep, dogs, and other animals. The horses in the biblical painting by De Loutherbourg were thus presented in a completely different context: "Now for some real horse power. What trusty steeds they are. If only we all owned a trusty steed instead of nasty polluting motor cars, the world would be a nicer place."[54] The pre-described walks of "Your Collection" further included "The Rainy Day Collection," "The I'm Hungover Collection," "The I Like Yellow Collection," and "The I've Just Split Up Collection," but the audience was also offered the possibility of curating a personal compilation of artworks by using a blank key map. Completed selections, which contained a title and a personal story that linked the chosen works together, could be printed or shared via e-mail.

Tapping into the virtual space of untold stories and highlighting the affective qualities of the works on display, the project spurred the imagination of individual visitors without neglecting the educational function of

53 http://www.tate.org.uk/art/artworks/de-loutherbourg-the-vision-of-the-white-horse-t01138. Last accessed 9 January 2014.

54 http://www.tate.org.uk/britain/yourcollection/animalfreak. This URL is no longer online.

Figure 1 Philip James De Loutherbourg. *The Vision of the White Horse* 1798

© 2015, Tate

the museum. After all, besides paying attention to the artist's intention or the symbolic meaning of a specific painting, the audience was also encouraged to concentrate on the ingenious composition of an artwork or the intensity of the colors on the canvas. The counter-narratives of "Your Collection" transformed the century-old institution of Tate Britain into a space for intuitive or affective encounters with art in the same manner that the website makes due allowance for a renewed view of the collection of

the Tate Group by abandoning chronology, medium, or subject as leading principles for ordering the collection. A reviewer for the *Evening Standard* conceded that the partial break with traditional discourses of art history and museum display was readily seen to be "the kind of gimmick that would make a serious art critic blanch and mutter about groupings of works that take no account of their different history or significance," yet the act of zigzagging through the gallery resulted in being "constantly surprised both by the familiar and the novel."[55] Not unlike *Tate in Space*, which encouraged the audience to engage with a work of imaginative storytelling, both the collection display at Tate Britain and the database logic of Tate's online presentation of art and artists keep opening up the affective space of virtuality by allowing for the unthought to be thinkable. Although the next phase in the history of museums is probably not heralded by travelling through outer space, the weightlessness of cyberspace and the infinite space of the virtual are equivalent to breaking loose from the gravitational pull that is exerted by traditional strategies of display.

55 N. Curtis, "Hangover? First Date? Split Up? Try Being an Art Bum. Tate Britain's New Set of Bespoke Tours Make It an Ideal Destination – No matter How You're Feeling," *The Evening Standard*, 21 September 2005, 35.