

Photo-Objects

On the Materiality of Photographs and Photo Archives
in the Humanities and Sciences

Edition Open Access

Series Editors

Ian T. Baldwin, Gerd Graßhoff, Jürgen Renn, Dagmar Schäfer, Robert Schlögl,
Bernard F. Schutz

Edition Open Access Development Team

Lindy Divarci, Samuel Gfrörer, Klaus Thoden, Malte Vogl

The Edition Open Access (EOA) platform was founded to bring together publication initiatives seeking to disseminate the results of scholarly work in a format that combines traditional publications with the digital medium. It currently hosts the open-access publications of the “Max Planck Research Library for the History and Development of Knowledge” (MPRL) and “Edition Open Sources” (EOS). EOA is open to host other open access initiatives similar in conception and spirit, in accordance with the *Berlin Declaration on Open Access to Knowledge* in the sciences and humanities, which was launched by the Max Planck Society in 2003.

By combining the advantages of traditional publications and the digital medium, the platform offers a new way of publishing research and of studying historical topics or current issues in relation to primary materials that are otherwise not easily available. The volumes are available both as printed books and as online open access publications. They are directed at scholars and students of various disciplines, as well as at a broader public interested in how science shapes our world.

Photo-Objects

**On the Materiality of Photographs and Photo Archives
in the Humanities and Sciences**

Julia Bärnighausen, Costanza Caraffa, Stefanie Klamm,
Franka Schneider, and Petra Wodtke (eds.)

Studies 12

Max Planck Research Library for the History and Development of Knowledge
Studies 12

Copyedited by Linda Jayne Turner.

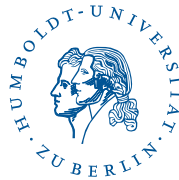
Image processing in HyperImage by bitGilde IT Solutions UG, Berlin.

Cover image by Katharina Stein: Montage from the four archives studied in the project “Photo-Objects”: Photothek (Kunsthistorisches Institut in Florenz – Max-Planck-Institut), Hahne-Niehoff-Archiv (Institute of European Ethnology, Humboldt-Universität in Berlin), Collection of Photography, Kunstbibliothek, and Antikensammlung (both Staatliche Museen zu Berlin – Stiftung Preußischer Kulturbesitz).

Funding by:

German Federal Ministry of Education and Research (program “Sprache der Objekte” grant number 01UO1511C), Open Access Publication Fund of Humboldt-Universität zu Berlin.

SPONSORED BY THE



ISBN 978-3-945561-39-3

e-ISBN [PDF] 978-3-945561-40-9

e-ISBN [EPUB] 978-3-945561-41-6

First published 2019 by Edition Open Access

Max Planck Institute for the History of Science

<http://www.edition-open-access.de>

Printed and distributed by

PRO BUSINESS digital printing Deutschland GmbH, Berlin Published under Creative Commons by-nc-sa 3.0 Germany License

<https://creativecommons.org/licenses/by-nc-sa/3.0/de/>

The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data is available at <https://dnb.d-nb.de>.

Max Planck Research Library for the History and Development of Knowledge

The Max Planck Research Library for the History and Development of Knowledge comprises the sub-series, Studies, Proceedings and Textbooks. They present original scientific work submitted under the scholarly responsibility of members of the Scientific Board and their academic peers. The initiative is currently supported by research departments of three Max Planck Institutes: the MPI for the History of Science, the Fritz Haber Institute of the MPG and the MPI for Gravitational Physics (Albert Einstein Institute). The publications of the Studies series are dedicated to key subjects in the history and development of knowledge, bringing together perspectives from different fields and combining source-based empirical research with theoretically guided approaches. The Proceedings series presents the results of scientific meetings on current issues and supports, at the same time, further cooperation on these issues by offering an electronic platform with further resources and the possibility for comments and interactions. The Textbooks volumes are prepared by leading experts in the relevant fields.

Scientific Board

Markus Antonietti, Ian T. Baldwin, Antonio Becchi, Fabio Bevilacqua, William G. Boltz, Jens Braarvig, Horst Bredekamp, Jed Z. Buchwald, Olivier Darrigol, Thomas Duve, Mike Edmunds, Fynn Ole Engler, Robert K. Englund, Mordechai Feingold, Rivka Feldhay, Gideon Freudenthal, Paolo Galluzzi, Kostas Gavroglu, Mark Geller, Domenico Giulini, Günther Görz, Gerd Graßhoff, James Hough, Manfred Laubichler, Glenn Most, Klaus Müllen, Pier Daniele Napolitani, Alessandro Nova, Hermann Parzinger, Dan Potts, Sabine Schmidtke, Circe Silva da Silva, Ana Simões, Dieter Stein, Richard Stephenson, Mark Stitt, Noel M. Swerdlow, Liba Taub, Martin Vingron, Scott Walter, Norton Wise, Gerhard Wolf, Rüdiger Wolfrum, Gereon Wolters, Zhang Baichun.

Contents

List of Contributors	3
Scholars, Scientists, Archivists, and Photo-Objects	9
1 Objects of Value: Challenging Conventional Hierarchies in the Photo Archive	
<i>Costanza Caraffa</i>	11
2 Photographs on the Move: Formats, Formations, and Transformations in Four Photo Archives	
<i>Julia Bärnighausen, Stefanie Klamm, Franka Schneider, and Petra Wodtke</i> ...	33
3 Thoughts on the “Non-Collections” of the Archival Ecosystem	
<i>Elizabeth Edwards</i>	67
4 The Accidental Trace and the Science of the Future: Tales from the Nineteenth-Century Archives	
<i>Lorraine Daston</i>	83
Into The Archive	101
5 Where is the Archive? The Reality of Conducting Research on Atatürk Photographs	
<i>İdil Çetin</i>	103
6 In the Family: Photographic Archives from India	
<i>Suryanandini Narain</i>	115
7 In the Eye of the Archive: A Triumphant Autopoiesis of Photography	
<i>Katharina Sykora</i>	131
Getting One’s Hands Dirty	147
8 Photographing Ottoman Modernity	
<i>Zeynep Çelik</i>	149
9 Handling the Heavens: Things and the Photo-Objects of Astronomy	
<i>Omar W. Nasim</i>	161

10	Finding Photography: Dialogues between Anthropology and Conservation <i>Haidy Geismar and Pip Laurenson</i>	177
11	Digital Cows: Flesh and Code <i>Christopher Pinney</i>	199
	Systems of Value	211
12	Images for Sale: Cards and Colors at the Photothèque du Musée de l’Homme <i>Anaïs Mauuarin</i>	213
13	Reflections on the Archive: Reconsidering the <i>Evidence</i> Project (1977–2017) <i>Lena Holbein</i>	229
14	The Unbearable (and Irresistible) Charm of “Duplicates” <i>Petra Trnková</i>	245
	Canon Formation and Transformation	261
15	The Two Cultures of Word and Image: On Materiality and the Photographic Catalog <i>Kelley Wilder</i>	263
16	Bruno Meyer and the Invention of Art Historical Slide Projection <i>Maria Männig</i>	275
17	Photographing Tutankhamun: Photo-Objects and the Archival Afterlives of Colonial Archaeology <i>Christina Riggs</i>	291
	Afterword	309
	“In the Archives, a Thousand Photos That Detail Our Questions”: Final Reflections on Photographs and Archives <i>Joan M. Schwartz</i>	311

List of Contributors

Julia Bärnighausen is a PhD candidate at the Humboldt-Universität in Berlin. In 2015–2018 she was an academic collaborator on the collaborative research project “Photo-Objects” at the Photothek of the Kunsthistorisches Institut in Florenz – Max-Planck-Institut. Her dissertation focuses on photographic and archival practices of art dealers around 1900. Bärnighausen studied art history and history in Berlin and London. Former places of work include the Alfred Ehrhardt Stiftung in Berlin, Das Technische Bild at Humboldt-Universität, and the Census of Antique Works of Art and Architecture Known in the Renaissance, Berlin-Brandenburg Academy of Sciences and Humanities.

Costanza Caraffa has been Head of the Photothek at the Kunsthistorisches Institut in Florenz – Max-Planck-Institut since 2006. She holds a Master’s degree in architecture and a PhD in art history. In 2009 Caraffa initiated the “Photo Archives” conference series and authored the *Florence Declaration – Recommendations for the Preservation of Analogue Photo Archives*. She edited, inter alia, *Photo Archives and the Photographic Memory of Art History* (2011) and *Photo Archives and the Idea of Nation* (2015, with Tiziana Serena). She was coordinator of the collaborative research project “Photo-Objects.”

Zeynep Çelik is Distinguished Professor at the New Jersey Institute of Technology-Rutgers University and Adjunct Professor at Columbia University. Her publications include *The Remaking of Istanbul* (1986), *Displaying the Orient* (1992), *Camera Ottomana* (2014), and *About Antiquities. Politics of Archaeology in the Ottoman Empire* (2016). She co-curated several exhibitions, among them “*Walls of Algiers*,” Getty Research Institute in Los Angeles (2009) and *Camera Ottomana*, Koc University, Istanbul (2015). Çelik has been the recipient of fellowships from the Guggenheim Foundation, the American Council of Learned Societies, and the National Endowment for the Humanities.

İdil Çetin earned a PhD in political science at Galatasaray University, Turkey. Her dissertation project concerns the photographs of Mustafa Kemal Atatürk from the late Ottoman Empire up until his death in 1938. Her research focuses on the circulation of the photographs in the press as well as in the public sphere to reveal the link between state and imagery. Apart from conducting her own research on the visual history of the Ottoman Empire in the nineteenth century, Çetin also works as a part-time lecturer at the TOBB University of Economics and Technology in Ankara, Turkey.

Lorraine Daston is Director Emerita at the Max Planck Institute for the History of Science, Berlin, and Visiting Professor in the Committee on Social Thought at the University of Chicago. She is also a Permanent Fellow of the Wissenschaftskolleg zu Berlin and has been awarded the Sarton Medal of the History of Science Society and the Bielefeld Wissenschaftspreis. Her publications include *Objectivity* (with Peter Galison, 2007), *Histories*

of Scientific Observation (with Elizabeth Lunbeck, 2011), and *How Reason Almost Lost Its Mind: The Strange Career of Cold War Rationality* (with Paul Erikson et al., 2013). Daston is currently at work on a book about the history of rules.

Elizabeth Edwards, visual and historical anthropologist, is Professor Emerita of Photographic History at De Montfort University and joined the V&A Research Institute as Andrew W. Mellon Visiting Professor in 2016. She is also Honorary Professor in the Anthropology Department at UCL and was elected a Fellow of the British Academy in 2015. Her most recent monograph was *The Camera as Historian: Amateur Photographers and Historical Imagination 1885–1918* (2012). Edwards' current book projects are on photography and concepts of the collective ownership of ancient monuments and on photography and the apparatus and practice of history.

Haidy Geismar is Professor of Anthropology at University College London (UCL), Co-director of the Digital Anthropology Program, and Vice-Dean of Strategic Projects for Social Sciences, Arts, and Humanities at UCL. She is also co-curator of the UCL Ethnography Collections and Chair of the Royal Anthropological Institute Photographic Committee. Geismar holds a PhD in anthropology and material culture from UCL (2003). She has long-term fieldwork experience in the South Pacific and within museums in the Pacific, North America, and Europe. She is currently working on the research project "Finding Photography. Exploring the Material and Social Networks Underpinning Contemporary Art Photography" with Prof. Pip Laurenson, Tate Gallery, and Maastricht University.

Lena Holbein studied art history and media science in Braunschweig, Bochum, and Toulouse. She holds a Masters degree in history of modern and contemporary art from the Ruhr-University Bochum. Since October 2016 she is fellow in the graduate researcher group "*Das fotografische Dispositiv*" (HBK Braunschweig); since April 2018 she is also associate researcher in the graduate researcher group "*Das Dokumentarische. Exzess und Entzug.*" Her PhD project examines archival strategies in contemporary art practices using found photographs.

Stefanie Klamm is an art/visual historian and historian of science based in Berlin. She recently started a new research project on the history of the Gotha Collections at Gotha Research Centre, University of Erfurt. She was an academic collaborator in the collaborative research project "Photo-Objects" at the Collection of Photography, Kunstbibliothek, Staatliche Museen zu Berlin – Stiftung Preussischer Kulturbesitz. Stefanie Klamm began her academic training with studies in history, classical archaeology, cultural studies, and philosophy. In 2012, she completed a dissertation on the history of archaeological visualization at the Institute of Art History and Visual History, Humboldt-Universität and the Max Planck Institute for the History of Science in Berlin. She co-curated the exhibition "Photography in World War I" at the Staatliche Museen zu Berlin (2014). Stefanie Klamm has received several fellowships, for example, at the Getty Research Institute Los Angeles.

Pip Laurenson is Head of Collection Care Research at Tate and Professor of Art Collection and Care at Maastricht University. She has over twenty years of experience in the conservation of contemporary art, beginning her career at Tate in 1992 and going on to establish

and lead Tate's Time-based Media Conservation section. In her current role, Pip develops, leads, and supports research related to the conservation and management of Tate's collections. She received her PhD from University College London, is an accredited member of the Institute for Conservation, a trustee of the UK's National Science and Heritage Forum, and a member of the Steering Committee of the International Network for the Conservation of Contemporary Art (INCCA).

Maria Männig is a postdoctoral researcher in the Media Theory Department at the Karlsruhe Institute of Technology (KIT). She holds a PhD in art history from the Karlsruhe University of Arts and Design, a master's degree in art history (University of Vienna), and a second one in visual arts (Academy of Fine Arts in Vienna). Her main research topics are the Vienna School of Art History, digital art history (internet cultures and the materiality of the digital), and the history of art historical slide projection. In 2017, her monograph *Hans Sedlmayrs Kunstgeschichte. Eine kritische Studie* was published.

Anais Mauuarin holds a PhD at the University of Paris 1 Panthéon-Sorbonne, titled *Anthropology Put to the Test of Pictures: Anthropology and Photography in France, 1930–1960* (2018), currently in press. Mauuarin has published several articles on this topic, coordinated a special issue of the journal *Gradhiva*, "Sur le vif: photography and anthropology" (27, 2018) and is currently undertaking research on the visual culture of anthropology and the building of colonial imagery.

Suryanandini Narain is Assistant Professor of Visual Studies at the School of Arts and Aesthetics, Jawaharlal Nehru University, New Delhi. She teaches courses on Indian visual culture, photography, and critical writing. Her doctoral thesis addresses the feminine figure in family photographs from Delhi. Narain is a recipient of scholarships from the Ford Foundation, INLAKS foundation, and the Indian Council of Social Science Research. She has also been involved as an assistant editor for various *Marg* magazines and volumes. She has spoken on the subject of photography at various institutions and has published in a number of academic journals and catalogues.

Before taking up his current post as Professor for the History of Science at the University of Regensburg, **Omar Nasim** was based at the Centre for the History of Sciences at the University of Kent (Canterbury) and a Newton International Fellow at Oxford University. He has also worked at the ETH Zurich, the Kunsthistorisches Institut in Florenz – Max-Planck-Institut, and the Max Planck Institute for the History of Science in Berlin. Nasim has authored two award-winning monographs, including *Observing by Hand: Sketching the Nebulae in the Nineteenth Century* (2013), which won the History of Science Society's prestigious Pfizer Award in 2016.

Christopher Pinney is Professor of Anthropology and Visual Culture at University College London. He has held visiting positions at the Australian National University, University of Chicago, University of Cape Town, Northwestern University, Boğaziçi University (Istanbul), and Jagiellonian University (Kraków). His research interests cover the art and visual culture of South Asia, with a particular focus on the history of photography and chromolithography in India. He has also worked on industrial labor and Dalit goddess possession.

Pinney is the author of *Camera Indica* (1997), *Photography and Anthropology* (2011), *The Waterless Sea* (2018) and *Lessons from Hell* (2018).

Christina Riggs is a historian of ancient Egyptian art and Egyptology. Her current research focuses on the history of photography and archaeology, using archives formed during and after the 1920s excavation of Tutankhamun's tomb. She has recently published the monograph *Photographing Tutankhamun* (2019), for the Bloomsbury series Photography, History: History, Photography, edited by Elizabeth Edwards, Jennifer Tucker, and Patricia Hayes. Since 2019, she has been Professor of the History of Visual Culture in the history department of Durham University, and a Fellow of All Souls College, Oxford. She has previously worked at the University of East Anglia, The Queen's College, Oxford, Manchester Museum, and the University of Cambridge.

Franka Schneider is a European ethnologist and historian. She was an academic collaborator on the cooperative project "Photo-Objects" at the Institute of European Ethnology, Humboldt-Universität in Berlin. She has worked and taught at institutes of European ethnology at the universities of Göttingen, Hamburg, and Berlin. Her research areas include practices of production and circulation of ethnographic knowledge, the history of popular culture, material culture, and anthropology of the city.

Joan M. Schwartz is Professor of History of Photography in the Department of Art History and Art Conservation, Queen's University, Kingston, Canada, where she is cross-appointed to the Department of Geography and Planning. She is also an Adjunct Research Professor in the Department of History at Carleton University, Ottawa. A historical geographer and archival theorist, she has a dual scholarly focus on the power of archives and photographs to shape notions of place and identity, history and memory. A Fellow of the Royal Society of Canada, the Royal Canadian Geographical Society, and the Society of American Archivists, she is co-editor of *Picturing Place: Photography and the Geographical Imagination* (2003) and is currently working on an exhibition and book on the life, landscapes, and legacy of nineteenth-century British Columbia photographer Frederick Dally.

Katharina Sykora is Professor Emerita of Art History at the Braunschweig University of Art (HBK) and initiator of the PhD program The Photographic Dispositif (2013–2019). She was Professor of Art History at the Ruhr University, Bochum, Max Kade Guest Professor at the University of Bloomington, Indiana and is elected Distinguished Harris Professor, Dartmouth College. Sykora was awarded an Opus Magnum fellowship of the Volkswagen Foundation, was a Research Fellow at the Rockefeller Center, Bellagio, and was nominated Senior Fellow at the Internationales Institut für Kulturforschung (IFK), Vienna. She has curated several exhibitions. Amongst her most recent publications is *The Deaths of Photography* (2 volumes, 2009 and 2015).

Petra Trnková is a Senior Research Fellow and a curator of the photographic collection at the Institute of Art History of the Czech Academy of Sciences in Prague. Her research interests center around nineteenth and early twentieth-century photography. She (co-)authored and (co-)edited several books, including *Oudadate Pix: Revealing a Photographic Archive* (2010) and *Landscape – Residence – Image: Georg Johann Buquoy's Romantic Order*

(2015). At present, Trnková is completing a monograph on the beginnings of photography in Central Europe (forthcoming). She received her PhD in art history in 2008 from Masaryk University in Brno.

Kelley Wilder is Director of the Photographic History Research Centre, De Montfort University, Leicester. Particular research interests cover photographic methods in the sciences, the science of the archive, industrial histories, and science photography exhibitions. She received her doctorate from the University of Oxford in 2003 and has since worked as Assistant Editor to the Talbot Correspondence, as the co-editor of Roger Fenton's Crimean letterbooks, and for the Max Planck Institute for the History of Science in Berlin. Wilder is the author of *Photography and Science* (2009) and co-author of *Documenting the World: Film, Photography and the Scientific Record* (2016).

Petra Wodtke lives and works in Berlin with a focus on scientific communication and material culture studies in interdisciplinary and transdisciplinary research collaborations and cooperation. She is currently Academic Coordinator within the Excellence Cluster Temporal Communities in Berlin. She was an academic collaborator on the cooperative project "Photo-Objects" at the Antikensammlung, Staatliche Museen zu Berlin – Stiftung Preussischer Kulturbesitz. At the same time she was part of the research management team of the Excellence Cluster Topoi in Berlin. After her studies of archaeology and Latin in Berlin, Vienna, and Lausanne, she had a scholarship at the International Graduate Centre for the Study of Culture in Gießen. In 2014, Wodtke completed her PhD in classical archaeology about communication structures of, with, and through archaeological objects in the Roman province of Epirus.

Scholars, Scientists, Archivists, and Photo-Objects

Chapter 1

Objects of Value: Challenging Conventional Hierarchies in the Photo Archive

Costanza Caraffa

FA-Perg34-0002

The archive of the Antikensammlung (Museum of Classical Antiquities), Staatliche Museen zu Berlin, holds a large collection of photographs relating to the archaeological excavations conducted by this and other institutions since the 1870s. Here we find a photograph that is worth examining in some detail (see Fig. 1).



Fig. 1: Upper body of a colossal double statue from the Red Hall in Pergamon, unidentified photographer, 1900, albumen print on cardboard mount, 16.8 x 23 cm (photo), 25.2 x 33.4 cm (cardboard), Antikensammlung, SMB, inv. no. FA-Perg34-0002.

It is an albumen print (16.8 x 23 cm), evidently derived from two negatives placed side by side, in other words, two separate photographs, printed together, that show the same archaeological find, apparently the torso of a colossal double-sided statue, viewed from two

different angles. The albumen print is mounted on cardboard (25.2 x 33.4 cm), originally blue, but now much yellowed by age; like a palimpsest, it is liberally covered with inscriptions, stamps, annotations, and numbers, some superimposed, in different scripts, media, and colors.

One of the stamps, “Pergamon,” above the photograph to the right, enables us to connect this object with the excavations conducted, in successive campaigns, by German archaeologists in this ancient Greek city in Asia Minor, now Turkey, then the Ottoman Empire; and the inscription “Perg. 1900” to the left evidently refers to the place and date of the photograph. The photograph is in the archive of the Antikensammlung, but the circular stamp in the center of the card mount to the right is from the *Kaiserlich Deutsches Archaeologisches Institut Central-Direction Berlin* (head office of the Imperial German Archaeological Institute in Berlin). Both the support and the photograph bear numerous signs of wear and tear, and the bottom right-hand corner of the mount is torn off.

Let us take the cardboard in our hands and observe the photograph in close-up, perhaps moving it back and forth under a raking light. On the left-hand side, above the archaeological find, there is a whitish stain on the photographic print, now turned grey by the passage of time, evidently resulting from a retouch to the positive. On the right-hand half of the photograph, immediately above the marble torso, the darkened stain of a similar retouch has partially flaked off, allowing the image of the bust of a child to resurface. The bust in question, however, is not part of the sculpture, but that of a real-life child who seems to be emerging from inside the torso. If we look again more closely at the image on the left, we will glimpse, underneath the retouch, the head and pigtail of the same child.

Among the various annotations on the mount, close to the top left-hand corner, is a pencil inscription “FA-Perg34-0002.” This number identifies the photograph and will be used below as a shorthand name for the image in question; it was added to the mount in 2016 by our colleagues Petra Wodtke and Victoria Kant at the Antikensammlung, Staatliche Museen zu Berlin, in the context of the collaborative project “Photo-Objects. Photographs as (Research) Objects in Archaeology, Ethnology and Art History,” of which the present publication is a spin-off. We will return to this project below.

Another example of the same photograph but without the retouches, and with the child clearly visible in both views, is also preserved in the Antikensammlung on a similar card mount, although this one is devoid of inscriptions (see Fig. 2).

The working copy was evidently the other retouched photograph (see Fig. 1) and the successive annotations were placed on the card mount of this. Some of these annotations, together with the penciled lines and arrows on the card mount to the right and left of the photograph marked “0,12” and the long penciled bracket above the image, define a portion of the photograph, clearly in preparation for its reproduction in a publication. Indeed, the inscriptions “Perg. VII 2, Abb. 284 A” and “Abb. 284 B” written in ink below the two images in Fig. 1 refer to illustrations in the publication of the excavations of Pergamon, more precisely to volume 7, part 2, of the *Altertümer von Pergamon*, the monumental edition documenting the results of the campaigns (Winter 1908), and in particular figs. 284 A & B on p. 235 (see Fig. 3).

Let us briefly recapitulate some historical data relating to the German exploration of the site (Hübner 2004; Kästner 2011). The first systematic excavations at Pergamon were conducted by the Königlich Preußische Museen, now the Staatliche Museen zu Berlin, with annual campaigns between 1878 and 1886. Alexander Conze, who as Director of the An-



Fig. 2: *Upper body of a colossal double statue from the Red Hall in Pergamon*, unidentified photographer, 1900, albumen print on cardboard mount, 17,1 x 23,3 cm (photo), 24.4 x 30.8 cm (cardboard), Antikensammlung, SMB, inv. no. FA-Perg34-0003.

tique Sculpture Collection (subsequently Antikensammlung) in Berlin had initiated the excavations, was appointed General Secretary of the Archäologisches Institut des Deutschen Reiches (subsequently Deutsches Archäologisches Institut, DAI) in 1887. In this new position, Conze initiated the second period of campaigns in Pergamon (1900–1911), which was conducted under the aegis of the DAI (Athens section). The negatives of the two views are consequently in the archive of the DAI in Athens (see Fig. 4 and 5, side by side in Hyperimage).

The key role played by Conze and the DAI also explains the above-mentioned stamp “Kaiserlich Deutsches Archaeologisches Institut Central-Direction Berlin”: in its journey from Pergamon to the Antikensammlung, this photo-object probably passed over his desk.¹ Institutional history and personal histories are intertwined: both left their traces on the photo-object.

This second period of excavation campaigns, directed on site by Wilhelm Dörpfeld, also entailed inspections of the surrounding territory of ancient Pergamon and, in particular, the modern town of Bergama at the foot of the Acropolis. Here, in the Greek quarter, in the house of a certain Johannis Kaiserli, the torso of a colossal double-sided statue was docu-

¹ The DAI (now the German Archaeological Institute’s Istanbul Section, established in 1929) still remains responsible for the excavations of Pergamon. I am very grateful to Stefanie Klamm, Martin Maischberger, and Petra Wodtke for their advice and valuable suggestions while I was writing this paragraph.

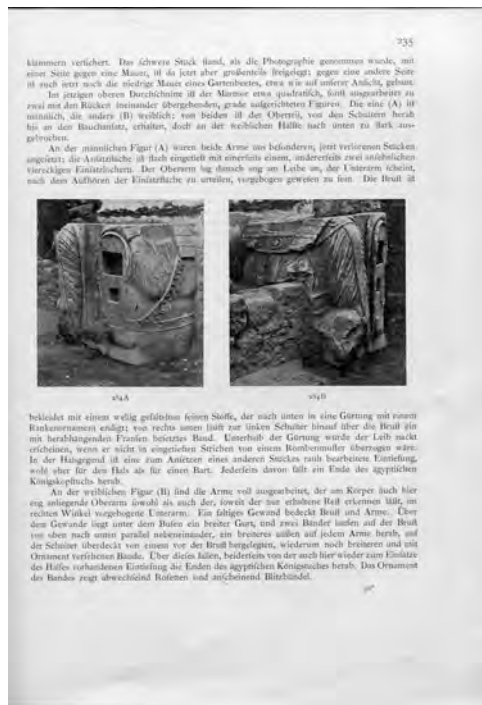


Fig. 3: Alexander Conze, entry no. 284, “Torso,” in Winter (1908, 234–236, here 235).

mented in 1900. According to the owner of the house, the statue came from the complex of the “Red Basilica” (in Turkish: *Kızıl Avlu*), originally a temple of the Hadrianic period dedicated to Egyptian deities.² The torso was published, as we have seen, in volume 7, part 2, of the *Altertümer von Pergamon* (Winter 1908, 234–236), illustrated by the two photographs described above (see Figs. 1 and 2). Both the annotations on the mount and the 1908 publication, which are the sources for all the information presented here, state that the cavity in the torso (the one in which the child was placed at the time the photograph was taken) is modern; it had been hollowed out of the sculpture to convert it into a water tub. We have no information on the identity of the child—perhaps a child or grandchild of Johannes Kaiserli? We know that for the excavation campaign of 1900–1901 the photographer Rudolf Rohrer joined the team in Pergamon (Hübner 2004; Krumme 2008),³ but it is also known that Dörpfeld himself very often picked up the camera and used it himself (Klamm 2017, 226), so the “authorship” of the photograph remains uncertain.

If we were to limit ourselves to examining this photograph as a purely referential image of the object represented, we would have to agree with Daniel Arasse that “on n’y voit rien” (Arasse 2000). Only if we consider FA-Perg34-0002 together with its mount and all its annotations and traces as a material object—indeed, a photo-object—that exists in space and

² The “Red Basilica” was recently restored and reconstructed, with the reinstallation of, inter alia, pieces such as the torso from our photograph.

³ See also Conze 1902, 6.



Fig. 4: Negative of the photograph in figs. 1 and 2, left part, 18 x 24 cm (glass plate), Deutsches Archäologisches Institut, Athens, inv. no. D-DAI-ATH-Pergamon-0193A.

time, and in social and cultural contexts, does its epistemological potential unfold (Caraffa 2011). Analyzing its technique, materials, and form, deciphering its inscriptions, linking this photo-object with others, and studying it more widely in relation to institutional history, archival and academic practices, and, not least, the history of the individuals involved, their interests and their affects—these are just some of the actions afforded by FA-Perg34-0002. Immersing ourselves in the world of FA-Perg34-0002, among other things, would paint a more precise picture of the undoubtedly asymmetrical relations that existed between the human actors involved, conditioned by the latently colonial context of the excavations.

From my point of view, its potential also consists in being able to test the methodological tools offered by the material approach in photography studies. As an art historian, I deliberately chose to open this publication by commenting on a photograph associated with another academic discipline, in this case, archaeology, and coming from another photographic archive and not from the Photothek of which I am in charge. FA-Perg34-0002 had already been identified as a particularly eloquent photo-object, in the true sense of the word, since it has a lot to tell us if we are willing to listen to what it has to say and do not limit ourselves to its visual content. In fact, the image had already been included in the KHI's online exhibition *Into the Archive*⁴, which was one of the first outputs of our collaborative

⁴ <http://photothek.khi.fi.it/documents/oau/00000303?Language=en>, accessed August 14, 2019.



Fig. 5: Negative of the photograph in figs. 1 and 2, right part, 18 x 24 cm (glass plate), Deutsches Archäologisches Institut, Athens, inv. no. D-DAI-ATH-Pergamon-0193B.

project. The program of the conference “Photo-Objects. On the Materiality of Photographs and Photo Archives in the Humanities and Sciences”⁵ (the contributions to which form the basis of this publication) was conceived as a kind of facsimile of FA-Perg34-0002.

Photo-Objects

All these steps in the process, right down to the potted history of the image I have presented above, have contributed to the construction of a new narrative around FA-Perg34-0002. Photo-objects are dynamic and unstable not only in their historical but also in their current dimension, and everything we do or say about them will make a further contribution to their formation and transformation. The material traces on and of this photo-object will continue to be studied and to shed new light, and new clues will no doubt emerge from the archive of the Antikensammlung to help us reconstruct the “photography complex” of FA-Perg34-0002 (Hevia 2009). But this close reading should in the meantime help us to introduce the premises and objectives of the project “Photo-Objects. Photographs as (Research) Objects in Archaeology, Ethnology, and Art History”: photographs are not only images, but also historically shaped three-dimensional objects. They have a physical presence, bear traces of handling and use, and circulate in social, political, and institutional networks. Beyond

⁵ https://www.khi.fi.it/pdf/veranstaltungen/20170215_photo-objects.pdf, accessed August 14, 2019.

their visual content, they have to be acknowledged as material “actors,” not only indexically representing the objects they reproduce but also playing a crucial role in the processes of meaning-making within scientific practices. Thus, photographs lead a double existence as both pictures of objects and material objects in their own right.

The “Photo-Objects” project, funded by the German Federal Ministry of Education and Research (BMBF), was coordinated by the Photothek at the Kunsthistorisches Institut in Florenz, Max Planck Institute (represented by myself and Julia Bärnighausen), and partnered with the Antikensammlung, Staatliche Museen zu Berlin (Martin Maischberger and Petra Wodtke), the photographic collection at the Kunstbibliothek (Art Library’s Photographic Collection), Staatliche Museen zu Berlin (Ludger Derenthal and Stefanie Klamm), as well as at the Institut für Europäische Ethnologie (Institute for European Ethnology), Humboldt-Universität zu Berlin (Wolfgang Kaschuba and Franka Schneider). The focus of the three-year project (March 2015 to March 2018) was on techniques and practices of scholarly work on and with photographs from a transdisciplinary viewpoint. The project involved four different photo archives and photographic corpora: the photographic documentation of applied arts with a focus on art trade at the Florentine Photothek; the documentation of works of art and monuments in architectural photographs from the US and Europe around 1900 at the Kunstbibliothek’s photographic collection in Berlin; archaeological excavation campaigns in Asia Minor and their photographic documentation at the Collection of Classical Antiquities (the corpus to which FA-Perg34-0002 belongs); and ethnographic photographs of the Hahne-Niehoff-Archiv at the Institut für Europäische Ethnologie.

The premises and aims of the project were also discussed during the conference “Photo-Objects. On the Materiality of Photographs and Photo Archives in the Humanities and Sciences,” held at the Kunsthistorisches Institut in Florenz in February 2017.⁶ Of course, the use of photographs as research materials is not a practice limited to art history, archaeology, and ethnology. Most scientific and scholarly disciplines rapidly adopted photography as an important research tool to document everything from excavation sites, costumes, and artworks in museums to snowflakes under a microscope. It was through photographs that these objects of research were detached from their original surroundings, converted into standardized and transportable formats, newly contextualized, and made comparable. In particular, the material qualities of photographs have shaped their adoption in the various disciplines by affording certain types of use. Thanks to the ways in which photographs were handled or processed, and the inscriptions or annotations on their mounts, photo-objects could be classified according to specific taxonomies and stored in files, boxes, cabinets, and shelves; thus, they were made applicable to the sciences and humanities.

Concurrently, the rhetoric of the presumed neutrality of photography as a chemical-mechanical process fed the notion of photographs as evidence, satisfying the positivistic demand for “objectivity.” The formation, development, and definition of many academic disciplines is therefore inconceivable without photography. These processes were encouraged by the foundation of specialized photo-archives as interfaces of technology and science. Since the second half of the nineteenth century, enormous masses of documentary photographs have been gradually accumulated in universities, research institutes, and museums (Mitman and Wilder 2016). These archives were and still are laboratories of scientific thought, where the humanities and sciences have developed their methods and practices.

⁶ See the complete program of the conference on https://www.khi.fi.it/pdf/veranstaltungen/20170215_photo-objects.pdf, accessed August 14, 2019.

Here, objects of all kinds are part of a dynamic and material system of knowledge, interacting with and reacting to each other—from photo-objects in their various manifestations to storage facilities, card catalogs, inventory books, reference lists, prints, and illustrated publications. The network of interactions also comprises human agents such as photographers, archivists, and researchers.

The papers presented at the conference in Florence and now forming the basis of this publication have the material approach as their common denominator. They make use of this shared approach in order to analyze the epistemological potential of analog and digital photographs and photo archives in the humanities and sciences from a comparative viewpoint. Taking the material aspects of photographic practices as their starting point, the papers deal with the circulation and distribution of photographs, the construction of methods through the handling and use of photographs in the various disciplines, the arrangement, classification, and working processes in place in photo archives, as well as photographs in different institutions (i.e., archives, museums, research institutes, and laboratories). The conference was an occasion for us to test and discuss our ideas with colleagues from various disciplines. Moreover, this publication also represents an opportunity to briefly sum up the state of the art of research on photography and materiality from a critical and self-reflexive perspective.

Photography and materiality

The material approach in photography studies is relatively recent; it only began to be developed in the 1990s. The first seminal publications appeared in the sphere of British anthropology (Edwards 1992) and are linked to the need to come to terms with the colonial legacies of the discipline. Some underlying ideas had been formulated in the 1980s in the context of the *material turn* (Miller 1987; 1998). This stimulated the serious consideration of the physical and material aspects of photographs, including their forms of presentation and archival storage. The phenomenological approach of the French sociologist Pierre Bourdieu (Bourdieu 1965; 1990 as well as Bourdieu 1972; 1977) has also had a fundamental impact. “The physicality of the photograph is not articulated by those consuming it. It constitutes part of the unarticulated ‘habitus’, that daily praxis within the material world, a ‘household ecology of signs’ in which social actions take place” (Edwards 1999, 234 quoting Bourdieu 1977). The material aspects, consequently, cannot be separated from social practices and cultural expectations—for instance, the expectation of “objectivity” with regard to documentary photographs collected as research tools in the context of a particular discipline. A leading methodological approach to addressing issues such as this has been the biographical model with the idea of a “social life of things,” which can be traced back to the studies of Appadurai (1986) and Kopytoff (1986): a thing cannot be reduced or confined to a single moment of its existence (for example, the instant of the shutter’s click) but must be considered within a continuous and fluid process of production, exchange, and consumption.

Tracing the “concrete historical circulation” of artifacts enables us to reconstruct their changing “meanings [...] inscribed in their forms, their uses, their trajectories” in space and time (Appadurai 1986, 5).⁷ By recognizing that objects have a life of their own and hence play an active role in social relations, the biographical model indirectly led to the concept of

⁷ Similarly influential was actor-network theory, which is also discussed later in this essay.

the *agency* of objects later elaborated by Alfred Gell (1998). According to Gell, visual artifacts exercise agency through an “enchantment of technology” (1992) which permits them to enter into relations with persons by arousing feelings of love, desire, hate, or fear. These ideas were effectively applied to photographs by Christopher Pinney (1997) and Elizabeth Edwards (1999; 2001). Another substantial contribution came from a different route, from the field of historical geography and Canadian archive studies, in particular thanks to the work of Joan M. Schwartz (1995). Deborah Poole (1997) introduced the notion of “visual economy” to describe the global circulation of images as commodities. Geoffrey Batchen (1997, 2) was among the first to confront art historians with the idea that “the photograph is an image that can also have volume, opacity, tactility, and a physical presence in the world.” A phase of consolidation roughly between 2000 and 2005 helped to diffuse this material approach beyond the confines of disciplines and Western academia.⁸ Studies on photography and materiality are currently flourishing and rapidly growing, as shown by the incredible number of abstracts we received in response to our call for papers on “Photo-Objects.”

I have attempted elsewhere (Caraffa forthcoming) to provide a broad historical and critical discussion of the material approach in photography studies as well as a more exhaustive survey of recent contributions;⁹ many more besides are cited in the papers included in the present volume. It may be worthwhile to extend the picture by recalling that photography and materiality studies are by definition transdisciplinary, albeit rooted in material culture studies, and so they should be considered against a wider cultural backdrop.

Indeed, in the same years during the 1980s in which the *material turn* was taking shape, a series of studies and approaches from different disciplines began to challenge some canonical concepts that had characterized photography studies up until this point. In the late 1970s, postmodern critics had started questioning the existence of a single photographic meaning and highlighting the intrinsic ambiguity of photography (Crimp 1989; Solomon-Godeau 1984).¹⁰ Attention, however, was still focused largely on art photography. Authors such as John Tagg (1988), Victor Burgin (1982), Allan Sekula (1982; 1989), John Berger (1974; 1980), and Martha Rosler (1989) widened its scope by subjecting all photographic cultural production—including mass media, documentary photography, and other regulatory social practices—to an overall critique. These studies helped pave the way for the material approach, anticipating one of its benefits, namely, that of overcoming the conventional hierarchies of photographic value based on uniqueness and authoriality.

This idea of photographs as unique art works, which excludes a major part of the actual photographic production, is rooted both in museum systems and in art historical academia. Consequently, within the field of art history, it was particularly necessary to prepare the ground for a different consideration of (photographic) images: not only expressions of the artistic intentionality of an author but also active entities in society. One of the seminal studies in this direction was by Baxandall (1972), who showed that the public addressed by Italian Renaissance painters was able to decipher their works thanks to a series of shared social experiences.

The concept of the power of images (Freedberg 1989), heralded in a series of art historical studies, was expanded by W. J. T. Mitchell in the sense of a *pictorial turn* (Mitchell

⁸ In such seminal publications as Schwartz and Ryan 2003; Pinney and Peterson 2003; Edwards and Hart 2004.

⁹ See also Edwards 2012; Ruchatz 2012.

¹⁰ See Dennis 2009.

1994; see also Stafford 1999).¹¹ Postulating the central role of images in culture and society meant highlighting the truly visual, non-textual performances of images, going beyond the linguistic approach to culture that suggested interpreting and “reading” the entire world (and thus also photographs) as a text.¹² By posing the significant question “What do pictures want?,” Mitchell (1996; 2005b) arrived at a theory of the agency of images and also insisted on their multisensory nature (Mitchell 2005a): images cannot be reduced to pure opticality (see also Bal 2003). Mitchell’s work influenced and confirmed the path taken by other contemporary studies on photography and materiality. Similarly influential was the German art historian Hans Belting who, in his anthropology of images (Belting 2001; 2011), devoted particular attention to the relationship between images and bodies.

Another important contribution came from the field of visual culture: this concept “implies the possibility of inventing different kinds of historical voices” (Batchen 2008, 127). It encouraged researchers to go beyond the traditional mode of concentrating on single photographers as auteurs and suggested placing the emphasis on photographic practices and genres or the perspectives of the embodied viewer (e.g. Smith 1999; Mirzoeff 2003).¹³ In the meantime, interest in photographic practices as an industrial and commercial phenomenon (McCauley 1994) had opened the way for considering photographs as commodities and, consequently, social objects. Authors such as Crary (1990) and Mitchell (1992) had highlighted the historical dimension of vision and representation technologies.

During the same period, the advent of digital technology led to a distancing from analog photography, which could now be historicized as a medium of the past. The history of science began to query the link between technologies of representation and the concept of scientific objectivity (Daston and Galison 1992; Tucker 2005; Daston and Galison 2007). At the same time, feminist-oriented studies such as those by Haraway (1991) had even more radically begun questioning the concepts of nature, science, and objectivity, criticizing the separation between humans and non-humans. Terry Cook and Joan M. Schwartz (Schwartz 2002), among others, used Haraway’s conceptual tool of “situated knowledge” to develop a new postmodern archive theory and practice. Their insistence on the archivist’s role as a “historically situated” actor (Schwartz 1995, 62), not as the neutral guardian of the archive, has been of fundamental importance to studies on photography and materiality: photographic archives are places of interaction among various actors (archivists and users) and of technological and professional practices that are not limited to preserving but rather that shape photographic documents and their meanings over time. Stripping photographs of their presumed objectivity is equivalent to putting them back into circulation as autonomous objects within the network of agencies described above.

The intellectual and cultural climate described here was dramatically influenced by actor-network theory (ANT) and assemblage thinking. ANT was developed from the 1970s onward in the context of science, technology, and society studies (STS) (Callon and Latour 1981; Latour 2005). It took as its starting point a critique of the separation between nature, culture, and society based on modern concepts of scientific objectivity and causal determinism. For ANT, there are no discrete and independent entities, but only relational results and effects. The networks are heterogeneous and hybrid, comprised of both human

¹¹ At around the same time, the *iconic turn* was proclaimed by Boehm 1994.

¹² On the prevalence of literary and linguistic methods and theories aimed at ‘reading’ photographic images like a text, see Baetens 2007.

¹³ On visual studies from the standpoint of material culture studies, see Pinney 2006.

and non-human elements (animals, objects, and the practices of daily life). Each of these exerts an agency (as actor or actant) on which the network's stability depends. Through their performances, the actors interact among themselves in a process of continuing translation; the networks, in fact, never have a fixed morphology. ANT's emphasis on processuality is explained in storytelling: the construction of hybrid actor-networks is a narrative of how networks take shape and are stabilized (or perhaps not), engaging new actors, persons, and things.¹⁴

The picture traced above cannot claim to be exhaustive. But the reference to networks and storytelling takes us back to the history of FA-Perg34-0002 with which I began this introduction. The network of this photo-object (see Fig. 1) is not limited to the negatives, other positives, and their circulation on printed media (see Figs. 2, 3, 4, and 5). It also includes the German archaeologists who documented and studied the torso in Bergama, the photographic techniques and archaeological practices around 1900, as well as Johannis Kaiserli, in whose house the statue was found, and the child playing in the torso's cavity. The structures of the Antikensammlung and their changes over time, together with the storage and numbering systems, are just as much part of the network as the transformations that occurred within the framework of the "Photo-Objects" project.¹⁵

Networks are never stable and always expanding. To come to terms with these processes of continuous expansion and give form to their narratives, it is useful to begin focusing on one knot of the network—in our case, FA-Perg34-0002. It was Elizabeth Edwards (2001, referencing Geertz 1973 and Ginzburg 1993) who programmatically proposed the technique of close reading in the interpretation of photo-objects. Microhistories and close-up views help us grasp what escapes broader analyses; it is a concentration on "little narratives" (Hoskins 1998, 5) which, ultimately, can also tell us a great deal about the big narratives. In this sense, photo-objects like FA-Perg34-0002 also serve as cross-references, *pars pro toto*, to the archive in which they are preserved and in which an important part of their biography is played out. This dimension is fundamental to our project and is touched upon by many of the papers published here, which take into consideration masses of often anonymous photographs that have gradually accumulated in archives and museums.

Close readings of this kind also serve as a way for many of us to raise the awareness of our political and institutional partners, to whom we can say: "Just look at what extraordinary objects are hidden away in a dusty photo archive!" All the more reason for not shutting them down or getting rid of their holdings—a real risk in the current institutional situation still characterized by the rhetoric of the digital revolution and dematerialization. However, this practice of closely examining selected photo-objects prompts us to reflect on a particular danger that is inherent in the material approach: that of their reduction to museum objects. If we concentrate on individual exceptional photo-objects, our aim should be not to extrapolate them from their archive and place them in a glass case, forgetting the rest. If we do so, we would end up perpetuating the museographic approach that has hitherto fueled the opposite phenomenon, namely, the low visibility of many "functional" photo collections (Edwards and Lien 2014; Edwards and Morton 2015). For this reason, the concept of ecosystem de-

¹⁴ Further interesting methodological tools came in the meantime from remediation theory (Bolter and Grusin 1999) and media archaeology (Huhtamo and Parikka 2011).

¹⁵ Described in detail by Petra Wodtke in the collaborative essay of Bärnighausen et al. in this publication (Chapter 2).

veloped by Elizabeth Edwards is extremely useful because it highlights interactions and definitively breaks traditional hierarchies of value.

The papers in this publication

This leads us to the various contributions to this publication. Elizabeth Edwards, in her introductory essay (Chapter 3), emphasizes the dual nature of photographs as collectable objects at the museum level and as objects dependent on museum management. We therefore find institutionally recognized collections of photographs in museums and in archives, as well as “non-collections” which exist materially but are invisible at the institutional level. Expanding her recent reflections on the concept of photographic ecosystem (Edwards and Lien 2014),¹⁶ Edwards offers a perceptive critique of institutional practices nowadays. She points out the current tendency toward the “insurrection” of non-collections. In the final analysis, this insurrection is stimulated by the profusion of recent studies on photography and materiality to which the present publication is also intended to contribute.

With her chapter on the “sciences of the archives,” Lorraine Daston provides the scholarly and historical background to the conference and its publication from the point of view of the history of science (Chapter 4). In the nineteenth century, the universal aspirations and the quest for mechanical objectivity were common to humanities and natural sciences and gave rise to the formation of colossal archives which siphoned off funds and energy from research proper. In her study, Daston concentrates in particular on two monumental archives founded to support Big Science: the paper squeezes of Latin inscriptions of the *Corpus Inscriptionum Latinarum* and the astrophotographic glass negative plates of the Carte du Ciel. Following the destinies of these two projects to the present, Daston pinpoints the accidental traces that have in the meantime emerged from these archives and that are able to respond to questions unforeseeable at the time of their formation.

The first section of the publication is headed “Into the Archive.” It is an invitation to continue this immersion in the reality of photographic archives. İdil Çetin offers a lively ethnography in miniature of her doctoral research on photographs of Atatürk (Chapter 5). Her intervention is focused on the experience of the ethnographic self in the non-territory of Turkish state archives. Suryanandini Narain poses the question of what happens when family snapshots leave their natural habitat and take on new connotations in an archive (Chapter 6). Her study examines, inter alia, the various objectives and different degrees of institutional formalization of some Indian archives presented as case studies. The interpretations of photographs they permit are always incomplete. Katharina Sykora reports on a find she made in the holdings of the Photothek of the Kunsthistorisches Institut in Florenz: a group of photographs that document a performance celebrating the 250,000th accession to the Photothek in 1969 (Chapter 7). Sykora methodically reconstructs the event and subtly analyzes the material agency developed on various levels by the photographs and their archons, deducing from them an invitation to scholars of photography to handle their objects of research with equal freedom and creativity.

Hands serve not only to handle photographic objects but also to perform surgical operations and to work in a conservation laboratory: activities scrutinized in the next section of the book, entitled “Getting One’s Hands Dirty.”¹⁷ In contrast to the purely postcolonial ap-

¹⁶ See also Caraffa 2017.

¹⁷ See also Favero 2013.

proach that characterizes many studies on the photography of the Middle East, Zeynep Çelik invites us to consider an alternative point of view, that of late nineteenth-century modernity in the region (Chapter 8). The album of medical photographs she has studied was produced in Istanbul's Haseki women's hospital during the 1890s. The photographic portraits are of women mainly of humble origins, who display the scars on their abdomens and the jars in which the tumors surgically removed from them are preserved. They call into question, among other things, what were considered the conventions for representing women in a Muslim society. Then Omar Nasim analyzes photo-objects in astronomical practices with a focus on their handling within the context of apparatuses (Chapter 9). With the introduction of astrophotography, the apparatus of astronomers has been transformed from a night spent in the observatory to the analysis of the fragile glass plate negatives in one's own office. Nasim explores the tensions between photo-object and thing using contemporary contradictions such as the removal of historic annotations from negative plates in the field of digitalization campaigns. The material approach is particularly useful because it shifts the focus to the photographic "non-collections" discussed by Edwards (Chapter 3). It is also useful to enter into dialogue with authorial, artistic, and museum photography. In their joint study on the *Corridors* series by the artist Catherine Yass (Tate London), Haidy Geismar and Pip Laurenson are able to make different epistemologies of the photo-object dialogue with each other in a productive way, from the point of view of both anthropology and conservation (Chapter 10). In the final essay in this section, Christopher Pinney introduces us to the world of the digital circulation of images of sacred cows in India (Chapter 11). Pinney reminds us that the digital is a physical phenomenon in itself. Yet the photographs of Indian cattle have even deeper material implications, including the killing of citizens of Muslim faith accused on social media of having slaughtered cows. The essay shows it is possible to dirty one's hands even by handling digital photographs.

The question of hierarchies of values is a recurrent theme in this publication. However, some of the papers address this aspect more directly in the section headed "Systems of Value." Focusing on the Photothèque of the Musée de l'Homme founded in Paris in 1938, Anaïs Mauuarin calls into question the dichotomy generally postulated between agencies responsible for commercializing images and institutions dedicated to the archival storage of photographs for research (Chapter 12). The ethnographic photographs from the Photothèque were considered not only as scholarly evidence, but also as commodities, with consequences for the material arrangement of the collection and the standardization of images. Mauuarin analyzes and interprets the various levels of codification of data on the card mounts in particular, where the scientific value and the commercial value of photographs intersect. Then Lena Holbein examines the photo book *Evidence* published by Mike Mandel and Larry Sultan in 1977 and the photographic exhibitions linked with this (Chapter 13). The artistic and curatorial strategies of *Evidence* are revealed as playful ways of turning archival practices upside down, of negating archival conventions; they have the result of underlining the intrinsic value of photographs as images and not as documents or evidence. The different modes of cataloging the photographs then used by Mandel and Sultan in two digital collections show a similar oscillation between intrinsic artistic worth and original documentary value. The question of the value of individual photo-objects is unavoidable in the context of duplicates, as discussed by Petra Trnková in her paper on eight "almost identical" photographs by Andreas Groll showing the town hall in the Old Town of Prague and dating back to the 1850s–1860s (Chapter 14). A detailed analysis of the material qualities of each of

the positives is followed by the reconstruction of the collection to which they originally belonged and its institutional vicissitudes. The “rediscovered” present is linked to the contingent fortune of photo-objects in current research, an unstable or precarious one according to Trnková, precisely because it is linked to a system of not wholly canonized values.

This leads us directly to the last section of the publication dedicated to processes of “Canon Formation and Transformation” that occur in photographic archives and in their numerous manifestations, including catalogs. Kelley Wilder applies the material approach to the photographic card indexes in use both in museums and in the commercial sphere—the precursors of digital catalogs (Chapter 15). Catalogs represent the interface between the collection and the public. An encounter or clash between the different materialities of photographs and the complex structures of the textual information that accompanies (or sometimes contradicts) them takes place in the files of these catalogs. Wilder identifies a historical tendency towards the assimilation and interaction of text and image in such catalog entries, which become photo-objects in their own right. It is no coincidence that the commercialization of lantern slides for art historical teaching, pioneered by Bruno Meyer in Germany, began with a printed catalog of 1883. Maria Männig proposes a material history of Meyer’s slides, their production and distribution, and his business interests in marketing them, which ultimately met with little success (Chapter 16). Männig’s contribution places the slides of Meyer and Herman Grimm in the dialectic between “old” and “new” media. The sale catalog, which for Meyer had the status of a scientific publication, prefigures later art historical slide libraries in its systematic arrangement. The most iconic photographs in the history of archaeology certainly include those taken by Howard Burton of the excavations of the tomb of Tutankhamun. However, in the view of Christina Riggs, it is the archive formed by all these photographs (preserved for historical reasons in two only partially overlapping collections in Oxford and New York) that represents the mirror and the founding myth of archaeology (Chapter 17). Riggs traces the history of these two collections right to the digital present. It is archival practices, she underlines, that transport the traces of the structures of power in which the photo-objects were created and used; and in disciplines such as archaeology, the structures in question are those of colonial power.

This series of papers is concluded with the final reflections of Joan M. Schwartz (Afterword). After 25 years of studies on photography and materiality, Schwartz begins by stating that an international interdisciplinary community concerned with photo-objects finally exists: while in other academic contexts, many of the papers would have been at the margins of the scholarly discourse, they found a fitting environment at the conference in Florence and in the present publication. Schwartz rounds off the discussion with some closing remarks on the archival dimension and the scholarly customs that still very often characterize the use and reception of photographs in archives. Researchers should approach photo-objects not only by asking for (visual) answers but also by being prepared to listen to these and to the questions that photographs pose.

A transdisciplinary approach

Finally, looking back at the joint contribution by Julia Bärnighausen, Stefanie Klamm, Franka Schneider, and Petra Wodtke that opens this publication (Chapter 2), the aim, or at least one of the aims, of this collective study is to express the great potential of the transdisciplinary work conducted as part of the “Photo-Objects” project. Yet the comparative

analysis of the processes that take place in such heterogeneous archives—and that give rise to the continuous formation and transformation of photo-objects—always ends up reinforcing their mutable and unstable character. This ought not to be considered a topos, or even a commonplace. Nor should its reiteration be regarded as superfluous, because many members of the scientific community that study and/or use photographs and archives continue to believe that photographs and archives *are* stable entities. Bärnighausen, Klamm, Schneider, and Wodtke also test the notion of “itinerary” in relation to the idea of a biography of photographic objects.

This attempt is linked to a wider transdisciplinary debate that is in progress in our field of studies. Reflections on the index and on the agency of photo-objects have given rise in recent years to alternative concepts such as that of the “performative index” proposed by Margaret Olin (2012, 69), or of “presence,” on which Elizabeth Edwards (2015; 2016) as well as Haidy Geismar and Christopher Morton (2015) have worked.¹⁸ But what about the social lives of photographs? The biographical model derived from Appadurai (1986) and Kopytoff (1986), as we have seen, has been adopted ever since the first studies on photography and materiality (Pinney 1997). Right from the outset, Edwards has fended off a frequent criticism of the biographical model that would entail the death of the object: those photographs “are not dead in the stereotypical cultural graveyard of the museum and archive, but are active as objects and active as ideas in a new phase of their social biography” (Edwards 2001, 14). Proponents of the biographical model often speak of biographies (in the plural) precisely to avoid the idea of a death that must perforce end the life of photographs—a conception that is, moreover, rooted in European Christian culture. Perhaps other cultures have fewer problems with a cyclical view of the biographies of objects.

The wide diffusion of the writings of Latour has more or less directly influenced many authors (Geimer 2010). For instance, James Hevia (2009) derived the notion of the “photography complex” from ANT. Pinney (2005, 266) speaks of trajectories and of compressed performances. Meanwhile, the biographical model has been called into question even by some of its initial supporters, for it suggests linearity and therefore cannot necessarily embrace complex networks of relationships (Edwards and Morton 2015, 9–10). Various proposals for alternative concepts, such as interaction (Knappett 2011), entanglement (Hodder 2012), and itineraries (Hahn and Weiss 2013), have come from the field of material culture studies. In coming to terms with photo-objects and telling their histories, studies of photography and materiality seem to make unprejudiced use of all these expressions and methodological tools.

There is another field that requires us to rid ourselves of many prejudices: namely, the relation between analog and digital. The material approach provides us with many arguments in favor of the preservation of analog photo archives, which cannot be substituted by their digital surrogates. This is argued also in the “Florence Declaration – Recommendations for the Preservation of Analogue Photo Archives”¹⁹ launched in 2009.²⁰ Moreover, we need to develop digital tools that do not reduce photographs to their purely visual content but also take account of their materiality. This online publication, entrusted to the Edition Open Access of the Max Planck Institute for the History of Science in Berlin, is certainly an occasion to experiment with new digital visualization and interaction tools. Hyperimage

¹⁸ On the concept of presence, although not referred to photography, see also Gumbrecht 2004.

¹⁹ <https://www.khi.fi/en/photohek/florence-declaration.php>, accessed August 14, 2019.

²⁰ See also Sassoon 2004 and Sandweiss 2007.

(as one way of handling photo-objects in the online publication) was made possible by our colleagues at bitGilde in Berlin. Above all, however, it is essential to extend our attention to the materiality of the digital itself. This is indeed one of the major themes of the future in our postdigital society, ever more mindful of analog processes in which the digital is expressed.

Digital media shape the acts of our memory—individual, familial, and collective (VanDijck 2007; Rose 2010). The digital images that circulate in the social networks have the capacity to impact on people’s lives and to reunite individuals in communities: they are therefore far from “immaterial” (Were and Favero 2013; Miller 2015; Walton 2016). The material approach has highlighted the multisensoriality that characterizes the photographic experience.²¹ This aspect, together with interaction with the (engendered) body and the gestures connected to producing and using photographs, has also been studied in the digital field (Favero 2014; Frosh 2015). Even without wishing to consider the problem of digital rubbish (Gabrys 2011; Maxwell, Raundalen, and Vestberg 2015), the use of digital photography presupposes the need to avail ourselves of a variety of objects (perhaps increasingly less computer monitors and increasingly more tablets and smartphones, perhaps even digital tables or walls, or even watch screens—but still hardware) whose use is also linked to a specific gestuality. Paolo Favero (2017; 2018) defines the actions performed with digital images as a continuous performance. He definitively deconstructs the idea that the transformations that take place in the digital habitat lead to a progressive “dematerialization”: there is a series of technologies (such as 3D printers and wearable technologies) that will increasingly be used to translate abstract images or ideas into material objects. These technologies transform the relations between the vision, body, and senses to which analog photography has accustomed us. They also question the association between photography and time, since digital photographic practices in the social media no longer appear to register the past; they seem instead to comment on a present in a constant state of becoming (McQuire 2013; Miller 2015; Miller and Sinanan 2017). Some of the papers in this publication address these phenomena.

I would like to conclude with some comments on how our own archives and methodology are adjusting to the transdisciplinary approach. The photographic materials with which we interact in the four photo archives involved in this project are clearly very different in kind. At the outset, we were slightly concerned about this lack of homogeneity, but now we are firmly convinced that it is one of the assets of the project. The transdisciplinary approach produced key results also thanks to the format of what is known as “Tandem-Forschung”: our collaborators periodically organized tandem meetings of two or more scholars at a time, one of whom invites the other to a few days’ immersion in his or her “own” archive.²² The exercise begins as a guided visit and ultimately becomes a shared process. All participants learn about the materials and working methods of the others as well as how to see their own objects of research through the eyes of their colleagues, who each contribute their own ideas. We have thus learned to consider our own work not as something separate from photo-objects, but as a transformative addition to their trajectories. By working on photographs and archives in their materiality, we have strengthened our sensitivity to the connections that bring people closer together in what Edwards (2015, 241) calls “the photographic encounter.”

²¹ See, *inter alia*, Langford 2001; Pinney 2004; Edwards 2005; Edwards 2009; Campt 2012; Wright 2013.

²² See Schlehe and Hidayah 2014; Schneider et al. 2017; Schneider 2019 for further literature on tandem research and collaborative anthropology.

In the case of the Hahne-Niehoff-Archiv at the Humboldt Universität, the individuals in question are those portrayed and reified in photographs that were intended to serve an ethnology with an explicitly racist stamp. This collection of ethnographic photographs documenting folk festivals in villages in central Germany between the early 1920s and 1945 should prove the continuity of German culture as part of the strongly ideologized scholarly panorama of proto-Nazi and Nazi Germany. This clearly is the most shocking and least innocent of the photographic corpora on which we were working in the framework of this project (while recognizing that no archive is innocent). Apparently, photographs of Baroque mirrors or American domestic architecture or archaeological ruins are far more innocuous—apart from the fact that here, too, human beings may appear, as we have already seen in FA-Perg34-0002 (see Fig. 1). My personal *punctum*, what makes me uncomfortable about this photograph is not so much the head of the child as the exclamation mark after the words “Das Kind zu tilgen!”: The child is to be erased! But we have learned that all of our photo-objects may be “touching photographs,” as Olin (2012) would call them.

The critical approach that needs to be applied to the Hahne-Niehoff-Archiv has in fact made us far more receptive to the disturbing elements that may crop up even in what, at first sight, may seem the most inoffensive photographs. Pinney (2003, 6; 2008, 2) and Poole (2005, 164) have called it the “noise” and “excess” of photography. Edwards (2001) has spoken of “rawness” and more recently of “abundance” (2015, 237). To the photographic encounter we should add the “archival encounter” (Campt 2012, 20) to which Joan M. Schwartz has contributed so much.²³ Photography, materiality, and people encounter each other in the archive, which is simultaneously an orderly and a multitemporal space. It is here that the academic and archival practices of our predecessors and those of the present emerge. Yet affects are also revealed: not least our own affects, which have in turn become part of the project. Affects and the question of positionality were among the components of the exhibition “Unboxing Photographs. Arbeiten im Fotoarchiv” that concluded our project (Berlin, Kunstbibliothek, Staatliche Museen zu Berlin, at the Kulturforum, February 16 to May 27, 2018).²⁴

The exhibition itself was not a simple result, but an essential part of our joint research on photo-objects (Lehmann-Brauns, Sichau, and Trischler 2010). In this exhibition we “unboxed” the boxes of photographs in our archives and displayed the daily work practices performed by generations of archivists and not least by us. We attempted to transpose into the exhibition the specific gestuality of the photographic archive (Geismar 2006) and to show, as Gillian Rose (2000) maintains, that it is the archive that “makes” the researcher. In the course of this project, we have learned to have respect for the photo-objects in their (changing) materiality. We hope we were able to convey this to visitors to the exhibition. Only if we respect photographs and are disposed to listen to them (Campt 2017) will these photographs speak to us.

²³ See Schwartz 1995; 2002; 2011; 2012.

²⁴ Among the outputs of the projects I should also mention Bärnighausen et al. forthcoming, with a chapter dedicated to the making of our exhibition.

List of figures

- Fig. 1: Upper body of a colossal double statue from the Red Hall in Pergamon, unidentified photographer, 1900, albumen print on cardboard mount, 16.8 x 23 cm (photo), 25.2 x 33.4 cm (cardboard), Antikensammlung, SMB, inv. no. FA-Perg34-0002.*
- Fig. 2: Upper body of a colossal double statue from the Red Hall in Pergamon, unidentified photographer, 1900, albumen print on cardboard mount, 17.1 x 23.3 cm (photo), 24.4 x 30.8 cm (cardboard), Antikensammlung, SMB, inv. no. FA-Perg34-0003.*
- Fig. 3: Alexander Conze, entry no. 284, "Torso," in: Franz Winter (ed.), *Altertümer von Pergamon: Die Skulpturen mit Ausnahme des Altarreliefs*, vol. 7, 2: (Berlin: 1908), 234–236, here 235.*
- Fig. 4: Negative of the photograph in figs. 1 and 2, left half, 18 x 24 cm (glass plate), Deutsches Archäologisches Institut, Athens, inv. no. D-DAI-ATH-Pergamon-0193A.*
- Fig. 5: Negative of the photograph in figs. 1 and 2, right half, 18 x 24 cm (glass plate), Deutsches Archäologisches Institut, Athens, inv. no. D-DAI-ATH-Pergamon-0193B.*

References

- Appadurai, Arjun, ed. (1986). *The Social Life of Things: Commodities in Cultural Perspective*. Cambridge, UK: Cambridge University Press.
- Arasse, Daniel (2000). *On n'y voit rien*. Paris: Descriptions.
- Baetens, Jan (2007). Photography: The Question of "Interdisciplinarity". In: *Photography Theory*. Ed. by James Elkins. London: Routledge, 53–74.
- Bal, Mieke (2003). Visual Essentialism and the Object of Visual Culture. *Journal of Visual Culture* 2(1):5–32.
- Bärnighausen, Julia, Costanza Caraffa, Stefanie Klamm, Franka Schneider, and Petra Wodtke (forthcoming). *Foto-Objekte: Forschen in archäologischen, ethnologischen und kunsthistorischen Archiven*. Berlin: Kerber Verlag.
- Batchen, Geoffrey (1997). *Photography's Objects*. Albuquerque, NM: University of New Mexico Art Museum.
- (2008). Snapshots: Art History and the Ethnographic Turn. *Photographies* 1(2):121–142.
- Baxandall, Michael (1972). *Painting and Experience in Fifteenth Century Italy: A Primer in the Social History of Pictorial Style*. Oxford: Clarendon Press.
- Belting, Hans (2001). *Bild-Anthropologie: Entwürfe für eine Bildwissenschaft*. München: Fink.
- (2011). *An Anthropology of Images: Picture, Medium, Body*. Princeton, NJ: Princeton University Press.
- Berger, John (1974). Understanding a Photograph. In: *The Look of Things*. Ed. by John Berger. London: Viking.
- (1980). Uses of Photography. In: *About Looking*. Ed. by John Berger. New York: Pantheon Books, 27–63.
- Boehm, Gottfried, ed. (1994). *Was ist ein Bild?* München: Wilhelm Fink Verlag.
- Bolter, Jay David and Richard Grusin (1999). *Remediation: Understanding New Media*. Cambridge, MA: MIT Press.
- Bourdieu, Pierre, ed. (1965). *Un art moyen. Essai sur les usages sociaux de la photographie*. Paris: Ed. de Minuit.
- (1972). *Esquisse d'une théorie de la pratique*. Paris: Librairie Droz.
- (1977). *Outline of a Theory of Practice*. Cambridge, UK: Cambridge University Press.
- ed. (1990). *Photography: A Middle-brow Art*. Stanford, CA: Stanford University Press. Trans. by Shaun Whiteside.
- Burgin, Victor, ed. (1982). *Thinking Photography*. London: Macmillan.
- Callon, Michel and Bruno Latour (1981). Unscrewing the Big Leviathan: Or How Actors Macrostructure Reality and How Sociologists Help Them to Do So. In: *Advances in Social Theory and Methodology*. Ed. by K. Knorr-Cetina and A. V. Cicourel. London: Routledge and Kegan Paul, 277–303.

- Campt, Tina M. (2012). *Image Matters: Archive, Photography, and the African Diaspora in Europe*. Durham, NC: Duke University Press.
- (2017). *Listening to Images*. Durham, NC: Duke University Press.
- Caraffa, Costanza (forthcoming). Photographic Itineraries in Time and Space: Photographs as Material Objects. In: *Handbook of Photography Studies*. Ed. by Gil Pasternak. London / New York: Bloomsbury Academic.
- (2011). From Photo Libraries to Photo Archives: On the Epistemological Potential of Art-Historical Photo Collections. In: *Photo Archives and the Photographic Memory of Art History*. Ed. by Costanza Caraffa. Berlin and Munich: Deutscher Kunstverlag, 11–44.
- (2017). Manzoni in the Photothek: Photographic Archives as Ecosystems. In: *Instant Presence: Representing Art in Photography*. Ed. by Hana Buddeus, Vojtěch Lahoda, and Katarína Mašterová. Prague: Artefactum, 122–137.
- Conze, Alexander (1902). Vorbericht über die Arbeiten zu Pergamon 1900–1901. In: *Mitteilungen des Deutschen Archäologischen Instituts, Athenische Abteilung*, vol. 27.
- Crary, Jonathan (1990). *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*. Cambridge, MA: MIT Press.
- Crimp, Douglas (1989). The Museum's Old/ The Library's New Subjects. In: *The Contest of Meaning: Critical Histories of Photography*. Ed. by R. Bolton. Cambridge, MA: MIT Press, 3–14.
- Daston, Lorraine and Peter Galison (1992). The Image of Objectivity. *Representations* 40:81–128.
- (2007). *Objectivity*. New York: Zone Books.
- Dennis, Kelly (2009). Benjamin, Atget and the "Readymade" Politics of Postmodern Photography Studies. In: *Photography: Theoretical Snapshots*. Ed. by J. J. Long, Andrea Noble, and Edward Welch. New York, NY: Routledge, 112–124.
- Edwards, Elizabeth, ed. (1992). *Anthropology and Photography, 1860–1920*. New Haven, CT: Yale University Press.
- (1999). Photographs as Objects of Memory. In: *Material Memories*. Ed. by Marius Kwint, Christopher Breward, and Jeremy Aynsley. Oxford: Berg, 221–236.
- (2001). *Raw Histories: Photographs, Anthropology and Museums*. Oxford and New York: Berg.
- (2005). Photographs and the Sound of History. *Visual Anthropology Review* 21(1-2):27–46.
- (2009). Thinking Photography Beyond the Visual. In: *Photography: Theoretical Snapshots*. Ed. by J. J. Long, Andrea Noble, and Edward Welch. London: Routledge, 31–48.
- (2012). Objects of Affect: Photography Beyond the Image. *Annual Review of Anthropology* 41:221–234.
- (2016). Der Geschichte ins Antlitz blicken: Fotografie und die Herausforderung der Präsenz. In: *Zeigen und/oder Beweisen? Die Fotografie als Kulturtechnik und Medium des Wissens*. Ed. by Herta Wolf. Berlin: De Gruyter, 305–326.
- Edwards, Elizabeth and Janice Hart, eds. (2004). *Photographs Objects Histories: On the Materiality of Images*. London: Routledge.
- Edwards, Elizabeth and Sigrid Lien, eds. (2014). *Uncertain Images: Museums and the Work of Photographs*. Farnham: Ashgate.
- Edwards, Elizabeth and Christopher Morton, eds. (2015). *Photographs, Museums, Collections: Between Art and Information*. London: Bloomsbury.
- Favero, Paolo S. H. (2013). Getting Our Hands Dirty (Again): Interactive Documentaries and the Meaning of Images in a Digital Age. *Journal of Material Culture* 18(3):259–277.
- (2014). Learning to Look Beyond the Frame: Reflections on the Changing Meaning of Images in the Age of Digital Media Practices. *Visual Studies* 29(2):166–179.
- (2017). *The Transparent Photograph: Reflections on the Ontology of Photographs in a Changing Digital Landscape*. London: Royal Anthropological Institute.
- (2018). *The Present Image. Visible Stories in a Digital Habitat*. London: Palgrave Macmillan.
- Freedberg, David (1989). *The Power of Images: Studies in the History and Theory of Response*. Chicago, IL: The University of Chicago Press.
- Frosh, Paul (2015). The Gestural Image: The Selfie, Photography Theory and Kinesthetic Sociability. *International Journal of Communication* 9:1607–1628.
- Gabrys, Jennifer (2011). *Digital Rubbish: A Natural History of Electronics*. Ann Arbor: University of Michigan Press.
- Geertz, Clifford (1973). *The Interpretation of Cultures: Selected Essays*. New York: Basic Books.
- Geimer, Peter (2010). *Bilder aus Versehen*. Hamburg: Philo Fine Arts.
- Geismar, Haidy (2006). Malakula: A Photographic Collection. *Comparative Studies in Society and History* 48(3): 520–563.

- Geismar, Haidy and Christopher Morton (2015). Reasserting Presence, Reclamation and Desire. *Photographies* 8(3):253–270.
- Gell, Alfred (1992). The Technology of Enchantment and the Enchantment of Technology. In: *Anthropology, Art and Aesthetics*. Ed. by J. Coote and A. Shelton. Oxford: Clarendon, 40–66.
- (1998). *Art and Agency: An Anthropological Theory*. Oxford: Clarendon Press.
- Ginzburg, Carlo (1993). Microhistory: Two or Three Things That I Know about It. *Critical Inquiry* 20(1):10–35.
- Gumbrecht, Hans Ulrich (2004). *Production of Presence: What Meaning Cannot Convey*. Stanford, CA: Stanford University Press.
- Hahn, Hans Peter and Hadas Weiss, eds. (2013). *Mobility, Meaning and the Transformations of Things: Shifting Contexts of Material Culture through Time and Space*. Oxford: Oxbow Books.
- Haraway, Donna J. (1991). *Simians, Cyborgs, and Women: The Reinvention of Nature*. London: Routledge.
- Hevia, James L. (2009). The Photography Complex: Exposing Boxer-Era China (1900 – 1901), Making Civilization. In: *Photographies East: The Camera and Its Histories in East and Southeast Asia*. Ed. by Rosalind C. Morris. Durham, NC: Duke University Press, 79–121.
- Hodder, Ian (2012). *Entangled. An Archaeology of the Relationships between Humans and Things*. Malden: Wiley-Blackwell.
- Hoskins, Janet (1998). *Biographical Objects: How Things Tell the Stories of People's Lives*. London: Routledge.
- Hübner, Gerhild (2004). Zu den Anfängen der Photographie in der deutschsprachigen Klassischen Archäologie. Ihre Anwendung während der ersten zwei Jahrzehnte der Pergamongrabung. *Istanbuler Mitteilungen* 54:83–111.
- Huhtamo, Erkki and Jussi Parikka, eds. (2011). *Media Archaeology: Approaches, Applications, and Implications*. Oakland: University of California Press.
- Kästner, Ursula (2011). ‘Ein Werk, so groß und herrlich ... war der Welt wiedergeschenkt!': Geschichte der Ausgrabungen in Pergamon bis 1900. In: *Pergamon: Panorama der antiken Metropole*. Exhib. cat. Antikensammlung der Staatlichen Museen zu Berlin. Petersberg: Imhof, 36–44.
- Klamm, Stefanie (2017). *Bilder des Vergangenen: Visualisierung in der Archäologie im 19. Jahrhundert—Fotografie, Zeichnung und Abguss*. Berlin: Gebr. Mann Verlag.
- Knappett, Carl (2011). *An Archaeology of Interaction: Network Perspectives on Material Culture and Society*. Oxford: Oxford University Press.
- Kopytoff, Igor (1986). The Cultural Biography of Things: Commodification as Process. In: *The Social Life of Things: Commodities in Cultural Perspective*. Ed. by Arjun Appadurai. Cambridge, UK: Cambridge University Press, 64–91.
- Krumme, Michael (2008). Der Beginn der archäologischen Fotografie am DAI Athen. In: *Διεθνές Συνέδριο Αφιερωμένο στον Wilhelm Dörpfeld: υπό την Αιγίδα του Υπουργείου Πολιτισμού, Λευκάδα 6-11 Αυγούστου 2006*. Ed. by Chara Papadatou-Giannopoulou. Patra: Peri Technōn, 61–78.
- Langford, Marta (2001). *Suspended Conversations*. Montreal: McGill-Queen's University Press.
- Latour, Bruno (2005). *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.
- Lehmann-Brauns, Susanne, Christian Sichau, and Helmuth Trischler, eds. (2010). *The Exhibition as Product and Generator of Scholarship*. Berlin: Max Planck Institute for the History of Science.
- Maxwell, Richard, Jon Raundalen, and Nina Lager Vestberg, eds. (2015). *Media and the Ecological Crisis*. London: Routledge.
- McCaughey, Elisabeth Anne (1994). *Industrial Madness: Commercial Photography in Paris, 1848–1871*. New Haven, CT: Yale University Press.
- McQuire, Scott (2013). Photography's Afterlife: Documentary Images and the Operational Archive. *Journal of Material Culture* 18(3):223–241.
- Miller, Daniel (1987). *Material Culture and Mass Consumption*. Oxford: Basil Blackwell.
- ed. (1998). *Material Cultures: Why Some Things Matter*. London: UCL Press.
- (2015). *Photography in the Age of Snapchat*. London: Royal Anthropological Institute.
- Miller, Daniel and Jolynna Sinanan (2017). *Visualising Facebook*. London: UCL Press.
- Mirzoeff, Nicolas (2003). The Shadow and the Substance: Photography and Indexicality in American Photography. In: *Only Skin Deep: Changing Visions of the American Self*. Ed. by Coco Fusco and Brian Wallis. New York: International Center for Photography / Harry N. Abrams, 111–128.
- Mitchell, W. J. T. (1994). *Picture Theory: Essays on Verbal and Visual Representation*. Chicago, IL: The University of Chicago Press.
- (1996). What Do Pictures “Really” Want? *October* 77:71–82.
- (2005a). There Are No Visual Media. *Journal of Visual Culture* 4(2):257–266.

- (2005b). *What Do Pictures Want?: The Lives and Loves of Images*. Chicago, IL: The University of Chicago Press.
- Mitchell, William J. T. (1992). *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*. Cambridge, MA: MIT Press.
- Mitman, Gregg and Kelley Wilder, eds. (2016). *Documenting the World: Film, Photography, and the Scientific Record*. Chicago, IL: The University of Chicago Press.
- Olin, Margaret (2012). *Touching Photographs*. Chicago, IL: The University of Chicago Press.
- Pinney, Christopher (1997). *Camera Indica: The Social Life of Indian Photographs*. London: Reaktion Books.
- (2003). Introduction. In: *Photography's Other Histories*. Ed. by Christopher Pinney and Nicolas Peterson. Durham, NC: Duke University Press, 1–16.
- (2004). "Photos of the Gods." *The Printed Image and Political Struggle in India*. London: Reaktion Books.
- (2005). Things Happen: Or, From Which Moment Does That Object Come? In: *Materiality*. Ed. by Daniel Miller. Durham NC: Duke University Press, 256–272.
- (2006). Four Types of Visual Culture. In: *Handbook of Material Culture*. Ed. by Christopher Tilley, Keane Webb, Susanne Küchler, Mike Rowlands, and Patricia Spyer. London: Sage, 131–144.
- (2008). *The Coming of Photography in India*. London: British Library.
- Pinney, Christopher and Nicolas Peterson, eds. (2003). *Photography's Other Histories*. Durham, NC: Duke University Press.
- Poole, Deborah (1997). *Vision, Race and Modernity: A Visual Economy of the Andean Image World*. Princeton, NJ: Princeton University Press.
- (2005). An Excess of Description: Ethnography, Race, and Visual Technologies. *Annual Review of Anthropology* 34:159–179.
- Rose, Gillian (2000). Practising Photography: An Archive, a Study, Some Photographs and a Researcher. *Journal of Historical Geography* 26:555–571.
- (2010). *Doing Family Photography: The Domestic, The Public and The Politics of Sentiment*. Farnham: Ashgate.
- Rosler, Martha (1989). in, around, and afterthoughts (on documentary photography). In: *The Contest of Meaning: Critical Histories of Photography*. Ed. by Richard Bolton. Cambridge, MA: MIT Press, 303–341.
- Ruchatz, Jens (2012). Kontexte der Präsentation. Zur Materialität und Medialität des fotografischen Bildes. *Fotogeschichte* 124:19–28.
- Sandweiss, Martha A. (2007). Image and Artifact: The Photograph as Evidence in the Digital Age. *The Journal of American History* 94(1):193–202.
- Sassoon, Joanna (2004). Photographic Materiality in the Age of Digital Reproduction. In: *Photographs, Objects, Histories*. Ed. by Elizabeth Edwards and Janice Hart. London: Routledge, 186–202.
- Schlehe, Judith and Sita Hidayah (2014). Transcultural Ethnography: Reciprocity in Indonesian-German Tandem Research. In: *Methodology and Research Practice in Southeast Asian Studies*. Ed. by Mikko Huotari, Jürgen Rüländ, and Judith Schlehe. London: Palgrave Macmillan, 253–272.
- Schneider, Franka (2019). Tandemforschung im Foto-Archiv: Ein Bericht aus dem interdisziplinären Projekt "Foto-Objekte". In: *Zusammen arbeiten: Praktiken der Koordination und Kooperation in kollaborativen Prozessen*. Ed. by Stefan Groth and Christian Ritter. Bielefeld: transcript, 135–163.
- Schneider, Franka, Julia Bärnighausen, Stefanie Klamm, and Petra Wodtke (2017). Die Materialität des punctum: Zum Potential ko-laborativer Objekt- und Sammlungsanalysen in Foto-Archiven. In: *Eine Fotografie: Über die transdisziplinären Möglichkeiten der Bildforschung*. Ed. by Irene Ziehe and Ulrich Hägele. Münster: Waxmann, 217–241.
- Schwartz, Joan M. (1995). We Make Our Tools and Our Tools Make Us: Lessons from Photographs for the Practice, Politics, and Poetics of Diplomats. *Archivaria: The Journal of the Association of Canadian Archivists* 40:40–74.
- (2002). Coming to Terms with Photographs: Descriptive Standards, Linguistic 'Othering,' and the Margins of Archivry. *Archivaria: The Journal of the Association of Canadian Archivists* 54:142–171.
- (2011). The Archival Garden: Photographic Plantings, Interpretive Choices, and Alternative Narratives. In: *Controlling the Past: Documenting Society and Institutions*. Ed. by Terry Cook. Chicago, IL: Society of American Archivists, 69–110.
- (2012). "To Speak Again With a Full Distinct Voice": Diplomats, Archives, and Photographs. In: *Archivi fotografici: spazi del sapere, luoghi della ricerca*. Ed. by Costanza Caraffa and Tiziana Serena. Rome: Carocci Editore, 7–24.
- Schwartz, Joan M. and James Ryan, eds. (2003). *Picturing Place: Photography and the Geographical Imagination*. London: I. B. Tauris.

- Sekula, Allan (1982). On the Inventions of Photographic Meaning. In: *Thinking Photography*. Ed. by Victor Burgin. London: Macmillan, 84–109.
- (1989). The Body and the Archive. In: *The Contest of Meaning. Critical Histories of Photography*. Ed. by Richard Bolton. Cambridge, MA: MIT Press, 343–389.
- Smith, Shawn Michelle (1999). *American Archives: Gender, Race, and Class in Visual Culture*. Princeton, NJ: Princeton University Press.
- Solomon-Godeau, Abigail (1984). *Photography after Art Photography: Gender, Genre, History*. Durham, NC: Duke University Press.
- Stafford, Barbara M. (1999). *Visual Analogy: Consciousness as the Art of Connecting*. Cambridge, MA: MIT Press.
- Tagg, John (1988). *The Burden of Representation: Essays on Photography and Histories*. London: Macmillan.
- Tucker, Jennifer (2005). *Nature Exposed: Photography as Eyewitness in Victorian Science*. Baltimore: Johns Hopkins University Press.
- VanDijck, Jose (2007). *Mediated Memories in the Digital Age*. Stanford, CA: Stanford University Press.
- Walton, Shireen (2016). *Photographic Truth in Motion: The Case of Iranian Photoblogs*. London: Royal Anthropological Institute.
- Were, Graeme and Paolo Favero, eds. (2013). Imaging Digital Lives: Participation, Politics and Identity in Indigenous, Diaspora, and Marginal Communities. 18(3). Special Issue of *Journal of Material Culture*.
- Winter, Franz, ed. (1908). *Altertümer von Pergamon*, Vol. 7,2: *Die Skulpturen mit Ausnahme des Altarreliefs*. Berlin.
- Wright, Christopher (2013). *The Echo of Things: The Lives of Photographs in the Solomon Islands*. Durham, NC: Duke University Press.

Chapter 2

Photographs on the Move: Formats, Formations, and Transformations in Four Photo Archives

Julia Bärnighausen, Stefanie Klamm, Franka Schneider, and Petra Wodtke

Photographs are constantly on the move,¹ accumulating traces of use and layers of meaning. They have “social biographies”² in the sense that they pass from one hand to another, travel through various institutions, and circulate in different political, social, and cultural contexts. In the archives, their journey continues from one section to the next, from one box to another. It is these layers of sedimented knowledge that increasingly attract the attention of scholars.³ In addition to the image itself, researchers have come to see and reflect on the material qualities of photographs such as the mounting, cutting, retouching, and coloring, and on various forms of inscriptions on the recto and verso. Not only do photographs depict objects, they are also “three-dimensional” objects themselves (Edwards and Hart 2004b, 1). This is what can be described as the double “objectness” (*doppelte Objekthaftigkeit*) of photographs.⁴

In the present paper, we would like to take this idea one step further and think about photographs not only as two-sided objects but as “multiple originals” (Schwartz 1995, 46) leading “multiple lives.” Like Edwards and others, we refer to the “lives” of photographs in a material sense: Notes, stamps, and other traces of use generate material biographies of the photographic objects that are always linked to the social, political, and cultural contexts of their time. In every journey, there are winding roads, crossroads, and dead ends: various paths that are all intertwined. How we choose to view photographs, whatever interests us at a certain point in time, will determine how we tell their stories: which paths do we want to follow and why? We would like to reconstruct some of these multiple photographic itineraries,⁵ meaning their routes traveled or journeys made, the various formats they were presented in, the hands they passed through, the boxes they were stored in.

¹ See the articles of Edwards (Chapter 3) and Trnková (Chapter 14) in this volume; cf. Geismar and Herle 2010.

² Edwards 2001, 28; Edwards and Hart 2004a, 5; Pinney 1997; Jung 2015; Knappett 2005; and Buchli 2008 all go back to: Appadurai 1986.

³ See the overview by Caraffa (forthcoming).

⁴ See <https://fotobjekt.hypotheses.org/>, accessed August 14, 2018. The artist Akram Zaatar, Arab Image Foundation, was a guest at the workshop of the collaboration partners in August 2017, when he spoke of photographs as leading “double lives.”

⁵ An “itinerary” is the description of travel routes but is also frequently referred to as the route itself (see, inter alia, Caraffa forthcoming; Hahn and Weiss 2013). Thus, photographs are both traveling objects circulating on various routes and, at the same time, they accumulate traces of these journeys, becoming retrospective itineraries themselves (see Julia Bärnighausen’s PhD project developed in 2016 at the Kunsthistorisches Institut in Florenz – Max-Planck-Institut, supervisor: Prof. Dr. Anke te Heesen, Chair for the History of Science, Department of History, Humboldt-Universität zu Berlin); see also the ethnographic research on photo itineraries by Cécile Cuny, Alexa Färber, and Sonja Preissing on <http://researchingacity.com/#hafency-introduction>, accessed August 21, 2017.

In our project entitled “Photo-Objects. Photographs as (Research) Objects in Archaeology, Ethnology, and Art History,”⁶ we discussed photographs as material objects and their substantial uses in these disciplines. From a transdisciplinary perspective, we examined four holdings by the project partners dating from roughly 1850 to 1945 and representing specific disciplinary practices with “documentary”⁷ photographs: the photographic collection of applied arts at the Photothek of the Kunsthistorisches Institut in Florenz, the archiving of monuments in the architectural photographs from the US and Europe around 1900 at the Kunstbibliothek’s (Art Library) Photography Collection, archaeological excavations in Asia Minor and their photographic documentation in the Collection of Classical Antiquities, both housed in Staatliche Museen zu Berlin – Preußischer Kulturbesitz, and ethnographic photographs of the Hahne-Niehoff-Archiv at the Institute of European Ethnology which is part of the Humboldt-Universität zu Berlin.

The “Photo-Objects” project was based on an intensive comparative exchange. Through tandem research⁸—reciprocally organized collaborative research in the four archives—we compared the materialities of photographs and their historical uses as well as reflected upon our own concepts, methodologies, and handling of photo-objects. This paper intends to show how a material and comparative perspective may enrich the analysis of photographs. Setting different photo archives and photo-objects in contrast to and in dialogue with each other enables us to identify and reflect upon our own disciplinary standpoints and think in new dimensions. It is precisely this approach that teaches us openness and delight in the unknown. We learn to look with fresh eyes at what we thought we already knew.

Writing a text about four photo archives in the spirit of this inspiring comparative partnership is a challenging endeavor. It means transcending the individual very different archival histories while at the same time explaining these adequately. The paper does not represent the archives as a whole. Instead, they are described under thematic aspects exemplifying various facets of photo archival practices. We would like to ask our readers to indulge us as we move to and fro, jump back and forth, and think in loops. This is certainly not intended to force anyone to play an intellectual mind game but it is fundamental to our comparative approach.

In the following, we would like to discuss some of our comparative insights with respect to the formats, formations, and transformations of photographs in our four photo archives, considering the material changes that accompany the processes of archival meaning-making. While in the first chapter we describe the various formats in which photographs were presented and used in our archives, the second chapter will consider them within the framework of their specific cultural, political, and social histories. Both the materiality of photographs and their socio-political contexts determine how we treat and think of them. Archives are part of disciplinary formations, which in turn also affect how knowledge is structured within

⁶ It was a three-year collaboration project (March 2015–March 2018) of the Photothek at the Kunsthistorisches Institut in Florenz, Max Planck Institute (represented by Costanza Caraffa and Julia Bärnighausen), the Antikensammlung, Staatliche Museen zu Berlin (Martin Maischberger and Petra Wodtke), the Photography Collection at the Kunstbibliothek (Art Library), Staatliche Museen zu Berlin (Ludger Derenthal and Stefanie Klamm), and the Institut für Europäische Ethnologie, Humboldt-Universität zu Berlin (Wolfgang Kaschuba and Franka Schneider), funded by the German Federal Ministry for Education and Research (BMBF), see further Bärnighausen et al. forthcoming.

⁷ On the history of “documentary” photographs, see, inter alia, Wöhrer 2015; on photographs as documents, see, e.g., Schwartz 2012.

⁸ See Schlehe and Hidayah 2014; Schneider et al. 2017; Schneider 2019.

a given discipline. Finally, we would like to show how none of the archives presented in this paper constitute a stable entity. Instead, they facilitate and are subject to various transformation processes and therefore need to be appreciated as dynamic ever-changing “ecosystems” (Edwards 2016).⁹

Reflecting on the different histories of photographs and photo archives and the way these are told by scholars, including ourselves, contributes to a better understanding of their material, socio-political, and often highly problematic nature. This in turn is an essential approach for critical social analysis, for recognizing, understanding, and reacting to various forms of both visual and material power relations. The social value of photographs and photo archives lies in their appreciation as material, changeable, and political objects. It is these material manifestations, their production and transformations, that are at the heart of the present paper.

Formats: standardization practices and beyond

“Format” is a common term in photographic and archival practice referring to the standardization of sizes, for example, in books as well as in photographs. Moreover, in the history of knowledge, the term “format” describes specific material ways of shaping knowledge: “A knowledge format is used to produce, mediate, and structure representations of scientific knowledge. The term refers to specific forms of transfer, the spaces in which they occur, and the ways in which they combine to generate a specific type of mediality.” (Davidovic-Walther and Welz 2010, 90–91) Formats of knowledge can range from research notes, photographs, drawings, and graphics to index cards and lists or lectures, publications, collections, and exhibitions—each collecting, selecting, interpreting, and presenting knowledge in different ways (Davidovic-Walther and Welz 2010, 94–95).¹⁰ Thus, various “knowledge formats” enable a variety of uses and mobilities, while excluding others.

In our four archives, we are confronted with many different material formats: everything from mounted and unmounted photographs produced by various techniques to contact prints and sheets, index cards with and without photographs, slides, glass negatives, film rolls, and so on. In a broader sense, all of them constitute visual media, but they are also so much more than that: as photo-objects, they facilitate or afford different forms of use. Positive prints suggest, for instance, that they can be mounted on cardboard, touched, looked at, picked up, laid out, cut, glued together, and also framed or hung up on walls. We would like to show how the different formats of photo-objects invite us to handle them in very particular ways. In what follows, we will concentrate on the mounted photograph as the most common form in our photo archives and, therefore, a common reference object.

In systematic image collections like that of the Photothek at the Kunsthistorisches Institut in Florenz, the Art Library’s Photography Collection, and the Collection of Classical Antiquities, photographs were (and still are) mostly mounted on standardized pieces of cardboard. The prints themselves, which are normally retouched and sometimes colored, depict works of art and architecture that were organized according to a certain art historical or archaeological canon embodying the structure of the relevant discipline. The cardboard mounts bear inventory numbers and shelf marks, sometimes connecting them to other finding aids such as card catalogues or lists, and various stamps as well as handwritten and stamped notes on the front and back of the cardboards.

⁹ See also Edwards in this volume (Chapter 3).

¹⁰ This also applies to digital databases, see Burkhardt 2015.



Fig. 1: Cardboards and boxes from the *Kunstgewerbe* section of the Photothek, digital photograph, Kunsthistorisches Institut in Florenz – Max-Planck-Institut, Photo: Stefano Fancelli, 2015.

Photographs are mounted to be handled. They were (and still are) used as working instruments. Particularly in documentary image collections, users needed to be able to browse through the holdings, lay out images, pass them around, and compare them. The mounting of photographs facilitates “legitimate handling” (Edwards 2014, 4) that protects them physically while ensuring access to their content. Therefore, large tables are very often essential furniture in a photo archive in order to allow the mounted photographs to be distributed and to encourage the practice of comparing photographs. Visitors to the archive can combine, juxtapose, and isolate the images in new ways.¹¹ They still do this to this day, although mainly for other, new research purposes (Klamm 2016).

The photographs in those archives are mostly stored in boxes standing upright on shelves. This form of presentation, which strongly resembles that of books in a library, functions as an open-stack research tool for employees, scholars, and other users—depending on the archives’ assignments and on the admission policy of their institutions (see Fig. 1, see also Fig. 2 of the Collection of Photography at the Art Library in Hyperimage).

Sometimes cardboards would be kept in register-like cabinets as is the case in the Collection of Classical Antiquities (see Fig. 3 in Hyperimage) or in folders as previously archived in the Art Library (see Fig. 4 in Hyperimage). All these installments allow faster access to the photo-objects while structuring them in classified grids (shelves) that are named according to art historical or archaeological categories, in this case: topography or applied arts. These are regulations concerning all storage furniture that have to be met by users. Some of these furniture are complex, encouraging certain forms of handling while hindering others (te Heesen and Michels 2007; Klamm and Wodtke 2017).

¹¹ Elizabeth Edwards has referred in this context to “acts of re-ordering, re-captioning, and re-interpretation” (Edwards 2009, 147).

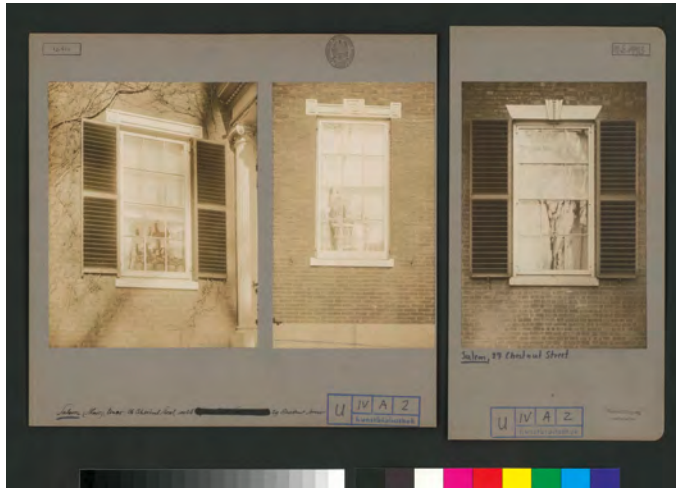


Fig. 6: Salem (MA), windows in Chestnut Street 26, 29, and 27, Frank Cousins, silver gelatin paper on cardboard mount, c. 1900, left: 20.3 x 16.1 cm (photo), center: 20.4 x 12.4 cm (photo), right: 20.4 x 14.2 cm (photo), Staatliche Museen zu Berlin, Kunstbibliothek, inv. no. 1913, 610.

The Photothek of the Kunsthistorisches Institut in Florenz holds approximately 620,000 photographs of works of art from late antiquity to the modern era with a traditional focus on the Italian Renaissance. In recent years, photographic campaigns as well as activities by individual scholars and research groups have added to the holdings in response to a broadening of the scope of study to the Mediterranean as a cultural hub—always underpinned by postcolonial critique. Mounted photographs form the main holdings of the Photothek and follow a systematic notation scheme starting with an inventory number in the top left-hand corner and a shelf mark in the top right-hand corner (see Fig. 5 in Hyperimage). The official KHI stamp is in the center below the photograph, the title and date of the artwork depicted are on the left, its location and provenance on the right. Sometimes, there will be a book reference on the far left-hand edge of the cardboard referring to the artwork depicted as well as copyright remarks and digitization numbers on the far right relating to the photographic image. The shelf mark refers to the classification of the photographs into four main genres that are well known among art historians: painting, sculpture, architecture, and applied arts. As we shall see later, this system is not (and never has been) stable or objective. It has expanded, branched out, and has many surprises in stock (both problematic and inspiring at the same time).

At the Art Library, photographs were also mounted on standardized cardboards, and depending on the size of the print, they were put together in pairs or even triples, reflecting disciplinary typologies. As a requirement of the archival arrangement (and quite similarly to the KHI) the photographs were all stamped with the signum of the library, uniformly labeled with, for example, an acquisition number, a title, and a classificatory reference number. This is the case with the architectural photographs by American photographer Frank Cousins (1851–1925) (see Fig. 6). In the top left-hand corner of the cardboard, an embossed stamp

signifies the entrance and—at the same time—inventory number of the bundle of photographs. On the right-hand side, there is an alphanumeric signature referring to the archive's classification as well as the embossed signum of the possessing library of the (then) Royal Museum of Decorative Arts in Berlin (*Königliches Kunstgewerbe-Museum Berlin Bibliothek*), today's Art Library, in the middle.

Handwritten notes below the prints describe what can be seen in the photographs: "Salem (Mass.), left: 26 Chestnut Street, right: 27 Chestnut Street, middle: 29 Chestnut Street."¹² In the bottom right-hand corner of the cardboard, a stamp with the words "Reproduction reserved" (*Vervielfältigung vorbehalten*) registers the copyright of the photographer. Thus unified, these photographs were integrated into the classification system of the archive. Similarly to that at the KHI Photothek, the collection at the Art Library was originally organized according to art historical genres (painting, sculpture, architecture, and the applied arts) and chronologies. In the case of this archive, too, however, classifications change, as will be discussed later.

The archive of the Antikensammlung seems to be a hybrid between those at the KHI and the Art Library on the one hand, where archival processes are fully standardized and precisely organized, and the Hahne-Niehoff-Archiv with its very different formats on the other hand (see below). The photographs of the Antikensammlung are less homogenous than at the KHI and the Art Library. More than 80,000 are held by the archive, with most of them in the same format: they are mounted on cardboards (Alexandridis and Heilmeyer 2004, 213). However, many of them are also glued in albums, kept in folios, or stored in boxes with other documentation material. Some photographs in the topographical section were taken, mounted, and inscribed during excavations (Figs. 7 and 8).

Every archaeological project of the Antikensammlung developed its own system of archiving photographs: the numbers, formats, and references are different. Even the cardboards vary in size, color, and material. The example of the photographs of Magnesia on the Maeander river is particularly interesting because of the sophisticated and complex notation system and its underlying network structures. At the same time, this kind of complexity and variety is fairly typical of all the excavation pictures. The system in the Magnesia series is based on the individual experience of the director of excavation, Carl Humann, who had formerly worked in Pergamon (Schulte 1963). Every photograph taken, developed, and mounted in Magnesia was marked on the back according to the same standardized inscription system (see again Fig. 8): Apart from the name of the archeological site, there are various numbers suggesting that different counting systems were in use. One or sometimes two figures (e.g., "52.") are followed by a short description of the object depicted, which is in turn linked to another counting system (e.g., "22a"), and by the date this particular fragment was found. The inscriptions conclude with the name of the editor ("Humann") and the date of editing. Interestingly, Humann did not write these notes on the cardboard himself. Instead, he left them on the reverse of the photograph. It was his assistant, Otto Kern, who transferred them onto the cardboard after the picture was mounted, thus contributing to the formation of archaeological knowledge (see below).

Photo archives are, in a way, consistent and structured but never homogeneous or uniform. At the Collection of Classical Antiquities, as we already know, the cardboard mounts very often differ in size, color, and material: probably from the 1910s or at least 1920s on-

¹² "Salem (Mass.), links: 26 Chestnut Street, rechts: 27 Chestnut Street, Mitte: 29 Chestnut Street."



Figure 7: Fragment of the Artemision's western frieze from Magnesia on the Maeander river, Carl Humann, 1891, albumen paper on cardboard mount, 20.2 x 11.3 cm (photo), 21.6 x 28.5 cm (cardboard), Staatliche Museen zu Berlin, Antikensammlung, inv. no. FA-Mag04-0001, neg. no. PM 1443.

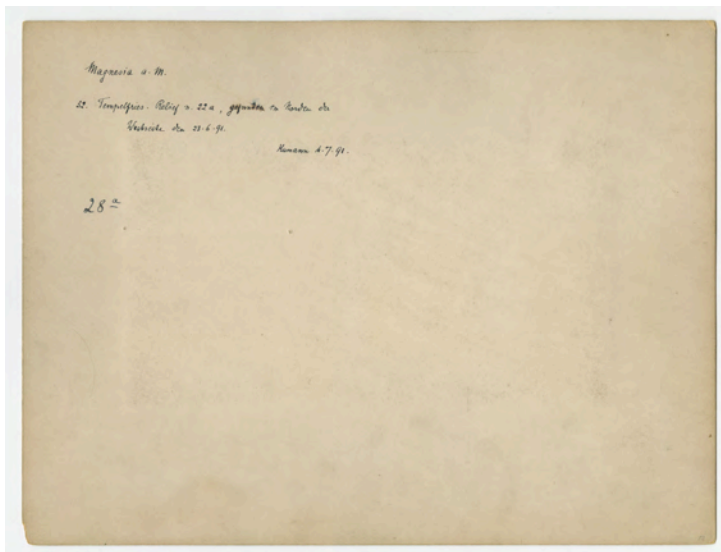


Figure 8: Verso of Fig. 7: Fragment of the Artemision's western frieze from Magnesia on the Maeander river, Carl Humann, 1891, albumen paper on cardboard mount, 21.6 x 28.5 cm (cardboard), Staatliche Museen zu Berlin, Antikensammlung, inv. no. FA-Mag04-0001, neg. no. PM 1443.

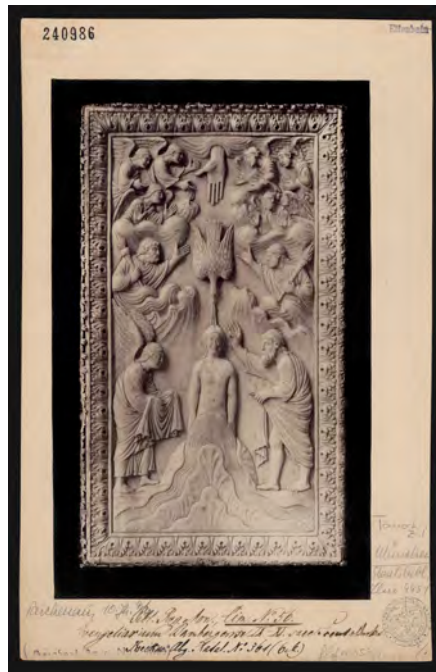


Fig. 11: Ivory relief of Baptism of Christ, unidentified photographer, c. 1900, albumen paper on cardboard mount, 27.6 x 17.8cm (cardboard), exchange with the Zentralinstitut für Kunstgeschichte in Munich, Kunsthistorisches Institut in Florenz – Max-Planck-Institut, inv. no. 240986.

ward, there were two sizes of standardized blue mint colored cardboards. In some cases, the pictures mounted on them were printed from an older negative long after the end of the excavation (see Fig. 9 in Hyperimage). Other photographs arrived at the museum with their own cardboards, for instance, when they were bought from photo agencies (see Fig. 10 in Hyperimage), exchanged with other institutions, or given as a present by researchers or colleagues.

Similarly, the photo archives in Florence and at the Art Library hold many prints that have been given to them or acquired from various donors or institutions. Very often their cardboards were simply adopted by the archivists and subject to various types of handling. Archivists at the KHI, for example, sometimes scratched out the old inventory numbers and shelf marks and wrote down their own (see Fig. 11).

At the KHI, too, we find photographs that have never been mounted at all. These are normally not part of the main holdings, as we shall see in the next chapter. Almost all of the unmounted photographs were inscribed in one way or another before they even entered the Photothek: by hand-coloring the print, by making small drawings, or by making notes about the object depicted on the recto or verso of the print itself. Thus, the material variety of the pre-archival histories of the photographs secretly infiltrates the standardized photo archive. If those photographs *were* to be mounted, this particular history would disappear. On the

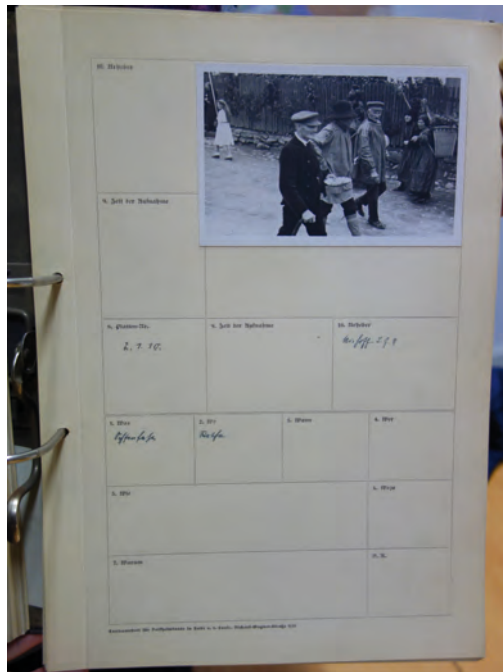


Fig. 12: Record sheet of a photograph from the *Ochsenfest* in Rotha, in original folder, Heinz Julius Niehoff, photo archive (Hahne collection), Museum Europäischer Kulturen, Staatliche Museen zu Berlin.

other hand, there is never just one history, one narrative, for a photo-object: Photographs do not become stable entities when mounted but keep on transforming: although this was not permitted, visitors to the KHI's Photothek would sometimes comment on and add to the information provided on the mounts, re-attributing, for example, the objects depicted, thus ignoring archival standards and individualizing the photo-object. However, it is not only the users who transform the photo-objects. As we shall see below, archivists play their part, too, and their role is crucial. Looking at this, how do we cope with the archive's diversity, with different mounts, modern prints, and added information? The answer is simple. These alleged "shortcomings" of archival standards, of an assumed unity that never existed, in fact constitute a major strength: they lay open processes of decision making, attribution, and (re-)appropriation in the archive, unveiling its history and its politics.

The specific features of the mounted photographs and their storage, use, and handling in the Antikensammlung, the KHI, and the Art Library are particularly evident in comparison to the photo-objects of the Hahne-Niehoff-Archiv at the Institute of European Ethnology, Humboldt-Universität zu Berlin, which are fundamentally different in two ways. First, photographs here are glued on record sheets that not only differ from the mounts in the other archives in terms of size and thickness but also because they organize the notations in a tabular form (see Fig. 12). Furthermore, the cardboards are perforated on the sides and filed in thick gray-brownish binders. Similarly to the boxes, the folders were used to put the

photographs in a certain order that reflected disciplinary categories. This system operated almost as flexibly as the boxes did. At the same time, it made unintentional changes difficult. The materiality of the folders necessitates scrolling from front to back, as with a book (Krajewski 2002, 163). The weight and size of the folders, however, makes the process of browsing somewhat impractical. The record sheets cannot (and are not supposed to be) laid out on a table as it is the case in the other archives. Bound in folders, they are not expected to function as mobile objects as is the case with the mounted photographs. This exemplifies a second point relating to the above-mentioned practice of “legitimate handling” (Edwards 2014, 4): Mounted photographs on cardboards also enable *easy* handling of photo-objects during research as well as allowing their mobility in the archive.

Second, apart from the record sheets, the main holding of the Hahne-Niehoff-Archiv is approximately 1,100 uncut negative films with approximately 35,000 black-and-white 35-mm pictures stored in 13 cardboard boxes. These negative films contrast with the format of mounted photographs in many ways. They have a materiality that makes it difficult to work with the images themselves. Only the act of rolling them out makes the actual image accessible and visible, but even then motifs are hard to see and need a trained eye. Furthermore, it is not practical to lay out or browse the negative films, or to compare series of single images.¹³ Even reprinting them in an essay like this one is problematic. Their format of 1.5 meters is oversized in relation to the limited space and limited numbers of figures in a printed paper. Showing them in their original format, that is, in full length and uncut, is only possible in an online repository—realized here by the digital visualization tool Hyperimage (see Fig. 13 in Hyperimage).

A special feature of negative films compared to single mounted photographs is the seriality within the format. Through the succession of one shot after another, series of photographs form linear and temporal sequences giving, for instance, an impression of the order of events, procedures, or arrangements. Film number 02/001 shown in Hyperimage displays sequences from the so-called *Ochsenfest* (festival of the ox) in the central German village Rotha in 1933. We see a historical parade with individual thematic groups dedicated to festivities, handcraft, rural life, political dates, or social groups like hunter or poacher.¹⁴ Since five other negative films (one is missing) are preserved, we know that film number 02/001 is neither the beginning of the documentation of the festival nor the only one showing this part of the parade. But its sequences form a kind of enclosed narration: the parade ends in a political speech with an unknown political leader standing in front of a crowd and flanked by men in SA uniforms as well as by a swastika.¹⁵

We are familiar with the iconography of each single image (parade, crowd, speech, and Nazi symbols). They can stand for themselves, but their grouping in one film generates a linear and temporal narration: the formation of the *Volksgemeinschaft* as a collective subject,

¹³ Contact prints mounted on one sheet are an analog solution that shows an overview and sequentiality in one format.

¹⁴ The parade was just one part of a multi-day festival taking place at Pentecost in the neighboring village of Questenberg. During the festival, the people of Rotha were supposed to bring bread and cheese to the people of Questenberg by midnight at the latest. If they arrived too late, the people of Questenberg could ask for an ox from Rotha. In 1933, they were deliberately late in order to “wage war” on the people of Questenberg in what was known as the battle for the ox (Kiel and Schneider 1995, 44).

¹⁵ In one of the other films, the recordings show people doing the Hitler salute during this speech (see Fig. 14 in Hyperimage).

a political actor, and a social community.¹⁶ Consequently, the narrative sequentiality of the negative films might contradict the intended representation of the *Volksgemeinschaft*. For example, the ducks seen on the village square between the people watching on film 02/001 perhaps create such a counter-narrative. We could imagine that the whole speech is accompanied by their quacking disturbing the intended staging of the *Volksgemeinschaft*. This kind of sequentiality is a remarkable difference to mounted photographs. Producing similar linear and temporal sequences with mounted single photographs is only possible by handling them, laying them out, and comparing, arranging, and rearranging them. On the other hand, it should be noted that this use of the film rolls as a series is not obvious and was suggested by the fact that the 1,100 boxes with the film rolls are the most remarkable, material, heavy part of the Hahne-Niehoff-Archiv, whereas most of the prints on record sheets are not preserved entirely (see below). We can imagine that originally the film rolls were just “archived” and people used and handled the prints as research material.

As the last example shows, different photographic formats generate different practices and routines in archives. At the same time, it is also the researchers and archivists who define the way photographs are handled and examined during their work. Photo-objects in archives could take on relatively standardized appearances, like at the KHI or the Art Library. In other archives, for example, at the Collection of Classical Antiquities or the Hahne-Niehoff-Archiv, their physical format is more complex. However, they all share a history of constant and multiple changes in time and space, which is the focus of our next two chapters.

Formations: contexts, canons, and challenges

All photo archives are closely involved in processes of formation. In art history and archaeology, they are at the core of what defines the academic discourse (Caraffa 2011; Klamm and Wodtke 2017). Scholars looked at photographs more than they did at actual artefacts and in doing so, they were confronted with a prescribed selection of artworks and monuments.¹⁷ The *Musée Imaginaire*—according to the famous phrase by André Malraux (Malraux 1965)—of disciplinary knowledge is represented in a multitude of photographs and shows both the expansiveness and the boundaries of our disciplines (Geimer 2009; Locher 2011; Locher 2012). Processes of canonization took place while building up two of our photo archives in particular: the photographs in the *Kunstgewerbe* section at the Photothek in Florence and those in the Collection of Photography at the Art Library in Berlin both relate to an increased interest in the applied arts in the second half of the nineteenth century, which resulted in the worldwide emergence of industrial fairs as well as museums, schools, and collections specializing in the applied arts. Founded at the height of historicism, applied arts museums sought to convey historical and contemporary styles as well as techniques of production. The aim was to contribute to enhancing taste and the improving commercial and industrial production in order to overcome the separation of the arts and crafts. In this

¹⁶ *Volksgemeinschaft* was the core community concept defining sociality in Nazi ideology: “it was within it, and via it, that visions of community in Nazi Germany were expressed, negotiated, and put into practice” (Steber and Gotto 2014b, 2). For an analysis of serial photography of festivities in Nazi Germany, see Conze 2015.

¹⁷ Heinrich Dilly has argued that it is not the works of art but, rather, the photographic reproductions that form the subject of the analysis of art history (Dilly 1975, 153).

context, photographic collections were intended to take on exemplary functions in contemporary production.¹⁸

The photo archive which forms the basis of the Collection of Photography at the Art Library today was originally developed from the 1860s onward as a teaching repository to supply models and examples for the educational institute belonging to the Museum of Decorative Arts in Berlin. In addition to literature, this model and teaching collection also provided drawings, prints, and, of course, photographs of decorative art works and architecture to prospective artisans, architects, artists, and, as of the end of the nineteenth century, also to art historians (Evers 1994; Derenthal and Kühn 2010b). Acquiring representative photographs worldwide for this purpose was crucial. Peter Jessen (1858–1926), the first director of the Art Library, went on a trip around the world in 1913 that took him to the United States, Asia (China, Korea, and Japan), and Russia to learn about non-European art and acquire photographs, drawings, and prints (Jessen 1916–1917). In the U.S., Jessen bought 562 photographs directly from the amateur photographer Frank Cousins, based in Salem, Massachusetts (Jessen 1916, 46).¹⁹ These show colonial architecture—at the time at risk of demolition—on the east coast of the United States such as Daniel P. Parker’s Mansion, the house of a prominent Bostonian merchant and now a National Historic Landmark (see Fig. 15 in Hyperimage).²⁰ Cousin’s photographs marked a significant change in the perception of colonial architecture as historic monuments and national heritage at the beginning of the twentieth century in the U.S. In 1913, for example, Cousins was commissioned by the Art Commission of the City of New York to document 50 buildings of historical importance before their demolition (Mason 2009, XIXf., 256). His photographs served the emergent preservation movement in North America as a decisive argument and, thus, they were very directly involved in processes of formation and canonization of a national heritage (Page and Mason 2004).

Unlike the photo archive of the Art Library, the *Kunstgewerbe* section of the KHI (see Fig. 16 in Hyperimage) did not primarily seek to provide artists and apprentices of the crafts with models for their work. Instead, the Florentine image collection as a whole was created to support academic research. This means that scholars, mostly art historians with specific research interests, would come to visit the collection, study, and compare photographs for their research. In this scenario, the applied arts section stands out from the other photographic holdings of the KHI (sculpture, painting, and architecture) regarding its age, size, and classification.²¹ Not only is it the newest section, having been introduced in early 1899, more than a year after the foundation of the KHI and the Photothek. With its roughly 37,000 photographs, it is also the smallest section. Furthermore, it is organized according to very particular categories. Whereas the sections of sculpture, painting, and architecture are classified by epochs, artists, and places, the applied arts follow a system that is based on materials and techniques, that is, noble metals, metals, enamel, wood, ivory, ceramics, textiles, stone cutting, etc. This difference in the classification system holds true not only for the KHI but is also characteristic of the structure of other photographic collections focused on the applied

¹⁸ On the interleaving of the (applied) arts, museums, archives, and photography see, inter alia, Hamber 1996; Martin 2010; Mundt 1974; Vogelsang 1989.

¹⁹ See also the inventory book (*Erwerbungsbuch*) of the Art Library for 1913, entry no. 610.

²⁰ Between 1912 and 1920, Cousins published four books concerning colonial architecture in Salem and Philadelphia (Derenthal 2010, 13–15).

²¹ <http://photothek.khi.fi.it/documents/oau/00000284>, accessed August 21, 2017.

arts. The photographic holdings at the Art Library referring to artefacts of that category, for example, were organized according to materials and techniques first and foremost, and only secondarily according to epochs and places (General-Verwaltung der Königlichen Museen 1896, 41–75).

All of these aspects are closely related to the development of the applied arts in the nineteenth century. Notably, very similar to photography, works of the applied arts had a rather “uncertain” (Edwards and Lien 2014) status around 1900. On the one hand, there was an increased interest in the applied arts that resulted not only, as we have seen, in fairs, exhibitions, and museum foundations but also led to many publications on the socio-cultural role of this previously very much underestimated genre that, in public discourse, had always been stuck between the arts and the crafts; on the other hand, it was now, more than ever before, demarcated from the fine arts.²² Consequently, it is no surprise that the *Kunstgewerbe* section of the KHI is comparatively small and was treated differently from the other sections. Its organization goes back to image collections of applied arts museums such as that at the Art Library, where classification according to materials and techniques had been long discussed and was common practice by the turn of the century.²³

In every archive, there are what Elizabeth Edwards (2017) describes as “non-collections.”²⁴ Most of our photo archives include seemingly “marginal” parts which stand outside the disciplinary canon and have been removed from the main holdings at some point in the past or have never been part of them, such as the “unsorted” (*unsortiert*) photographs at the Art Library or the “duplicates and various” (*Dubletten und Varia*) section at the Photothek of the KHI (see Fig. 17 in Hyperimage). From the 1920s onward, KHI archivists began to identify among the holdings of the Photothek photographs that were considered duplicates and thus to remove them from the collection. Stamped with the words “removed as a duplicate” (*als Dublette ausgeschieden*), these photographs were transferred into a separate section (see Figs. 18 and 19 in Hyperimage). They were kept here in order to be exchanged with the doubles of other archives. This ensured the material supply and dynamic flow of the archives as well as intellectual collaboration. The exchange of duplicates was not only common practice in most collections around 1900 but also systematically organized in academic circles such as the Exchange Society which were active in Europe around 1900 (Gianferro forthcoming). Over time, the duplicates section expanded to encompass all kinds of photographs that had not yet found their place in the collection and, hence, not been inventoried. This is the case with some photographs attributed to the Galleria Sangiorgi in Rome, which had been lying dormant in this section for many years. With their retrospective incorporation into the archive in 2015, they underwent a drastic re-evaluation, as we shall see in the following chapter of this paper.

Processes of knowledge formation in photo archives play a crucial role in national identity politics (Caraffa and Serena 2015). For Jessen and in the collection of the Art Library, which was becoming more and more independent of the Museum of Decorative Arts, Cousins’ photographs were of interest because they depicted models and provided exemplary details for the development of the applied arts and architecture in German-speaking countries. Jessen included details about them in the report to his colleagues in the arts and

²² <http://photothek.khi.fi.it/documents/oau/00000284>, accessed August 21, 2017; Berling 1910; Bie 1908; Bode 1907; Lehnert et al. 1907–1910; Martin 2010.

²³ <http://photothek.khi.fi.it/documents/oau/00000284>, accessed August 21, 2017.

²⁴ See also Edwards in this volume (Chapter 3).



Fig. 20: Peter Jessen's essay on the colonial style in the journal *Kunstgewerbeblatt* of 1916 with photographs by Frank Cousins.

crafts associations in Germany about interesting and exemplary American architecture and its decorative elements and interior design for German domestic residential buildings (Jessen 1916) (Fig. 20). The photographs thus became part of a debate about exemplary design and circulated as patterns for reproduction.

Identity politics are crucial for the formation of ethnographic photo archives. This is the case in particular with the Hahne-Niehoff-Archiv. It was established by Hans Hahne (1875–1935), Director of the Museum of Prehistory and Director of the Regional Office for Prehistory in Halle/Saale, along with Heinz Julius Niehoff (1888–1947), a photographer and documentary filmmaker. For the question of disciplinary formation through archives, it is a key factor that Hahne, Niehoff, and their collaborators took most of the photographs themselves. The above-mentioned film number 02/001 illustrated that there were several photographers in the field that supposedly belonged to the team of Hahne and Niehoff (see again the film (Fig. 13) in Hyperimage, here, pictures 3 and 9). And we also see Heinz Julius Niehoff shooting a film (see again the film, Fig. 13, in Hyperimage, here, picture no. 34). This kind of self-representation (or self-archiving) in ethnographic photographs was widespread and could be interpreted as a way of stabilizing disciplinary authority: ethnographers recorded

themselves as researchers in the field (see Fig. 21 in Hyperimage) to document that they had been “there” and witnessed something with their own eyes. It justified them writing about the “there” as well as marking their photographs as a result of field research.²⁵ This is just one example of the many academic practices conducted with photographs. There is an inherent promise of objectivity that photographs are made not by human hands but by a neutral machinery depicting what is considered the “truth” (Daston and Galison 2010).

Forming a disciplinary representation was always an explicit task involving highly problematic cultural concepts of tradition, identity, or heritage. Since its founding in the early 1920s, Hahne/Niehoff used the photo archive (and other means) to pursue a very clear racist and nationalist agenda.²⁶ As they understood it, *Volkheitskunde* was a science of the German people connecting Germanic prehistory, *Volkskunde*, and *Rassenkunde*. Their photographs, depicting regional customs in the former Province of Saxony, were intended to document the reputed uninterrupted racial and cultural continuity of a Nordic-Germanic people in central Germany. The festivity of Questenberg, called *Questenfest* (the parade in Rotha documented in film number 02/001 was a part of this), was consequently interpreted by Hahne as a Germanic “sun cult” (Ziehe 1996, 48–49).²⁷ Under the canon of *Volkskunde*, which mostly comprised research on dwellings, traditions, religion, etc., Hahne and Niehoff portrayed people as what they considered “types”²⁸ as well as representing so-called traditional festivities, costumes, artefacts, and architecture. These customs were understood, visually documented, and spatially cataloged as models of culture. Hence, the archive could be characterized as a typical version of ethnographic photo collections producing visual constructions of the “Other” as well as of the “Self.”²⁹

In the case of the Hahne-Niehoff-Archiv, this “Self” was understood as a social-political community: the *Volksgemeinschaft*.³⁰ Today, the negatives are an interesting source for the analysis of everyday politics and the staging of the *Volksgemeinschaft* during the Nazi regime. But in terms of archival formation, it is important to note that it was Hahne and Niehoff’s intention to use the photographs as a tool for constructing the “German self.” Their archive was meant to produce and represent a politically propagated community that excluded the “Other.” What is then lacking are people and practices outside of the system as well as the violence, expulsions, and murders perpetrated under the Nazi regime. This absence was not accidental but the result of a racist and nationalist ideology intentionally deployed in the formation of the archive.

The archive of the Antikensammlung in Berlin is subject to an order that is fairly typical of the discipline of classical archaeology (*Klassische Archäologie*). Its photographs

²⁵ The discussion on “ethnographic authority” (Clifford 1988) and photography is reviewed in Morton 2005; Edwards 2011b.

²⁶ Hahne and Niehoff were both members of the National Socialist German Workers’ Party (NSDAP), see Ziehe 1996, 84; Stricker 2010, 43–49, for Hahne’s idea of the museum as an institute of National Socialist education (“völkische Erziehungsanstalt”), see also Brülls 2016, 51–67. For a more detailed description of the photo archive, see Blask and Meißner 1997.

²⁷ For this kind of interpretation, see, for instance, Hahne and Niehoff 1935.

²⁸ See Justnik 2012 for the production of types through photographs in German *Volkskunde*, Hägele 2001 particularly in the Nazi regime; on *völkische* photography by Erna Lendvai-Dirksen, see Blask and Friedrich 2005 or by Hans Retzlaff see Hägele and König 1999; for a broader discussion on everyday photography in Nazi regime, see Sachsse 2003; Conze, Prehn, and Wildt 2013; Umbach 2015.

²⁹ See the articles in Edwards 1992. For the history of anthropology, photography, and archives, see, e.g., Edwards 2015; Hägele 2007; Blask and Redlin 2005; Pinney 1992.

³⁰ See, inter alia, Steber and Gotto 2014a.

are divided into three sections representing research questions, methods, and practices of archaeological approaches (Alexandridis and Heilmeyer 2004): Most of the pictures show archeological objects such as vases, sculptures, and other categories to compare them with each other and with the actual objects in Berlin. The second section is composed of views of the museums' showrooms and exhibitions. The third section follows a topographical order and is sorted by the names of cities or archeological sites. In particular, collecting and comparing pictures of the same objects was and is still today a very popular method of iconographic research—both in archeology and in art history. This method is also controversial, however, because it may defeat the idea of the double “objectness” of photographs and, hence, disguise their material qualities. Very often the photograph becomes the surrogate of the object depicted, drawing attention only to the image and not the whole three-dimensional photo-object with all its traces of use. And yet, to understand the formation of (archaeological) knowledge, it is also fundamental to identify and contextualize these material traces. They open up a multi-faceted and complex network that consists not only of human actors but also of archaeological fragments, numbers, and various media (see Hevia 2009, 79–119; Latour 2005).

In the topographical section, the photo-objects of Magnesia on the Maeander river in modern Turkey serve as an essential point of formation in the photo archive. The excavation at Magnesia took place from 1891 to 1893 and was headed by the above-mentioned Carl Humann (Humann, Kohte, and Watzinger 1904). On the basis of a few entries in the diary of the excavation and of Humann's letters, it is very likely that he is also the author of the photographs.³¹ Fig. 7 shows a fragment of the frieze of the temple of Artemis in Magnesia. The picture was taken outdoors in front of the depot of the archaeological site. The negative held at the Antikensammlung (see Fig. 22 in Hyperimage) reveals that even better than the print. On the verso of the print (see again Fig. 7), someone wrote a note, which was transferred to the reverse of the cardboard after the photograph was mounted (see Fig. 8).

The notes pursue a certain order: the name of the ancient city “Magnesia a. M.” (*am Mäander*) is followed by a number that has not yet been attributed to a certain system (52) and the mention of the object depicted which is often used as the title of the image (*Tempelfries*). A second number (22a) refers to a counting system for the frieze that subsequently changed. For this reason, the number (28a) was added (compare Fig. 8 to Figs. 23 and 24 in Hyperimage). A short description of the circumstances is then followed by the date when the object was found (June 23, 1891) and concluded by *Humann 4.7.91* (July 4, 1891). This particular part of the annotation does not refer to the taking of the picture but to the editing of the information at a later date.

Moreover, as mentioned above, the inscriptions on the back of the cardboard were copied by Otto Kern from Carl Humann's original notes on the reverse of the photograph which would have disappeared with its mounting. Kern, an archaeologist and epigraphist who worked together with Humann in Magnesia and published the ancient inscriptions (Kern 1900), also kept the official diary of the excavation. Here, we find the very same styles in the handwriting of two different names, which confirms that the Magnesia cardboards were annotated on the back by his hand.

The work at Magnesia followed a very structured and well organized order which is reflected in the photographs. This photo network was and is essential not only for interpreting

³¹ For the remark about Humann's letters, my special thanks go to Johanna Auinger, see Auinger 2016.

the excavation in Magnesia but also for further research on the archeological site, including the preparation of publications on the subject. Apart from demonstrating how archaeological excavations were conducted around 1900, this photo network also gives important insights into the history of photographs as working instruments in the humanities.

The excavation in Magnesia took place in the late nineteenth century. The photographs provide a starting point for reflection on archaeological work, methods, and practices in the contemporaneous political situations. These kind of issues are part of the postcolonial debate in archaeology, which has experienced a dramatic upturn since the 1990s.³² We do not have the space to enter into the debate here, but one short example will suffice to illustrate how photographs are entangled with politics. If we take a closer look at the Magnesia photographs, it becomes apparent that a variety of anonymous individuals can be seen in the images. One of them is identified as the “little Turk” (*kleiner Türke*, see Fig. 25 in Hyperimage).

The text says: *Ansicht des Brunnenhauses von Osten gesehen. Hr Kern und der kleine Türke stehn auf Säulen desselben.* (“View of fountain house from the east. Mr. Kern and the little Turk are standing on its columns.”) This young boy—as well as *Hr. Kern*—was used by the photographer as a marker to scale certain positions in some photographs of the agora at Magnesia. In this case, the excavator is mentioned by name and the other person just by his ethnical status. Both individuals are literally “placed” within the picture as markers. In fact, we know nothing about the boy. Was he a son of one of the workers, fascinated and interested in this engineering project and the idea of being pictured? Or was he a paid errand boy, placed there by the German photographer as part of his job? We do not have any evidence for one or the other assumption. The boy (or young man) stands slightly stiffly with his arms hanging close to his body. His head is bent forward and down a little. However, his gaze goes up and he is looking right into the camera, claiming a certain “presence” in the picture (Edwards and Morton 2015). Using people as markers for important positions at an excavation site is, to this day, a very common archaeological practice. The intention is to pinpoint archaeological finds that can otherwise hardly be distinguished in the excavated ground. In short, the photograph and its inscriptions leave us thinking about processes of appropriation and re-appropriation in the nineteenth century and today.

All of our archives show that no archive is neutral. Even seemingly “innocent” archives such as the Photothek of the KHI, the Art Library, or the photo archive of the Antikensammlung hold political implications. These are often underpinned by national identity politics that can be quite blatant but sometimes also relatively difficult to recognize. All photo archives are embedded in processes of decision making that are always dependent on what is considered to be of value in disciplinary discourses at a given time. Other parts of the archive may remain outside the canon of a discipline. But what is on the periphery and what is at the center can change. Processes of reassessment take place all the time in the histories of our archives, as will be discussed in the next section of this paper.

Transformations: continuing itineraries

The “itineraries” of photographs neither start nor end in our photo archives. Photographs lead multiple material “lives” before entering an institution. They also potentially continue

³² The debate began with—among many others—Mattingly 1997, 7–8; Webster 1997, reflexively summarized by Hingley 2005, 14; Schörner 2005, 29–31.

to circulate afterwards. On the one hand, photographs are mobile within the institutional archives, and, on the other hand, they can also (but not frequently) leave the archive again. Thus, their “lives” do not end after entering an archive. Instead, their biographies continue. In this process, photographs are subject to various changes both to their physical appearance and to their forms of presentation. They literally undergo transformations; first, while entering the institutional setting and, second, while circulating within this and other settings. From their incorporation into the different archives onward, photographs accumulate traces of use and reuse. They are put into new reference systems, arrangements, and classifications which locate their meanings in new contexts. Below, each of our four archives is examined as an example of a different aspect of transformation that is, of course, also evident in the others. These could—very roughly—be characterized as material, descriptive, spatial, and social-political transformations.

For the photographs in the Art Library, material and descriptive transformations were at the core of the process. What happened to the photo-objects there shows very impressively the importance of everyday practices of cutting in archives. When first acquired, Frank Cousins’ photographs, which had been bought by Peter Jessen as single prints, were mounted as pairs or even triples onto the cardboard carrier of the archive, reflecting the above-mentioned disciplinary typologies (see Fig. 26 in *Hyperimage*). They had been organized in folders (like the one in Fig. 4 shown in *Hyperimage*) according to the genres or typologies which were deemed to be most useful for practitioners in the arts and architecture: building elements such as front doors as well as ornaments and handcrafts were the main classification subdivisions of the photo archive.³³

However, systems of classification in the archive then changed. After World War II, the Art Library’s photographic holdings changed its status to a repository for images with a focus on architecture.³⁴ This new status was accompanied by the deaccessioning of many photographs of—for instance—paintings or antique vases and sculptures. We found photographs of the latter wrapped in their original folders from the Art Library in the photo archive of the Collection of Classical Antiquities. In other words, the photographs were redistributed according to the category of museum objects they represented among the different institutions (in possession of these kinds of objects) forming the Staatliche Museen zu Berlin.

First and foremost, however, this transformation meant radical physical changes to the photographs again, and literally intervention into their material basis through cutting (see Fig. 27 in *Hyperimage*). Some of the mounted photographic pairs were separated again (see Fig. 28). But even more dramatic cuts were envisaged, as is still visible from lines drawn on the cardboard and also on the photograph itself. These cuts were not only planned but also executed as other examples show where parts of the cardboard carrier and even parts of the photographic images themselves were cut off in order to make the mounted photographs fit into the new and differently formatted shelves to which the photographs were moved (see Fig. 29 in *Hyperimage*).

³³ Other divisions were nature studies (*Naturstudien*) of flowers, plants, animals, and nudes as well as (the more art historical groups of) painting and sculpture (General-Verwaltung der Königlichen Museen 1896, 8f.).

³⁴ This only applies to a part of the collection, called “Image Archive” (*Bildarchiv*) from the 1920s to this day, consisting of photographic reproductions of paintings, sculpture, architecture, and decorative arts (Kühn 1994, 322–324; Kühn 2010, 33–62). Separated from this holding in handling and use was the “Collection of artistic photographs” (*Sammlung künstlerischer Photographien*), started in 1910 (Kühn 1994, 324–330; Kühn 2010, 51–62).



Fig. 28: Salem (MA), Miss Susan E. Osgood's Garden, supporting arches for climbing plants, Frank Cousins, c. 1900, silver gelatin paper on cardboard mount, left: 23.7 x 18.7cm (photo), right: 23.6 x 18.7cm (photo), Staatliche Museen zu Berlin, Kunstbibliothek, inv. no. 1913, 610.

This physical transformation was accompanied by changes in the formats of knowledge and a move to different storage facilities and rearrangement in various groupings, too. In line with the new purpose of the archive as a repository for images focusing on architecture, the photographs were relabeled according to a new classification. This arrangement was organized following a typology of architecture with a focus on the function of buildings (see Fig. 30 in Hyperimage). Following this new system, the mounted prints were now classified with regard to topography and the function as well as the genre of the edifice depicted. They were each also stamped according to the new classification. Some of these stamps are even partly on the images themselves, indicating the scant regard for the photographs in their original form at the time (see again Fig. 29 in Hyperimage).

Yet the transformation of photo-objects in our collections does not stop. The most recent changes have occurred as a result of our own work and handling of the photographs, which is based on a re-examination of photographs as objects that also includes a re-evaluation. In the course of the twentieth century, and particularly with the institutional re-evaluation of the Art Library's photo collection since the 1990s, the photographs' status changed into a more musealized collection on the history of photography (Derenthal 2008). In this process, photographs by Frank Cousins were integrated into the exhibition *A New View: Architecture Photography from the National Museums in Berlin*, which opened in 2010 in the newly renovated exhibition hall at the Museum of Photography in Berlin (see Fig. 31 in Hyperimage).³⁵ Cousins' photographs were displayed framed with a passe-partout—as is standard practice in showing art photography—valorizing them as prestigious

³⁵ *Ein Neuer Blick. Architekturfotografie aus den Staatlichen Museen zu Berlin* (Derenthal and Kühn 2010a).

art objects and single images. Permanently set into a *passe-partout*, the photographs had to move boxes and shelves again. The former order of the archive was disrupted once more. This transformation of the photo-objects is part and parcel of a changing status of such photo archives as a result of increased historization and musealization.³⁶

Similarly, the photographs of the Galleria Sangiorgi at the KHI (see Fig. 32, to unbox the photographs see Hyperimage) were re-evaluated several times in the course of their journey. Before they were rediscovered amongst the duplicates at the Kunsthistorisches Institut in Florenz, these photographs played an essential role in the workflow of the auction house. The Galleria Sangiorgi was founded by the Italian entrepreneur Giuseppe Sangiorgi (1850–1928) at the Palazzo Borghese in Rome around 1892 and soon became one of the largest and most successful auction houses with many prestigious clients.³⁷ Its photographs were part of a structured business with different departments and offices in various international locations circulating amongst staff, agents, artists, photographers, experts, and collectors. Before they even entered the KHI, they were already bureaucratic hybrids and mobile objects between art, archives, and commerce. The auction house closed in 1970. However, the journey of the photographs does not end here. We do not know exactly how they entered the Photothek of the KHI.³⁸ Once there, they underwent another spatial transformation: with their rediscovery in 2015, the Sangiorgi photographs were inventoried—but not as part of the main holdings. Instead, they traveled to the *Cimelia Photographica* section (Caraffa 2012) where the eldest, rarest, and materially most interesting photographs are kept. As a result of this, they were subject to an enormous shift in perceived value from the “non-collections” of the archive to the photographic “treasures.” This practice is meant to contribute to the appreciation of analog photographs and photo archives through the accentuation of their material richness. However, at the same time there is also a risk of putting certain photo-objects on a pedestal and thus separating them from their archival contexts.³⁹ This is where the concept of archival “ecosystems” comes in, flattening traditional hierarchies and highlighting the importance of each single photograph in its own right (Edwards 2017; Caraffa 2017).⁴⁰

This practice also reflects how research interests have changed over time. Whereas, originally, users would consult photographs mainly for their visual content (to compare works of art), they are now increasingly focusing on the photographs themselves as material objects as well as on the history of photo archives. Within our projects, these photographs are now, as Edwards (2011a) has argued for a long time, resourceful objects which can and should be studied for their historical and social contexts. This also means that photographs become historical objects in their own right, among others in the history of our disciplines. Moreover, the “rediscovery” of the Sangiorgi photographs stemmed from a curiosity for

³⁶ On the difference between working collections of photographs and museum collections, see Edwards and Morton 2015. On the different status of such photographic archives in museums, see Klamm and Wodtke 2017.

³⁷ For more detailed information on the history of the Galleria Sangiorgi, see Candi 2014; Loiacono 2008; Loiacono 2011; Mancini 1999.

³⁸ In the inventory books, many of the Sangiorgi photographs are attributed to the *Alter Bestand* (old holdings) of the Photothek, which are not further specified. These photographs that are not connected to the old holdings seem to have come in from various donors over a time frame of around 50 years (from the late 1920s to 1970s). Neither the books of arrivals nor the institute’s correspondence have yet unearthed any immediate contact to the auction house. However, according to the library’s inventory of 1965, one catalogue was given to the KHI directly from the gallery (“29.9.1965, Inv. Nr. 55836: Dal 1892 al servizio dell’arte e dell’antiquariato, dono Galleria, Anzahl: 1”). Research is still in progress (see also Julia Bärnighausen’s PhD project).

³⁹ See also Caraffa in this volume (Chapter 1).

⁴⁰ See also Edwards in this volume (Chapter 3).



Fig. 32: Box and photographs attributed to the Galleria Sangiorgi in Rome in the “duplicates” section of the Photothek, digital photograph, Kunsthistorisches Institut in Florenz – Max-Planck-Institut, photo: Stefano Fancelli, 2017.

the uncanonical, an affective search for photo-objects that cross archival boundaries, classifications, and typologies. Thus, affect is just as much an archival reality as classification systems and card catalogues (Edwards 2012; Edwards and Morton 2015).

The photo-objects in the Collection of Classical Antiquities in particular are vivid examples of the never-ending transformation of photographs in archives. To this day, photographs of Magnesia on the Maeander river are used for further research with annotations and numbers constantly added. They are permanently handled and used, arranged, and re-arranged.

For example, in 1902, shortly after Carl Humann had died in 1896, but before the leading book about Magnesia was published (Humann, Kohte, and Watzinger 1904) and the first Pergamon Museum opened (1910), Emil Herkenrath wrote his PhD about the friezes of the temple of Artemis (Herkenrath 1902). When preparing this work, he used photographs excessively: he added numbers in pencil that count the figures of the frieze, while the blue “2” refers to a system which reconstructs the fragments of the frieze discovered within its ancient order (compare Fig. 7 and Fig. 33 in Hyperimage).

Furthermore, the frieze was not published through photographs but through drawings, which—in turn—were based on the photographs.⁴¹ This is evident from a little note on the side of the cardboard reading: “trace the part in red” (*das rot unterstrichene durchpausen*).

⁴¹ For a detailed analysis of the (essential) use of different media in archaeology, see Klamm 2017.

Other indicators are the small drawings beside the photograph and the small holes made by pins used to fix the tracing paper. The fragment of the frieze marked with a red line was brought to Constantinople (Mendel 1966, 380). The other ended up in Berlin and is now exhibited in the Pergamon Museum.⁴²

The network continues to expand. On August 23, 1938, the negative of this photograph was registered in the index for negatives as PM 1443 (see again Fig. 22 in Hyperimage). On this date at the earliest, the PM number and also the reference to the publication was added on the cardboard, according to the handwriting.

In his 1976 publication on the frieze of the temple of Artemis in Magnesia, Abdullah Yaylali assumes that the photographs and the documentation material might be missing (Yaylali 1976, 13).⁴³ Since they were kept at the Old Museum in the German Democratic Republic (GDR), he had no access to them and apparently no knowledge as to their existence. Hence, he left no traces on the photographs. Only a mention in the book reveals his absence from the archive. It is a negative result leading to a kind of non-transformation of the photo-objects: although there is no visible material change to the photographs as a result of Yaylali's assumption, it does change their meaning and their status from existing objects to absent ones and therefore absent knowledge.

The "Photo-Objects" project began in 2015. It soon became clear that it was not very easy to handle the selected photographs from Magnesia: they did not have their own identification number within their system. Only the "shelf number" gave a rough idea of their position within this system; the single cardboards only had the number of the negatives or their inventory convolute. If there were more photographs in one convolute or more prints from one negative, it was not possible to select the one being searched for. Therefore we, the project team, decided to allocate ID numbers to every single photo-object and note them on the top left-hand corner of the cardboard (see again Fig. 7, top left-hand corner) (Wodtke 2016; Klamm and Wodtke 2017). Thus, adding our inscriptions and also our personal handwriting to a selected number of photo-objects as part of this project constitutes a further generation of researchers. And so the transformation continues.

The examples of the Art Library, the KHI, and the Collection of Classical Antiquities all show that photographs were physically transformed over and over again, also in terms of their arrangement, use, and evaluation. They took different routes and were often dispersed. The various assessments of the photographs as part of their subsequent incorporation into different collection contexts is of major importance in the Hahne-Niehoff-Archiv, too. One of the main transformations of the archive and its photo-objects resulted from the end of the Nazi regime and the reordering of the institutional landscape in the GDR in the 1950s, leading to a centralization of responsibilities of the scientific and cultural institutions. In the light of this, it was decided that the Halle Museum of Prehistory should collect and display only prehistoric objects. Therefore, its entire ethnographic collection was handed over to East Berlin's Volkskunde Museum (now the Museum of European Cultures) in 1953, including the Hahne-Niehoff-Archiv. From there, some of its contents—the negatives and most of the 11,200 record sheets—were moved to the GDR Academy of Sciences in 1956. Here, the holdings were dealt with in very different ways. While the negatives were largely forgotten,

⁴² But cannot be viewed at the moment due to renovation work in the museum: <https://blog.smb.museum/wo-ist-der-pergamonaltar>, accessed October 19, 2017.

⁴³ In a footnote, he added that the material could probably be found in some archive of the GDR if someone were to conduct research into this.



Fig. 34: *Ochsensfest* 1933, Rotha, index card with photographs from former record sheets, Heinz Julius Niehoff, Institut für Europäische Ethnologie – Humboldt-Universität zu Berlin.

the record sheets were cut and reused by members of the Academy: some of the prints were cut out and repasted into a card catalogue for ethnographic research on regional customs, traditions, and community in East Germany. The photographs of the above-mentioned film no. 02/001, for instance, were integrated into three cards in a section called festivities around Pentecost. Moreover the rearrangement and recombination took place on several levels: individual photographs of different Rotha films were mixed and grouped together according to their motifs (see Fig. 34). In this new compilation, the original sequences of the films as well as those of the festival were ignored. Instead, the index cards introduce a new order of comparison, while focusing on the single image. Scrolling through the different pages of one index card gives an impression of the seriality of motifs and figures of the festival.

As can be seen in Fig. 34, the reuse of pictures with Nazi symbols or the Hitler salute (in other images) seems not to have posed a serious problem in the early days of the GDR. Even the end of the Rotha film showing the speech with men in SA uniforms and the swastika is mounted on one card (see Fig. 35 in Hyperimage). Hahne/Niehoff's descriptions on the record sheets were also transferred (see Fig. 36 in Hyperimage). Furthermore, those cards were merged with those resulting from research and collecting activities in East Germany in the late 1950s. It is obvious that the Hahne/Niehoff photographs were easily integrated into research projects in the early GDR, demonstrating a continuity of research between National Socialist and 1950s *Völkskunde*.



Fig. 37: Divider / Piece of a former record sheet, Heinz Julius Niehoff, in folder no.1 of *Drescher und Dreschen*, Institut für Europäische Ethnologie – Humboldt-Universität zu Berlin.

In the 1960s, the vast majority of the record sheets were simply reused as paper objects—as dividers in administrative files, in personal documents, and in research materials. Cut-up record sheets were also utilized as placeholders for books lent out from the library of the Institute of Volkskunde at the Academy of Sciences. There seems to be no logic determining which of the photographs from the sheets were integrated into the index cards and which of them were used as dividers. The Rotha film no. 02/007, for instance, was incorporated in both: one index card is made of photographs of this negative film only. We also discovered one record sheet cut as a divider in the files on *Drescher und Dreschen*, a 1965 survey on threshers and threshing, as part of research on agricultural equipment and work by Rudolf Quietzsch and Wolfgang Jacobeit (see Fig. 37, compare this with Figs. 38 and 39 in Hyperimage).

Here, photo-objects became mere objects which should refer to nothing (but, of course, they did). As paper objects, they were integrated into different contexts of collecting and managing: from research material to administration files to personal records and library loans. This reuse might be a result of a lack of paper in the GDR. But it could also be interpreted, on the one hand, as a break with the National Socialist history of the discipline (Hägele 2005), and on the other hand, as part of a disciplinary shift of *Volkskunde* toward everyday practices devaluing old canon photographs. In both cases, with the reuse of photographs in index cards and as mere paper objects, the original photo archive was not protected. Instead, the archive was used as a form of “quarry” (Tschirner 2010, 105) where people could take out whatever they wanted. As a result, the Hahne-Niehoff-Archiv becomes a “distributed entit[y]” (Morton and Newbury 2015, 9) with the photo-objects moving between locations and socio-political contexts.

When we look at these examples, it becomes clear that transformation in archives can go hand in hand with both valorization and degradation. Photographs can turn into “mere”

paper objects or the photo-objects can become treasures. Procedures and practices of working in archives may vary in time, but what seems to be certain is that the transformation of the photo-objects continues to this day and will also continue in the future—not least between the analog and the digital environment, which has not been the subject of our paper but which, of course, plays a fundamental role within the archives we are dealing with. Photographs in archives move—through different boxes, shelves, folders, etc.—as part of these transformations. They do not remain in one place. We hope to have shown that these transformations through different practices in the photo archive itself determine the experiences both with and of photographs.

Conclusion

All four archives incorporate a multitude of functions and purposes. The photographs continue to be mobile and haptic objects but they are viewed differently today. In their previous “lives,” these photo-objects would be presented in various formats, picked up, handled, turned around, annotated, numbered, circulated, cut into pieces, punched, and glued together—to name but a few common photographic practices. Nowadays, their handling is much more cautious since it takes place in a clearly defined institutional or museum context. Photographs become part of the historiography of those institutions and the disciplines they represent.

This is also reflected in the changing perspective on photographic collections such as ours: whereas in the nineteenth and early twentieth centuries, art historians, archaeologists, and ethnologists mainly looked at photographs in order to learn more about the artworks, artefacts, or events and people depicted in them, today we are also interested in the photographs themselves as research objects. This does not mean that they are put on a pedestal, never to be touched again. They are still being passed from hand to hand, box to box, room to room. But during this process, they leave a trace of their material history, their biography, in our minds, senses, and pens. In a way, these photographs are epistemological hybrids: entering, leaving, and reentering the archive again and again, each time according to their attributed status in the academic narrative and archival practice. They are reservoirs of knowledge representing disciplinary history as well as its relationship with photography, also shedding light on the history of photography in general, which is no longer just a history of images, but also a history of three-dimensional dynamic photo-objects.

Despite their compulsory standardization, archives are never static entities. Every once in a while, the apparent synchronicity of the archival order is interrupted by discords. These are usually the most revealing: unexpected irregularities, problems, and insecurities make us doubt, think about, and question our fixed beliefs. For a long time now, these beliefs have been underpinned by the rhetoric of objectivity: the assumption that archives are neutral spaces of documentary truth and that photographs are visual representations of some form of reality. Although we know better by now, this rhetoric is still frequently used to undermine the value of analog archival material as well as research related to it—when space is required and funding is hard to come by, it is often the archives that suffer, even more so the photo archives (not to mention slide collections). However, if we watch out for archival interruptions and technical problems, if we look at the margins of the archives, instead of ignoring them, it becomes clear that objectivity is a mere construct and that archives are in fact extremely versatile spaces.

List of Figures

- Fig. 1:* Cardboards and boxes from the *Kunstgewerbe* section of the Photothek, digital photograph, Kunsthistorisches Institut in Florenz – Max-Planck-Institut, photo: Stefano Fancelli, 2015.
- Fig. 6:* Salem (MA), windows in Chestnut Street 26, 29, and 27, Frank Cousins, silver gelatin paper on cardboard mount, c. 1900, left: 20.3 x 16.1 cm (photo), center: 20.4 x 12.4 cm (photo), right: 20.4 x 14.2 cm (photo), Staatliche Museen zu Berlin, Kunstbibliothek, inv. no. 1913, 610.
- Fig. 7:* Fragment of the Artemision's western frieze from Magnesia on the Maeander river, Carl Humann, 1891, albumen paper on cardboard mount, 20.2 x 11.3 cm (photo), 21.6 x 28.5 cm (cardboard), Staatliche Museen zu Berlin, Antikensammlung, inv. no. FA-Mag04-0001, neg. no. PM 1443.
- Fig. 8:* Verso of Fig. 7: Fragment of the Artemision's western frieze from Magnesia on the Maeander river, Carl Humann, 1891, albumen paper on cardboard mount, 21.6 x 28.5 cm (cardboard), Staatliche Museen zu Berlin, Antikensammlung, inv. no. FA-Mag04-0001, neg. no. PM 1443.
- Fig. 11:* Ivory relief of Baptism of Christ, unidentified photographer, c. 1900, albumen paper on cardboard mount, 27.6 x 17.8 cm (cardboard), exchange with the Zentralinstitut für Kunstgeschichte in Munich, Kunsthistorisches Institut in Florenz – Max-Planck-Institut, inv. no. 240986.
- Fig. 12:* Record sheet of a photograph from the *Ochsenfest* in Rotha, in original folder, Heinz Julius Niehoff, 8.9 x 13.6 cm (photo), 34 x 24 cm (cardboard), Staatliche Museen zu Berlin, Museum Europäischer Kulturen, photo archive (Hahne collection), folder "Friedsdorf," photo: Wiebke Zeil, 2015.
- Fig. 20:* Peter Jessen, "Reisestudien. III. Der amerikanische Kolonialstil," in: *Kunstgewerbeblatt* NF 28/3 (December 1916), p. 45 with photographs by Frank Cousins, Staatliche Museen zu Berlin, Kunstbibliothek.
- Fig. 28:* Salem (MA), Miss Susan E. Osgood's Garden, supporting arches for climbing plants, Frank Cousins, c. 1900, silver gelatin paper on cardboard mount, left: 23.7 x 18.7cm (photo), right: 23.6 x 18.7cm (photo), Staatliche Museen zu Berlin, Kunstbibliothek, inv. no. 1913, 610.
- Fig. 32:* Box and photographs attributed to the Galleria Sangiorgi in Rome in the "duplicates" section of the Photothek, digital photograph, Kunsthistorisches Institut in Florenz – Max-Planck-Institut, photo: Stefano Fancelli, 2017.
- Fig. 34:* *Ochsenfest* 1933, Rotha, index card with photographs from former record sheets, Heinz Julius Niehoff, silver gelatin paper, left: 7.4 x 11.8 cm (photo), right 9.4 x 7.3 cm (photo), 29.8 x 21.1 cm (cardboard, open), Humboldt-Universität zu Berlin, Institut für Europäische Ethnologie, Archiv der Landesstelle für Berlin-Brandenburgische Volkskunde, B.I.2.4.14.-3, "Feste um Pfingsten," scan: Wiebke Zeil, 2017.

Fig. 37: Divider/piece of a former record sheet in folder no. 1 of *Drescher und Dreschen*, Heinz Julius Niehoff, 7.9 x 12.8 cm (photo), 11.2 x 24 cm (cardboard), Humboldt-Universität zu Berlin, Institut für Europäische Ethnologie, Archiv der Landesstelle für Berlin-Brandenburgische Volkskunde, B.I.2.2.6.3.-01, divider no. 18, photo: Wiebke Zeil, 2017.

In Hyperimage only:

Fig. 2: The “Image Archive” from the Collection of Photography at the Art Library with its boxes, digital photograph, Staatliche Museen zu Berlin, Kunstbibliothek, photo: Andras Veg, 2015.

Fig. 3: Cabinet 5b: Topography, “Magnesia” in the photo archive at the Collection of Classical Antiquities (Antikensammlung), digital photograph, Staatliche Museen zu Berlin, Altes Museum, photo: Petra Wodtke, 2015.

Fig. 4: Folder “North American Sculpture, 19th–20th century,” which was used for ordering and keeping the photographs in the Art Library’s archive up until the 1960s, digital photograph, Staatliche Museen zu Berlin, Kunstbibliothek, photo: Andras Veg, 2015.

Fig. 5: Mirror frames, unidentified photographer, c. 1900, silver gelatin paper on cardboard mount, 18.3 x 25.4 cm (photo), donation by the Vannini Parenti family from the collection of Elia Volpi, Kunsthistorisches Institut in Florenz – Max-Planck-Institut, inv. no. 434988.

Fig. 9: Fragment of the Artemision’s western frieze from Magnesia on the Maeander river, Carl Humann, taken 1891, printed in the 1930s, collodion paper on cardboard mount, 20.5 x 13.9 cm (photo), 24 x 30.8 cm (cardboard), Staatliche Museen zu Berlin, Antikensammlung, inv. no. FA-Mag04-0004, neg. no. PM 1443.

Fig. 10: Fragment of the Artemision’s eastern frieze from Magnesia on the Maeander river, Atelier Giraudon, Paris, before 1901, silver gelatin paper on cardboard mount, 26.3 x 19.8 cm (photo), 24.1 x 31.1 (cardboard), Antikensammlung, Staatliche Museen zu Berlin, convolute no. 979, inv. no. FA-Mag05-0005.

Fig. 13: *Ochsenfest* 1933, Rotha, film no. 02/001, Heinz Julius Niehoff, Agfa b/w film/edited reversed digital scan, 3.5 x 150 cm, Humboldt-Universität zu Berlin, Institut für Europäische Ethnologie, scan: Wiebke Zeil, 2017.

Fig. 14: *Ochsenfest* 1933, Rotha, sequence of film no. 02/004, Heinz Julius Niehoff, Agfa b/w film/reversed digital scan, 3.5 x 16.6 cm, Humboldt-Universität zu Berlin, Institut für Europäische Ethnologie, scan: Wiebke Zeil, 2017.

Fig. 15: Boston (MA), Daniel P. Parker’s Mansion, staircase (left), stairhead (right), Frank Cousins, c. 1900, silver gelatin paper on cardboard mount, left: 24 x 18.6 cm (photo), right: 23.9 x 18.8 cm (photo), Staatliche Museen zu Berlin, Kunstbibliothek, inv. no. 1913, 610.

- Fig. 16:* The *Kunstgewerbe* section of the Photothek in Palazzo Grifoni, digital photograph, Kunsthistorisches Institut in Florenz – Max-Planck-Institut, photo: Stefano Fancelli, 2015.
- Fig. 17:* Boxes containing “doubles” in the Photothek, digital photograph, Kunsthistorisches Institut in Florenz – Max-Planck-Institut, photo: Stefano Fancelli, 2015.
- Fig. 18:* Chest of drawers (with shadow of camera and head), unidentified photographer, c. 1900, silver gelatin paper on cardboard mount stamped “removed as a duplicate,” 16 x 17.3 cm (photo), Kunsthistorisches Institut in Florenz – Max-Planck-Institut, inv. no. 176435.
- Fig. 19:* Chest of drawers (with shadow of camera and head), unidentified photographer, c. 1900, silver gelatin paper on cardboard mount, 17.4 x 16.2 cm (photo), Kunsthistorisches Institut in Florenz – Max-Planck-Institut, inv. no. 176435.
- Fig. 21:* Niehoff in a procession, unidentified photographer, silver gelatin paper on cardboard mount, 8.2 x 13.2 cm (photo), 29.8 x 21.1 cm (cardboard, open), Humboldt-Universität zu Berlin, Institut für Europäische Ethnologie, Archiv der Landesstelle für Berlin-Brandenburgische Volkskunde, B.I.2.4.14.-2, “Lätare,” scan: Wiebke Zeil 2016.
- Fig. 22:* Fragment of the Artemision’s western frieze from Magnesia on the Maeander river, Carl Humann, 1891, glass negative, 21 x 13 cm, Staatliche Museen zu Berlin, Antikensammlung, neg. no. PM 1443.
- Fig. 23:* “Friesreliefs vom Artemision in Magnesia. Geordnet nach der Zeit ihrer Auffindung,” Staatliche Museen zu Berlin, Antikensammlung, archive signature Mag 8, p. 31, no. 28a.
- Fig. 24:* Fragment of the Artemision’s southern frieze from Magnesia on the Maeander river, Carl Humann?, 1891, albumen paper on cardboard mount, verso, 28.6 x 21.7 cm (cardboard), Staatliche Museen zu Berlin, Antikensammlung, inv. no. FA-Mag07-0005.
- Fig. 25:* *Brunnenhaus* at the Agora, Magnesia on the Maeander river, Carl Humann, 1891, albumen paper on cardboard mount, verso, 28.5 x 21.7 cm (cardboard), Staatliche Museen zu Berlin, Antikensammlung, inv. no. FA-Mag09-0002.
- Fig. 26:* Germantown (PA), entrances in Main Street, Frank Cousins, c. 1900, silver gelatin paper on cardboard mount, left: 23.6 x 13.3 cm (photo), center: 23.7 x 13.9 cm (photo), right: 23.7 x 15.5 cm (photo), Staatliche Museen zu Berlin, Kunstbibliothek, inv. no. 1913, 610.
- Fig. 27:* Inscribed parts from cardboard mounts: sculpture, 19th century, Paris, Kassel, Washington, undated, Staatliche Museen zu Berlin, Kunstbibliothek.
- Fig. 29:* Salem (MA), Frank Cousins’ Garden, Frank Cousins (?), c. 1900, silver gelatin paper on cardboard mount, above: 17.5 x 24 cm (photo), below: 14.7 x 23.6 cm (photo), Staatliche Museen zu Berlin, Kunstbibliothek, inv. no. 1913, 610.

- Fig. 30:* New classification of the “Image Archive,” 1960s, Staatliche Museen zu Berlin, Kunstbibliothek.
- Fig. 31:* Installation shot of the exhibition *A New View* with framed photographs of Frank Cousins, digital photograph, Staatliche Museen zu Berlin, Kunstbibliothek, photo: Ludger Derenthal, 2010.
- Fig. 33:* Fragment of the Artemision’s northern frieze from Magnesia on the Maeander river, Carl Humann, 1891, albumen paper on cardboard mount, 19.7 x 11.9 cm (photo), 28.6 x 21.7 cm (cardboard), Staatliche Museen zu Berlin, Antikensammlung, inv. no. FA-Mag06-0043, neg. no. PM 1438.
- Fig. 35:* *Ochsenfest* 1933, Rotha, index card with photographs from former record sheets, Heinz Julius Niehoff, silver gelatin paper, left: 5.8 x 12.3 cm (photo), right: 6.6 x 11.8 cm(photo), 29.8 x 21.1 cm (cardboard, open), Humboldt-Universität zu Berlin, Institut für Europäische Ethnologie, Archiv der Landesstelle für Berlin-Brandenburgische Volkskunde, B.I.2.4.14.-3, “Feste um Pfingsten,” scan: Wiebke Zeil, 2017.
- Fig. 36:* *Ochsenfest* 1933, Rotha, index card with photographs and description from former record sheets, Heinz Julius Niehoff, silver gelatin paper, 7.7 x 12.8 cm (photo), 29.8 x 21.1 cm (cardboard, open), Humboldt-Universität zu Berlin, Institut für Europäische Ethnologie, Archiv der Landesstelle für Berlin-Brandenburgische Volkskunde, B.I. 2.4.14.-3, “Feste um Pfingsten,” scan: Wiebke Zeil, 2016.
- Fig. 38:* *Ochsenfest* 1933, Rotha, sequence of film no. 02/007, Heinz Julius Niehoff, Agfa b/w film/reversed digital scan, 3.5 x 16.5 cm, Humboldt-Universität zu Berlin, Institut für Europäische Ethnologie, scan: Wiebke Zeil, 2017.
- Fig. 39:* *Ochsenfest* 1933, Rotha, index card with photographs from former record sheets, Heinz Julius Niehoff, silver gelatin paper, left: 7.4 x 11.8 cm (photo), right: 7.3 x 9.4 cm (photo), 29.8 x 21.1 cm (cardboard, open), Humboldt-Universität zu Berlin, Institut für Europäische Ethnologie, Archiv der Landesstelle für Berlin-Brandenburgische Volkskunde, B.I.2.4.14.-3, “Feste um Pfingsten,” scan: Wiebke Zeil, 2017.

References

- Alexandridis, Annetta and Wolf-Dieter Heilmeyer (2004). *Archäologie der Photographie: Bilder aus der Photothek der Antikensammlung Berlin*. Mainz: Zabern.
- Appadurai, Arjun, ed. (1986). *The Social Life of Things: Commodities in Cultural Perspective*. Cambridge, UK: Cambridge University Press.
- Auinger, Johanna (2016). Die Kopie-Bücher Carl Humanns: Ein aktuelles Projekt zur Erschließung seiner Briefe der Jahre 1884 bis 1895 im Archiv der Antikensammlung Berlin. *Antike Welt* 4:35–37.
- Bärnighausen, Julia, Costanza Caraffa, Stefanie Klamm, Franka Schneider, and Petra Wodtke (forthcoming). *Foto-Objekte: Forschen in archäologischen, ethnologischen und kunsthistorischen Archiven*. Berlin: Kerber Verlag.
- Berling, Karl (1910). *Kunstgewerbliche Stilproben: Ein Leitfaden zur Untersuchung der Kunststile für Schulen und zum Selbstunterrichte*. Leipzig: K. W. Hiersemann.
- Bie, Oscar (1908). *Das Kunstgewerbe*. Ed. by Martin Buber. Die Gesellschaft: Sammlung sozialpsychologischer Monographien 20. Frankfurt am Main: Rütten & Loening.

- Blask, Falk and Thomas Friedrich, eds. (2005). *Menschenbild und Volksgesicht: Positionen zur Porträtfotografie im Nationalsozialismus*. Berlin: LIT Verlag.
- Blask, Falk and Uwe Meißner, eds. (1997). *Das unheimliche Idyll. Fotografien aus Mitteldeutschland 1928-1943*. Halle: Technisches Halloren- und Salinemuseum.
- Blask, Falk and Jane Redlin, eds. (2005). *Lichtbild—Abbild—Vorbild: Zur Praxis volks- und völkerkundlicher Fotografie*. Berlin: LIT Verlag.
- Bode, Wilhelm von (1907). *Kunst und Kunstgewerbe*. Berlin: Cassirer.
- Brülls, Holger (2016). *Moderne und Monumentalität. Das Landesmuseum für Vorgeschichte in Halle von Wilhelm Kreis und seine expressionistischen Wandbilder*. Halle (Saale): Landesamt für Denkmalpflege und Archäologie Sachsen-Anhalt.
- Buchli, Victor (2008). Material Culture: Current Problems. In: *A Companion to Social Archaeology*. Hoboken, New Jersey: Wiley-Blackwell, 179–194.
- Burkhardt, Marcus (2015). *Digitale Datenbanken: Eine Medientheorie im Zeitalter von Big Data*. Bielefeld: transcript.
- Candi, Francesca (2014). Fotografie di archaeologia dal fondo Sangiorgi. In: *I colori del bianco e nero: Fotografie storiche nella Fototeca Zeri*. Ed. by Andrea Bacchi. Bologna: Fondazione Zeri, 99–106.
- Caraffa, Costanza (forthcoming). Photographic Itineraries in Time and Space: Photographs as Material Objects. In: *Handbook of Photography Studies*. Ed. by Gil Pasternak. London / New York: Bloomsbury Academic.
- (2011). From Photo Libraries to Photo Archives: On the Epistemological Potential of Art-Historical Photo Collections. In: *Photo Archives and the Photographic Memory of Art History*. Ed. by Costanza Caraffa. Berlin and Munich: Deutscher Kunstverlag, 11–44.
- (2012). Cimelia Photographica. Zum Umgang mit historischen Fotografien im Archiv. *Rundbrief Fotografie* 74:8–13.
- (2017). Manzoni in the Photothek: Photographic Archives as Ecosystems. In: *Instant Presence: Representing Art in Photography*. Ed. by Hana Buddeus, Vojtěch Lahoda, and Katarína Mašterová. Prague: Artefactum, 122–137.
- Caraffa, Costanza and Tiziana Serena, eds. (2015). *Photo Archives and the Idea of Nation*. Berlin: De Gruyter.
- Clifford, James (1988). *The Predicament of Culture. Twentieth Century Ethnography, Literature and Art*. Cambridge, Mass., and London: Harvard University Press.
- Conze, Linda (2015). Die Ordnung des Festes / Die Ordnung des Bildes. Fotografische Blicke auf Festumzüge in Schwaben (1926–1934). *Zeithistorische Forschungen* 12(2, Themenheft: Fotografie in Diktaturen): 210–235.
- Conze, Linda, Ulrich Pohn, and Michael Wildt (2013). Sitzen, baden, durch die Straßen laufen: Überlegungen zu fotografischen Repräsentationen von “Alltäglichem” und “Unalltäglichem” im Nationalsozialismus. In: *Fotografien im 20. Jahrhundert: Verbreitung und Vermittlung*. Ed. by Annelie Ramsbrock, Annette Vowinkel, and Malte Zierenberg. Göttingen: Wallstein, 270–298.
- Daston, Lorraine and Peter Galison (2010). *Objectivity*. New York: MIT Press.
- Davidovic-Walther, Antonia and Gisela Welz (2010). Community Studies as an Ethnographic Knowledge Format. *Journal of Folklore Research* 47(1–2, Special Double Issue: Ethnological Knowledges):89–112.
- Derenthal, Ludger (2008). *Museum für Fotografie. Kunstbibliothek – Sammlung Fotografie, Vortrag auf dem Symposium „Fotografie im Museum,“ 21. bis 23. November 2008*. URL: https://www.smb.museum/fileadmin/website/Museen_und_Sammlungen/Museum_fuer_Fotografie/13_Derenthal.pdf, accessed January 25, 2017.
- (2010). Bau im Bild. In: *Ein neuer Blick: Architekturfotografie aus den Staatlichen Museen zu Berlin, Katalog zur Ausstellung im Museum für Fotografie*. Ed. by Ludger Derenthal and Christine Kühn. Tübingen/Berlin: Wasmuth, 10–17.
- Derenthal, Ludger and Christine Kühn, eds. (2010a). *Ein neuer Blick: Architekturfotografie aus den Staatlichen Museen zu Berlin, Katalog zur Ausstellung im Museum für Fotografie*. Tübingen / Berlin: Wasmuth.
- eds. (2010b). *Museum für Fotografie: Kunstbibliothek—Sammlung Fotografie, Helmut Newton Stiftung*. Leipzig: Seemann.
- Dilly, Heinrich (1975). Lichtbildprojektion: Prothese der Kunstbetrachtung. In: *Kunstwissenschaft und Kunstvermittlung*. Ed. by Irene Below. Gießen: Anabas-Verlag, 153–172.
- Edwards, Elizabeth, ed. (1992). *Anthropology and Photography, 1860–1920*. New Haven, CT: Yale University Press.
- (2001). *Raw Histories: Photographs, Anthropology and Museums*. Oxford and New York: Berg.
- (2009). Photography and the Material Performance of the Past. *History and Theory* 48:130–150.

- (2011a). Photographs: Material Form and the Dynamic Archive. In: *Photo Archives and the Photographic Memory of Art History*. Ed. by Costanza Caraffa. Munich/Berlin: Deutscher Kunstverlag, 45–56.
- (2011b). Tracing Photography. In: *Made to be seen: Perspectives on the History of Visual Anthropology*. Ed. by Marcus Banks and Jay Ruby. Chicago: University of Chicago Press, 159–189.
- (2012). Objects of Affect: Photography Beyond the Image. *Annual Review of Anthropology* 41:221–234.
- (2014). Photographs, Mounts, and the Tactile Archive. *Interdisciplinary Studies in the Long Nineteenth Century* 19:1–9.
- (2015). Anthropology and Photography: A Long History of Knowledge and Affect. *Photographies* 8(3): 235–252.
- (2016). *The Presence of Non-Collections and the Challenge of Photographic Ecosystems*. URL: https://www.fotomuseum.ch/de/explore/still-searching/articles/29378_the_presence_of_non_collections_and_the_challenge_of_photographic_ecosystems, accessed May 11, 2017. In: Institutions and the Production of ‘Photographs,’ publ. 23.9.2016, blog of the Fotomuseum Winterthur.
- (2017). Location, Location: A Polemic of Photographs and Institutional Practices. *Science Museum Group Journal* 7 (Spring 2017). DOI: 10.15180/170709. URL: <http://dx.doi.org/10.15180/170709>, accessed August 17, 2019.
- Edwards, Elizabeth and Janice Hart (2004a). Introduction: Photographs as Objects. In: *Photographs, Objects, Histories: On the Materiality of Images*. Ed. by Elizabeth Edwards and Janice Hart. New York and London: Taylor & Francis, 1–15.
- eds. (2004b). *Photographs Objects Histories: On the Materiality of Images*. London: Routledge.
- Edwards, Elizabeth and Sigrid Lien, eds. (2014). *Uncertain Images: Museums and the Work of Photographs*. Farnham: Ashgate.
- Edwards, Elizabeth and Christopher Morton, eds. (2015). *Photographs, Museums, Collections: Between Art and Information*. London: Bloomsbury.
- Evers, Bernd, ed. (1994). *Kunst in der Bibliothek: Zur Geschichte der Kunstbibliothek und ihrer Sammlungen*. Berlin: Akademie-Verlag.
- Geimer, Peter (2009). The Art of Resurrection Malraux’s Musée imaginaire. In: *Fotografie als Instrument und Medium der Kunstgeschichte*. Ed. by Costanza Caraffa. Berlin / München: Deutscher Kunstverlag, 77–89.
- Geismar, Haidy and Anita Herle (2010). *Moving images. John Layard, fieldwork and photography on Malakula since 1914*. Honolulu: University of Hawai’i Press.
- General-Verwaltung der Königlichen Museen, ed. (1896). *Führer durch die Bibliothek des Kunstgewerbe-Museums*. 2nd ed. Berlin: Spemann.
- Gianferro, Patrizio (forthcoming). *The Exchange Society 1896–1901. Photography as a Vehicle for the Circulation of Illuminated Manuscripts in Europe*. Italian presentation at the conference: Faktizität und Gebrauch früher Fotografie, Bibliotheca Hertziana – Max-Planck-Institut für Kunstgeschichte and Deutsches Archäologisches Institut, Rom, 22.–24.3.2017.
- Hägele, Ulrich (2001). Die Visualisierung des “Volkskörpers”: Fotografie und Volkskunde in der NS-Zeit. *Fotogeschichte. Beiträge zur Geschichte und Ästhetik der Fotografie* 21:5–20.
- (2005). East meets West. Zu einer Foto-Ikonographie zwischen volkskundlicher Sinnstiftung und transnationaler Rezeption in den 1960er Jahren. In: *Ort. Arbeit. Körper. Ethnografie europäischer Modernen (34. Kongress der dgv, Berlin 2003)*. Ed. by Beate Binder. Münster u.a.: Waxmann, 499–513.
- (2007). *Foto-Ethnographie. Die visuelle Methode in der volkskundlichen Kulturwissenschaft*. Tübingen: Tübinger Vereinigung für Volkskunde e.V.
- Hägele, Ulrich and Gudrun König, eds. (1999). *Völkische Posen, volkskundliche Dokumente. Hans Retzlaffs Fotografien 1930 bis 1945*. Marburg: Jonas-Verl. für Kunst und Literatur.
- Hahn, Hans Peter and Hadas Weiss, eds. (2013). *Mobility, Meaning and the Transformations of Things: Shifting Contexts of Material Culture through Time and Space*. Oxford: Oxbow Books.
- Hahne, Hans and Heinz Julius Niehoff (1935). *Deutsche Bräuche im Jahreslauf*. Halle (Saale): Landesanstalt für Volksheitskunde.
- Hamber, Anthony J. (1996). *“A Higher Branch of the Art”: Photographing the Fine Arts in England, 1839-1880*. Amsterdam: Gordon and Breach.
- Herkenrath, Emil (1902). *Der Fries des Artemisions von Magnesia a. M.* Berlin.
- Hevia, James L. (2009). The Photography Complex: Exposing Boxer-Era China (1900 – 1901), Making Civilization. In: *Photographies East: The Camera and Its Histories in East and Southeast Asia*. Ed. by Rosalind C. Morris. Durham, NC: Duke University Press, 79–121.
- Hingley, Richard (2005). *Globalizing Roman Culture. Unity, Diversity and Empire*. London: Routledge.

- Humann, Carl, Julius Kohte, and Carl Watzinger (1904). *Magnesia am Mäander: Bericht über die Ergebnisse der Ausgrabungen der Jahre 1891–1893*. Berlin: Reimer.
- Jessen, Peter (1916–1917). Reisestudien. I.–IX. *Kunstgewerbeblatt NF* 27/12, 28/2, 28/3, 28/5, 28/6, 28/8, 28/9, 28/10, 28/12.
- (1916). Reisestudien. III. Der amerikanische Kolonialstil. *Kunstgewerbeblatt NF* 28(3):41–48.
- Jung, Matthias (2015). Das Konzept der Objektbiographie im Lichte einer Hermeneutik materieller Kultur. In: *Biography of Objects: Aspekte eines kulturhistorischen Konzepts*. Ed. by Dietrich Boschung, Patricia Alexander Kreuz, and Tobias Kienlin. Morphomata 31. Paderborn: Fink, 35–65.
- Justnik, Herbert (2012). "Volkstypen" - Kategorisierendes Sehen und bestimmende Bilder. In: *Visualisierte Minderheiten: Probleme und Möglichkeiten der musealen Präsentation von ethnischen bzw. nationalen Minderheiten*. Ed. by Petr Lozoviuk. Dresden: Thelem, 109–136.
- Kern, Otto (1900). *Die Inschriften von Magnesia am Maeander*. Berlin: Spemann.
- Kiel, Ernst and Alfred Schneider (1995). *Das Quastenfest: Gegenwart und Vergangenheit*. Quastenberg: Quastenberg e.V.
- Klamm, Stefanie (2016). Reverse—Cardboard—Print: The Materiality of the Photographic Archive and Its Function. In: *Documenting the World: Film, Photography, and the Scientific Record*. Ed. by Gregg Mitman and Kelley Wilder. Chicago / London: The University of Chicago Press, 166–199.
- (2017). *Bilder des Vergangenen: Visualisierung in der Archäologie im 19. Jahrhundert—Fotografie, Zeichnung und Abguss*. Berlin: Gebr. Mann Verlag.
- Klamm, Stefanie and Petra Wodtke (2017). Vom Versammeln und Archivieren: Konzepte archäologischer Fotosammlungen im Vergleich. *Fotogeschichte* 37(144):39–50.
- Knappett, Carl (2005). *Thinking Through Material Culture. An Interdisciplinary Perspective*. Pennsylvania.
- Krajewski, Markus (2002). *Zettelwirtschaft: Die Geburt der Kartei aus dem Geiste der Bibliothek*. Berlin: Kadmos.
- Kühn, Christine (1994). „für solche andächtige Betrachtung gesammelt ...“: Fotografie in der Kunstbibliothek. In: *Kunst in der Bibliothek: Zur Geschichte der Kunstbibliothek und ihrer Sammlungen*. Ed. by Bernd Evers. Berlin: Akademie-Verlag, 322–333.
- (2010). Die Sammlung Fotografie der Kunstbibliothek. In: *Museum für Fotografie: Kunstbibliothek—Sammlung Fotografie, Helmut Newton Stiftung*. Ed. by Ludger Derenthal and Christine Kühn. Leipzig: Seemann, 28–71.
- Latour, Bruno (2005). *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.
- Lehnert, Georg H., E. W. Braun, W. Behncke, M. Dreger, O. von Falke, J. Folnesics, O. Kümmel, E.A. Pernice, and G. Swarzenski, eds. (1907–1910). *Illustrierte Geschichte des Kunstgewerbes*. Berlin: M. Oldenbourg.
- Locher, Hubert (2011). Hamann's Canon: The Illustration of the Geschichte der Kunst (1933) and the Photo Archive of the Kunstgeschichtliches Seminar in Marburg. In: *Photo Archives and the Photographic Memory of Art History*. Ed. by Costanza Caraffa. Berlin/Munich: Deutscher Kunstverlag, 297–312.
- (2012). The Idea of the Canon and Canon Formation in Art History. In: *Art History and Visual Studies in Europe: Transnational Discourses and National Frameworks*. Ed. by Matthew Rampley, Thierry Lenain, Hubert Locher, Andrea Pinotti, Charlotte Schoell-Glass, and Kitty Zijlmans. Brill's Studies on Art, Art History, and Intellectual History 4. Leiden / Boston: Brill, 29–40.
- Loiacono, Debora (2008). *Collezionismo e mercato artistico a Roma tra '800 e '900: La Galleria Sangiorgi. Tesi di laurea in metodologia della ricerca storico-artistica*. Supervisor: Alberto Cottino, Bologna. MA thesis. Bologna.
- (2011). Gli arredi 'in stile' della Galleria Sangiorgi di Roma e qualche appunto su Umberto Giunti alias Falsario in Calcinaccio. *Vallori Tattili*:105–116.
- Malraux, André (1965). *Le Musée imaginaire: les voix du silence*. Paris: Gallimard.
- Mancini, Claudio Maria (1999). Giuseppe Sangiorgi, antiquario e filantropo. *L'Urbe. Rivista Romana* 59(4):109–132.
- Martin, Matthew (2010). Relics of Another Age. Art history, the 'Decorative Arts' and the Museum. *Journal of Art Historiography*:7–21.
- Mason, Randall (2009). *The Once and Future New York: Historic Preservation and the Modern City*. Minneapolis: University of Minnesota Press.
- Mattingly, David. J. (1997). Introduction. Dialogues of Power and Experience in the Roman Empire. In: *Dialogues in Roman Imperialism. Power, Discourse, and Discrepant Experience in the Roman Empire*. Ed. by D. J. Mattingly and S. E. Alcock. Journal of Roman Archaeology. Supplementary Series 23. Portsmouth: Oxbow, 7–24.
- Mendel, Gustave G. (1966). *Catalogue des sculptures grecques, romaines et byzantines, Musées Impériaux Ottomans: Part 1*. Rome: Bretschneider. Reprint of the 1912 edition.

- Morton, Christopher (2005). The Anthropologist as Photographer: Reading the Monograph and Reading the Archive. *Visual Anthropology* 18(4):389–405.
- Morton, Christopher and Darren Newbury (2015). Introduction: Relocating the African photographic Archive. In: *The African Photographic Archive: Research and Curatorial Strategies*. Ed. by Christopher Morton and Darren Newbury. London: Bloomsbury, 1–16.
- Mundt, Barbara (1974). *Die deutschen Kunstgewerbemuseen im 19. Jahrhundert*. Studien zur Kunst des 19. Jahrhundert 22. Munich: Prestel.
- Page, Max and Randall Mason (2004). *Giving Preservation a History: Histories of Historic Preservation in the United States*. New York / London: Routledge.
- Pinney, Christopher (1992). The Parallel Histories of Anthropology and Photography. In: *Anthropology and Photography 1860–1920*. Ed. by Elizabeth Edwards. New Haven/London: Yale University Press, 74–95.
- (1997). *Camera Indica: The Social Life of Indian Photographs*. London: Reaktion Books.
- Sachsse, Rolf (2003). *Die Erziehung zum Wegsehen: Fotografie im NS-Staat*. Dresden: Philo Fine Arts.
- Schlehe, Judith and Sita Hidayah (2014). Transcultural Ethnography: Reciprocity in Indonesian-German Tandem Research. In: *Methodology and Research Practice in Southeast Asian Studies*. Ed. by Mikko Huotari, Jürgen Rüländ, and Judith Schlehe. London: Palgrave Macmillan, 253–272.
- Schneider, Franka (2019). Tandemforschung im Foto-Archiv: Ein Bericht aus dem interdisziplinären Projekt “Foto-Objekte”. In: *Zusammen arbeiten: Praktiken der Koordination und Kooperation in kollaborativen Prozessen*. Ed. by Stefan Groth and Christian Ritter. Bielefeld: transcript, 135–163.
- Schneider, Franka, Julia Bärnighausen, Stefanie Klamm, and Petra Wodtke (2017). Die Materialität des punctum: Zum Potential ko-laborativer Objekt- und Sammlungsanalysen in Foto-Archiven. In: *Eine Fotografie: Über die transdisziplinären Möglichkeiten der Bildforschung*. Ed. by Irene Ziehe and Ulrich Hägele. Münster: Waxmann, 217–241.
- Schörner, Günther (2005). Imperialismus, Kolonialismus und Postkolonialismus in der Romanisierungsforschung. In: *Romanisierung – Romanisation. Theoretische Modelle und praktische Fallbeispiele*. Ed. by BAR International Series. 1427. Oxford: Archaeopress, 25–34.
- Schulte, Eduard, ed. (1963). *Chronik der Ausgrabung von Pergamon 1871–1886: Aus Berichten und Briefen des Humann-Kreises*. Dortmund: Ardey Verlag.
- Schwartz, Joan M. (1995). We Make Our Tools and Our Tools Make Us: Lessons from Photographs for the Practice, Politics, and Poetics of Diplomats. *Archivaria: The Journal of the Association of Canadian Archivists* 40:40–74.
- (2012). ‘To Speak Again With a Full Distinct Voice’: Diplomats, Archives, and Photographs. In: *Archivi fotografici: spazi del sapere, luoghi della ricerca*. Ed. by Costanza Caraffa and Tiziana Serena. Rome: Carocci Editore, 7–24.
- Steber, Martina and Bernhard Gotto (2014a). *Visions of Community in Nazi Germany: Social Engineering and Private Lives*. Oxford: Oxford University Press.
- (2014b). Volksgemeinschaft: Writing the Social History of the Nazi Regime. In: *Visions of Community in Nazi Germany: Social Engineering and Private Lives*. Ed. by Martina Steber and Bernhard Gotto. Oxford: Oxford University Press, 1–25.
- Stricker, Martin (2010). *Imaginierte Volkheit: Das Fotoarchiv der Landesanstalt für Volkheitskunde, Halle (Saale) 1927–1943*. MA thesis. Magisterarbeit am Institut für Europäische Ethnologie der HU Berlin, unpublished manuscript.
- te Heesen, Anke and Anette Michels, eds. (2007). *auf/zu: Der Schrank in den Wissenschaften*. Berlin: Akademie Verlag.
- Tschirner, Ulfert (2010). Sammlungsarchäologie. Annäherung an eine Ruine der Museumsgeschichte. In: *Museum revisited: transdisziplinäre Perspektiven auf eine Institution im Wandel*. Ed. by Kurt Dröge. Bielefeld: transcript Verlag, 97–112.
- Umbach, Maiken (2015). Selfhood, Place, and Ideology in German Photo Albums, 1933–1945. *Central European History* 48:335–365.
- Vogelsang, Bernd (1989). Das Museum im Kästchen oder Die Erfindung des Kunstgewerbemuseums als Photosammlung durch den Freiherrn von Minutoli (1806–1887). In: *Silber und Salz: Zur Frühzeit der Photographie im deutschen Sprachraum 1839–1860, Katalog zur gleichnamigen Ausstellung im Wallraff-Richartz-Museum/Museum Ludwig, Köln*. Ed. by Bodo von Dewitz and Reinhard Matz. Köln: Edition Braus, 522–547.
- Webster, Jane (1997). Necessary Comparisons: A Post-Colonial Approach to Religious Syncretism in the Roman Provinces. *World Archaeology* 28(3):324–338.
- Wodtke, Petra (2016). “Foto-Objekte”: Ein neues Forschungsprojekt in der Antikensammlung. *Antike Welt* 3:35–37.

- Wöhler, Renate (2015). Einleitung. In: *Wie Bilder Dokumente wurden. Zur Genealogie dokumentarischer Darstellungspraktiken*. Ed. by Renate Wöhler. Berlin: Kadmos, 7–24.
- Yaylali, Abdullah (1976). *Der Fries des Artemisions von Magnesia am Mäander*. Tübingen: Wasmuth.
- Ziehe, Irene (1996). *Hans Hahne (1875 bis 1935), sein Leben und Wirken. Biographie eines völkischen Wissenschaftlers*. Halle (Saale): Landesmuseum für Vorgeschichte.

Chapter 3

Thoughts on the “Non-Collections” of the Archival Ecosystem

Elizabeth Edwards

This paper considers the material dynamics on the edge of the archive. It argues that photographic practices form the ecosystem of the archive or museum, simultaneously maintaining, reproducing, and disturbing the hierarchies of value and categories that have created collections and performed photographs as certain kinds of things. However, these remain invisible practices, non-collections beyond the boundary of the archive, yet equally significant as epistemological and thus historical and cultural players.

Many years ago, working through the miscellaneous archaeological layers of the photograph collections at Pitt Rivers Museum in Oxford, I came across a brown envelope containing multiple resin-coated prints, probably dating from about 1960. The images were of historical photographs in the collection there. There seemed no rhyme or reason to them. The subject matter was very diverse but the groups of prints were all identical in and of themselves, the same number of prints for each image and they all had holes punched in their left-hand sides. The envelope carried some sort of caption, perhaps a date, and each photograph was just given a number (no description) which again I did not recognize as anything meaningful. Then it suddenly dawned on me. These were photographs that had been used as examination questions, these new material objects were the result of careful selection in the demonstration of some anthropological or ethnographic question or other.

Yet these photographs are material objects with an intended longevity of some sort, with a purpose, for an audience, within a disciplinary framework. Certainly, nobody had thrown them out. They told us something about that framework and something of the social activity of the image that they reproduced and projected across a dispersed plain of meaning. The photographs cannot simply be reduced to just “copies,” mere *simulacra* or duplicates, because they had a clear epistemological purpose in their own right. However, these photographs were there but not there, materially present, previously dynamic, yet intellectually invisible. They were outside the hierarchical structures that render some things preservable and others not. The fact that the brown envelope of photographs in the Pitt Rivers Museum cannot now be located, but I am sure is there, somewhere, rather reinforces the argument I wish to pursue here.

The experience of encountering these photographic prints sowed the seeds of a question which I have pondered ever since. How do we think about the material presence of photographs which are clearly active in the epistemological infrastructure of both a collection and its discipline, but are not recognized as *of it* in material terms? This paper is not about collecting policy or descriptive practices. There is a huge literature on these topics, and archivists and curators are trained rigorously in appraisal, acquisition, and disposal. Rather it represents some thoughts about the assumptions and hierarchies of value that shape the

very existence of collections. Consequently, it is intended as a heuristic device to bring our categories of analysis to the surface.

The idea of analyzing collections and disciplinary infrastructures has become intellectually fashionable of late. It aligns with the increasing analytical emphasis on photographs, not as singular objects but as assemblages in social and institutional contexts, as sets of social relationships. But how is that assemblage of photographs constituted as a conceptual entity? Where is it located in institutional hierarchies? What are its boundaries? And what happens at those boundaries? Such questions are important because the current interest in the materiality, biography, multiple forms, and fluidity of the collection cannot be contained merely in the study of what has been institutionalized and managed as “the collection.” The collection is instead also located in the photographic actions around it, which continually activate that collection over a network of multiple performances that are materially present but institutionally invisible.

Before I develop this argument further, a few definitions are necessary. Rather than the term “archive,” I shall use “collection”—an assemblage of objects (including the digital) which encompasses here both museums and archives, although it should be noted that they have different agendas and the way they police their boundaries might be differently positioned in terms of material objects. But the processes that concern me are effectively identical over the territory. I also want to avoid “archive” in its more metaphorical usages that have been spawned by Derrida’s arguments in *Archive Fever* (Derrida 1996). While they resonate within my discussion, they are not my concern here.

Collections and non-collections

I am now going to consider the processes that designate photographs as “collections” or “non-collections.”¹ Photographs are the only class of museum object that is simultaneously a collectable item (a significant object) and a tool of management (used to record and present objects within the museum from conservation reports to websites), whether we are considering the 1860s or contemporary uses. This is compounded by a slippage of language between “photograph” (a thing) and photography (a process or activity). These ambiguous and dichotomous relations are manifested through these “collections” and “non-collections.” That is, between, on the one hand, a sharply articulated material presence defined through institutional relevance, whether it be as art object or acknowledged collected items, for instance, in anthropology museums such as Pitt Rivers Museum in Oxford or Musée du quai Branly in Paris (see Fig. 1). On the other hand is the non-collection—those myriads of historically located material photographic practices which exist in institutions but are not “collections.” If they are acknowledged, they often exist in a hierarchical relationship and are sequestered to the margins of curatorial practice and kept, that is located, as “archives” or “related documents.” They are seen as servicing “real” collections, and understood as merely supporting, or providing information about, for instance, how ethnographic objects were worn, or the details of archaeological sites. Many more are sequestered physically in service de-

¹ There is an emerging literature in this field which moves beyond the consideration of “art” collections to analyze the entanglement of photographs within museums in particular. See Hamber (1996) and more recently Kratz (2011, 21–48); Crane (2013, 123–140); Edwards and Lien (2014); Edwards and Morton (2015) as well as essays therein. See also https://www.fotomuseum.ch/en/explore/still-searching/authors/29334_elizabeth_edwards, accessed November 21, 2017.



Fig. 1: Collections © Pitt Rivers Museum, University of Oxford.

partments—photographic studios, design studios, and so forth—separated from the main business of “collecting.”

However, these are vitally important photographs. In them resides the history of intersecting institutional and disciplinary epistemologies; they are what Lorraine Daston calls epistemic images (Daston 2015, 13–35). Yet they are not understood as such in their own right. This also translates into hierarchies of skill within institutions, with certain formative skills, such as photographic skills, being, again, invisible. This was neatly demonstrated in a conference question-time exchange with a senior keeper at a major German museum a few years ago. When I asked how the curatorial team planned the actual photography of objects for their impressive virtual gallery I was told dismissively: “We didn’t, that is a purely technical matter.” It seems that nobody had asked the intellectual question how do photographs change objects?

I have pondered the position I have just outlined for many years, as I watch institutions at work as user, curator, and commentator. Consequently, I shall now consider the implications of the material parameters of the collection and material and conceptual ambiguities at those boundaries as the material presence and practice of photographs in institutions are negotiated. I shall tackle this from three perspectives which overlap and mutually inform one another. First is the concept of ecosystem which, drawing on ideas of network or meshwork, has been applied increasingly to institutional processes and practices. Second are what I am calling “thought-landscapes” and maintenance of institutional categories. These are constituted through what might be described as “second-order epistemologies” perhaps, characterized by a dense genealogy of assumptions. These assumptions police the boundaries and purify the collections and the value systems that sustain them (Edwards 2017). I am especially concerned with the differential visibility which determines the categories

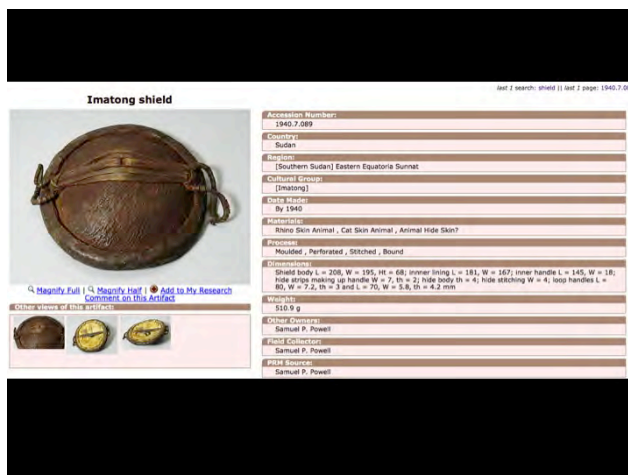


Fig. 2: Non-Collections. Management Photographs © Pitt Rivers Museum, University of Oxford.

and hierarchies of value. Thirdly, and finally, I shall look at agitation at the boundaries—because boundaries are transformative spaces where both dangerous and productive things can happen.

Underlying my argument are two key papers which offer useful ways to think about the questions I have outlined. First is Marilyn Strathern’s 1996 essay “Cutting the Network” (Strathern 1996, 517–535) in which she discusses the relationship between the concept of the hybrid and the network. If a network is a socially expanded hybrid, then hybrids are condensed networks—and what are the conditions of its stasis or stabilization? Where does obligation within a network end? This concept works well in determining the complex relations between collections and non-collections. Second, I draw on Christopher Pinney’s 2005 essay “Things Happen” (Pinney 2005, 256–272) which asks from what moment we can say an object comes and to what extent the presences and work of things, here photographs, emerge from multiple realms and moments that are manifested through multiple and temporally dispersed material forms and that confront historical and cultural assumptions and categories.

Behind this are, of course, much wider questions which are beyond the scope of this essay and which in any case have been well chewed over. How institutions make objects one kind of thing or another? How epistemologies translate into location and into category and to what extent categories might be sustained or challenged over time? It is now a museological commonplace that institutions create certain ways of seeing that make, translate, and consolidate objects as certain kinds of things—“the museum effect.” As art historian Svetlana Alpers stated, “everything in a museum [here my collection] is put under the pressure of a way of seeing” (Alpers 1991, 29).² This establishes the parameters of interest and quality of attention given because institutions are, as Gillian Rose has noted, “groups of statements which structure the way a thing is thought” (Rose 2001, 136). Photographs thus become disciplinary roadways that, as Mary Morgan has put it, “facilitate the travelling of facts, but

² See also Hooper-Greenhill 1992.



Fig. 3: The Shop: National Gallery, London, photo: Elizabeth Edwards.

at the same time, like rails, they may also limit the range and possibilities for travel” (Morgan 2011, 31). However, for all this scholarship on the categories of and practices related to collections, remarkably little attention has been given to photographs despite, or perhaps because of, their ubiquity. Yet photographs present us with perhaps the most perplexing kind of object, being, with equal epistemological force and symbiotic power, both collections and “non-collections.”

Ecosystem

I turn first to the idea of collection/non-collection as an ecosystem. An ecosystem might be defined as a barely perceptible yet palpably present network of finely balanced, yet vital, sets of interconnections, dependencies, benefits, and threats. It sustains a particular environment expressed through practices, materialities, hierarchies, and values (Edwards and Lien 2014, 4–5). The various manifestations of photographs in institutions are such an ecosystem. As I have already noted, photographic manifestations do not simply stop at the discrete material object but they spawn a mass of material objects that make meaning around the discrete object (see Fig. 2). There are accession photographs, conservation photographs, loan and condition report photographs, research photographs and all are historically located. There is an extent to which the museum object becomes a sum of its parts (which we must remember includes photographs). Photographs in the institutional ecosystem also exist, in material forms, as multiple originals: negatives, prints, digital scans, lantern slides, 35mm transparencies, publication prints—copies of copies, copies of copies of copies, a vast network of dependencies. As Malraux commented, photography became the organizing device which establishes the vast heterogeneity of the collection to a single perfect similitude³ (see Fig. 3). The apotheosis is perhaps the museum shop, where all objects are reduced to a series

³ Quoted in Crimp 1993, 54.

of consumable photographs, gathered around the collection, and spread across innumerable forms.

Thus, the photographic ecosystem is arguably the expanded instrument through which things, objects, can show themselves. Photographs mediate both existence and experience—consequently, the role of the ecosystem is “not simply instrumental but hermeneutic,” defining thought-landscapes, as materialities create their own force fields in a mesh of possibilities (Domanska 2006, 172; Pinney 2005, 261).

Despite the network of dependencies that feeds and stabilizes the values of museums and archives, these are made up of intersecting epistemologies that cluster around “the object” in different ways. They may “look” the same in representational terms, carrying a seductive visual equivalence that elides the work of material nuance. In many instances, non-collections of photographs look very like “collection” photographs themselves, merely with a different material form—traces of traces of traces. But, at the same time, there are historical layers to the representational practices around photographs themselves within the institutional ecosystem. These are significant because they track shifts in evaluation and the making of meaning. For instance, at the V&A, the first postcards, or non-collection photographs, produced for sale from photographs in the “collections,” were produced (and apparently sold, for they are reprinted) as hard, high contrast, glossy black and white prints, with no sense of the material qualities of the object.⁴ Meanings are dispersed through multiple material performances. The assumption is that these photographs are series of disaggregated forms that can be rendered collections or non-collections. However, all material players in the ecosystem are subject to the careful negotiated balance of meaning and practice. I would argue that we are looking at a dispersed flow of related objects that make meanings within a common discourse and ecosystem, some of which are deemed ephemeral, while some are preserved. Yet all carry forms of agency, effect, performativity, and power.

Perhaps they can be characterized as what anthropologist Alfred Gell has described as a “distributed object,” in that there is a surface coherence—here, that of photography—but is comprised of multiple objects with different microhistories and subject to different forms of evaluation over space and time (Gell 1998, 221). Of course, the different strands of practice forming these microhistories constitute the ecosystem. As I have noted, those processes are often invisible—as is much of an ecosystem—below the metaphorical waterline. But these repetitions constitute hybrids of complex epistemologies and value systems at the intersection of different knowledge systems which sustain institutions.

Categories

I shall now turn to the way in which ecosystems translate into categories of action and process, as photographs are controlled by the imposition of patterns of saliency and visibility. How do institutional thought-landscapes manifest themselves as categories and hierarchies of value which translate and fragment the ecosystem into collections and non-collections? All history is texted by the pattern of its archiving; of course, it was ever thus. But given the expanded base of photographic study, where does this leave us in the potential infinity of the network? Strathern’s concept of “cutting the network,” the perceived limits of relational action, can be used to account for the way in which some sets of ecosystem relationships are

⁴ V&A Archives A0803. Significantly great care appears to have been taken with the material qualities of other classes of museum object.

deemed no longer valid or even desirable. Yet if we are to write our institutional ethnographies, our histories of material practice, our biographies of objects, this ecosystem is central—the relations between collections and non-collections have historiographical impact. Consequently, one must ask: what are the actions of such categories?

Categories are, as Michel Foucault has famously argued, an epistemological apparatus that constitute political, social, and moral discourses. Categories allow a thing, here a photograph, “to pass over in its entirety into the discourse that receives it” (Foucault 1970, 135). Categories have ideological origins, and their consequences become naturalized within institutional practices and agendas and resonate through them long after their apparent demise. This is again familiar analytical territory, but it is worth restating.

Perhaps the root of photographs’ uncertainty in institutions is their ambiguity in the key areas of disciplinary-value hierarchy—uniqueness, preciousness, significance, and material specificity. Photographs, as we have noted, exist as multiple originals. With the exception of daguerreotypes, tintypes, polaroids, and a few other single-image technologies, this multiplicity is a defining characterization of the medium. Consequently, a range of museums can hold historical and contemporaneous prints of a photograph by, for instance, Talbot, or Alinari, and still legitimately claim to hold an “original.” As I have noted, however, photographs spawn further originals, which also reside in institutions, for instance, negatives, multiple prints, lantern slides, copy and mediated prints (details, crops, enlargements), and even the born-digital. All have legitimate claims to be “original historical objects.” Thus, as I noted earlier, the very physical identity is ambiguous in institutional terms as the “originality” and “significance” of “a photograph” might be dispersed across many related but discrete objects. As Pinney has asked, “from what moment does this object come?” (Pinney 2005). Good question. The ubiquity of forms challenges the hierarchies of value and the categories that sustain them. What is a multiple original, what is a reproduction, and when does it become historically significant? Categories shape the conditions under which the ecosystem becomes visible.

Different kinds of institutions have, of course, different sets of boundaries between “collections” and “non-collections.” “Archives” are more inclusive conceptually and materially than “art galleries,” for instance, and within this, objects are subjected to different levels of intellectual control. But there is nonetheless a general pattern to non-collections. They exist in a hierarchical relationship with other classes of objects and are often sequestered to the margins of curatorial practice and kept, that is, located, as “archives,” that is, outside the value systems of “collections.” And there are categories within non-collections, those that *are* recognized as having historical significance and are now subject to considerable historical analysis. For example, most anthropology archives now come into this category and are recognized as being “collections” even if this remains contested in some quarters. Yet the presence of photographs is perhaps not seen as dynamic within institutions. Once, in conversation with a social history curator who I knew had 35,000 glass plates of local interest in his collection, I asked how he thought about the photographs in relation to the rest of the collection. His answer was, “Well we don’t really, they are just there.”

However, equally important are the massive photographic non-collections (see Fig. 4), as I have suggested, scattered through institutions, that cluster around institutional practice and track concepts of significance within the institution—that vast heterogeneity that André Malraux noted (Malraux 1965). The history of institutions is vested in their non-collections, which are often unlisted, cataloged—just there, but represent an enormous force of episte-



Fig. 4: Non-Collections, photo: Elizabeth Edwards.

mological performance. They are nonetheless subject to categories that perform a form of purification on which institutional identities, and indeed integrity, depends. Consequently, most non-collections are marked by their intellectual invisibility.

These categories are played out in everyday institutional practices. For instance, the dominant form of photographic collecting for “art collections” has been the print. This relates to the discourses of modernist curatorship and the fine print, the final act of photographic production. Conversely, negatives are not perceived as having aesthetic value in and of themselves. Thus, negatives, like other “functional” forms such as lantern slides, tend to be marginalized as archives, as supporting objects of higher hierarchical value. For instance, Damarice Amao has described the practical and conceptual challenges to the core assumptions of photographic collecting practices when the photographic work of surrealist artist Eli Lotar was acquired by the Georges Pompidou Centre not as prints but as unremarkable boxes of negatives (Amao 2015, 231–245).⁵ Glenn Willumson, writing in 2004, argued that stereocards had been largely excluded from writing on “the history of photography” because not only were they “commercial” and mass-produced but their small, questionable print quality made them “unexhibitable” in terms of gallery aesthetics (Willumson 2004, 84–99). This situation has only changed with more widely available digital display technologies (see Fig. 5), more “cultural history” and material approaches to photography, which have brought stereocards into a more active institutional dynamic, for instance, at

⁵ Significantly, in 2017, Eli Lotar was the subject of a major exhibition at the Jeu de Paume, Paris, <http://www.jeuropaume.org/index2014.php?page=article&idArt=2719>, accessed July 19, 2017.



Fig. 5: Cultural Histories as Collection Tate Britain, photo: Elizabeth Edwards.

the Tate Britain’s 2014 exhibition, *The Poor Man’s Picture Gallery*.⁶ I shall return to the question about how things change category later.

The flow of photographs across categories in their multiple and hybrid forms within the ecosystem has to be managed to maintain the boundaries between collections and non-collections, to establish the purity of the photographic. As Douglas Crimp notes, the “fatal error” for museums, especially those invested in photography, is to admit the very thing that constitutes it (Crimp 1993, 56).

Blurred boundaries

Finally, I turn to the boundaries which have been too much assumed through my account. It is very easy to reify boundaries, and institutions have a tendency towards a rhetorical reinforcement of the boundaries, so that they can then claim to push against them when the need for some excitement is felt, for instance, the fascination of the art world with what they term “vernacular” photographs.

As we have seen, institutional categories intervene in the network of photographic flows and dictate what are collections and what are non-collections. As anthropologist Patricia Spyer has argued, in a way that resonates with my collections/non-collections model, things at boundaries are neither “here” nor “there,” neither fully absent nor unambiguously present (Spyer 1998, 1). Are non-collections invisible or merely unacknowledged objects of terror at the boundary of the unknown? Network as a concept has done much to blur categories,

⁶ Carol Jacobi: “Tate Painting and the Art of Stereoscopic Photography,” <https://www.tate.org.uk/whats-on/tate-britain/display/bp-spotlight-poor-mans-picture-gallery-victorian-art-and-stereoscopic/essay>, accessed November 21, 2017.



Fig. 6: National Museum of Ethnology, Lisbon, photo: Elizabeth Edwards.

giving off as it does “diverse signals” (Strathern 1996, 520). Tim Ingold’s concept of mesh-work is perhaps even more productive, in that relations constitute an *interwoven* tissue of knots rather than being simply connected (Ingold 2011, 70). What are the categories at work as the borders between collection and non-collection are re-negotiated? For such renegotiations are becoming increasingly frequent as the social, cultural, and material history of photography that I have noted becomes more visible. For instance, the recent exhibition in Lisbon which explored the folkloric survey in mid-twentieth century Portugal through its material/visual archival deposits (see Fig. 6).⁷

However, while there is this increasing engagement with non-collections, we also have to ask about the terms of that engagement. While there is much important anthropological and sociological work at the edges of the collection engaging precisely with that ambiguity, such as the excellent exhibition in Lisbon, in many cases, I would argue that non-collections are being absorbed, not in terms of *expanded categories* of analysis, but rather into *existing* categories of evaluation and analysis. For instance, it is interesting to watch the trajectory of Sir Benjamin Stone’s “record photographs” (see Fig. 7). He is transformed from the rather dull photographer he was through the privileging of single images that appeal to presentist categories, as he becomes, for instance, a proto-surrealist. Of course, objects are constantly reinterpreted, but what is interesting here is that the absorption of non-collections is dependent on their perceived ability to speak to and reinforce extant categories of value rather than disturb those categories.

Another instance here is the increasing visibility of the V&A Guard Books. The Victoria and Albert Museum (or South Kensington Museum as it was until 1899) was the first UK museum to make photography integral to its museum practice and management, photograph-

⁷ See Faria 2016, see also <https://mnetnologia.wordpress.com/edicoes-online/>, accessed July 19, 2017.



Fig. 7: Maundy Money, 1898, Sir Benjamin Stone © Victoria and Albert Museum, London.

ing many of the objects in its care from the late 1850s onwards. These photographs were placed in Guard Books, which could be consulted as needed, and indeed prints were sold to the interested public,⁸ with a second set used as student reference prints in the Library. But they were not “collections,” indeed the idea of collecting photographs as museum objects, beyond a documenting and recording function, was barely recognized until about 1900 (Haworth-Booth and McCauley 1998, 30). So those photographs became “non-collections,” subject to different management practices from “collections.” They were identified only at file level and, spatially separated, kept not in the “collections” but in the Library and then the archive. While increasing interest in the history of the institution has renewed interest in these archival objects, their uneven absorption into the narratives of “the collection” has been interesting. Prints extricated from the Library set, framed on the gallery wall, and privileging the photographer as “artist,” they are translated into precious objects.⁹ Their significance lies not in their institutional dynamics but in their alignment with established categories of “fine early photography.”

⁸ The series of some 900 volumes is at V&A Archives MA/32. The Guard Books are currently being digitized and integrated into institutional histories. I am grateful to Steve Woodhouse for discussing this project with me.

⁹ See the 2016/17 exhibition *The Camera Exposed*, <https://www.vam.ac.uk/exhibitions/the-camera-exposed>, accessed July 19, 2017.



Fig. 8: The Butler Bowden Cope, 1862, Thurston Thompson © Victoria and Albert Museum, London.

We can actually observe these agitated boundaries in action. A photograph of the early fourteenth-century Butler-Bowden cope (see Fig. 8) was taken in 1862 by Charles Thurston Thompson who was at the time the South Kensington Museum’s chief photographer. It is a curatorial management record for a loan exhibition: “Specimens Selected from the Special Exhibition of Works on Loan at the South Kensington Museum in 1862.” Yet such is the embeddedness in the ecosystem that the V&A reproduces the photograph in its catalog for its 2016 exhibition *Opus Anglicanum* on medieval English embroidery, with little sense of time or historicity or the material force field of the photograph as a material object. Indeed, the 1862 text appended to the archival object has been cropped out in the catalog (Browne et al. 2016, 109–10). Arguably, this photograph has become what Pinney has described as “uncontemporaneous,” operating in a network of multiplicity that functions as both similar and different.

The photograph is on the move, however. If one consulted the online catalog for this photograph early in 2017, the photograph was historically positioned as non-collection. The text read:

Photographs such as these were originally collected by the National Art Library as part of a program to record works of art, architecture and design in the interest

of public education, these photographs were valued as records and as source material for students of architecture and design.¹⁰

Then we got the blurring of the categories and the movement from non-collection to collection. It continued:

As well as being crucial records of the history of the V&A, and an important element within the National Art Library’s visual encyclopedia, these photographs are also significant artefacts in the history of the art of photography.

However, in February 2017, this description suddenly changed and the photograph of the cope became positioned in terms of the history of institutional practices, which simultaneously obliterated the history of the evaluation and interpretation of this photograph.¹¹ The categories shift almost before our eyes.

Thus, there is a marked tendency for previous “non-collections” to become “collections” because they accord with the dominant discourse of rare early photography or as prehistories of dominant, and indeed, marketable aesthetic. They shift from “use value” to “age value” to employ Rieglian categories (Riegl 1982, 21–51). The network reaches a moment of stasis as institutional hierarchies of value, informed by “age value,” intervene and these ambiguous objects are stabilized within this rhetoric. It is this, not their institutional history, which *enabled* them to shift category. Arguably, following Pinney, these are “wavy meanings—open to recoding but not anchored to a specific historical moment” (Pinney 2005, 267), but rather to moments of transubstantiation through shifts in nomenclature: from non-collection to collection, from archive to object. But, in this case, there are readings that lack this openness of the object to true transubstantiation into a different kind of thing, to quote “a further unfolding of the complex identity of the central object” (Pinney 2005, 267).

In this paper, I am not suggesting that, as we look at the longevity of something made by deep levels of the ecosystem, any of this is necessarily wrong in bald terms—things happen and things happen to images—it was ever thus. Photographs have always been hostages to their reproducibility and hybrid forms; it is the root of their ambiguity within the institutional ecosystem, and, I suspect, the root of our intellectual fascination with them. But why this is interesting is that it demonstrates the temporal and category complexities of the ecosystem and how the flow of photographs works over multiple perspectives, “uncontemporaneous” flows which are brought into momentary alignment through institutional practice and the categories that sustain it.

Yet as we extend the range of what it is to write photographically centered histories, anthropologies, or sociologies, these questions of institutionalization become more pressing. Because it sometimes appears that institutional practices and historiographical dynamics are moving in different directions or at least pushing on different boundaries or frames. Further, one suspects that as digital asset management takes hold in museums and archives, this will merely reinforce traditional boundaries between “real objects” and their multiple and assorted surrogates as the networks are cut more closely to traditional categories of value. And this represents a major point of danger for material collections. Where do we place the

¹⁰ This text cannot be verified except in the author’s transcription because it has been removed from the website.

¹¹ See <http://collections.vam.ac.uk/item/O1280324/cast-of-portico-de-la-photograph-cowper-isabel-agnes/>, accessed November 21, 2017.

limits on technologies and ideas which “promise to run away with all the old categorical divisions” (Strathern 1996, 519)? At what point does the network cut or stabilize? And to what ends? What will be the price to pay in how we write photographic histories? Because we all know what happens when one starts messing with ecosystems.

Some closing thoughts

This paper has scratched the surface of some big questions, but ones which resonated through the conference as papers addressed, in some way, the ambiguous formations of the ecosystem. To really grasp how the ecosystem of photographs and photographic practices work in institutions, especially at the putative boundaries of the archive, it may be more appropriate to consider photographs as “densely compressed performances unfolding in unpredictable ways.” It is this that makes them resistant to any particular moment. The energy with which the boundaries of institutions are maintained to counter such insurrection by non-collections rather suggests this to be the case (Pinney 2005, 266–269).

Studies that put photographs (whether analog or digital) at the heart of their analysis of epistemological regimes require a sensitivity to the complete ecosystem of images and practices, a network of multiple material forms and performance of images which make things, including other photographs, what they are. This is not merely a celebration of the margins of categories but an excoriation of boundaries and categories (Strathern 1996, 520) and a study of the tension between pure and hybrid forms which are part of the different epistemological claims. If we think of photographs not simply as material objects but as meshworks of hybrid forms that can accommodate multiple claims upon them and act as a critique of separations, here between collections and non-collections, there is the potential for a refigured understanding of the institutional practices that embed photographs in archives and museums.

The fact remains, however, that the practices of institutional evaluation shape the patterns of historical endeavor. So where do obligations to material forms (including the digital) stop? What is gained and what is lost in shifts in the ecosystem? The historiographical turn that takes photographic studies to multiple and entangled sites of analysis cannot be contained within the material singularity of the image and the archival systems that gave support to it. Instead, it is research which enters the ephemeral spaces of non-collections, which can all too easily become methodological quicksand.

The question is not whether these things happen or not, whether there are collections and non-collections, or even whether it is a good or a bad thing. Rather, it is a question about the modality of the relationship: what is its resonance? What is the media archaeology of institutions and their collections through which epistemic effects are realized and revealed? How do we accommodate what Pinney has called “the alien and haunting presence of things that we have made but might, in their institutional presences, also produce disjunction and incoherence” (Pinney 2005, 256)? Simultaneously, we need to be aware of the submerged institutional categories and the dense genealogies of assumption which, despite our best efforts, continue to intervene in the network of value, creating a stasis in their own image, within the hybrid flows of collections and non-collections.

List of Figures

Fig. 1: Collections © Pitt Rivers Museum, University of Oxford.

Fig. 2: The Shop: National Gallery, London, photo: Elizabeth Edwards.

Fig. 3: Non-Collections. Management photographs © Pitt Rivers Museum, University of Oxford.

Fig. 4: Non-Collections, photo: Elizabeth Edwards.

Fig. 5: Cultural Histories as Collection: Tate Britain, London, photo: Elizabeth Edwards.

Fig. 6: National Museum of Ethnology, Lisbon, photo: Elizabeth Edwards.

Fig. 7: Maundy Money, 1898, Sir Benjamin Stone © Victoria and Albert Museum, London.

Fig. 8: The Butler Bowden Cope, 1862, Thurston Thompson © Victoria and Albert Museum, London.

References

- Alpers, Svetlana (1991). *The Museum as a Way of Seeing*. In: *Exhibiting Cultures. The Poetics and Politics of Museum Display*. Ed. by Ivan Karp and Steven Lavine. Washington D.C.: Smithsonian Institution Press.
- Amao, Damarice (2015). To Collect and Preserve Negatives: The Eli Lotar Collection at the Centre George Pompidou. In: *Photographs, Museums, Collections: Between Art and Information*. Ed. by Elizabeth Edwards and Christopher Morton. London: Bloomsbury, 231–245.
- Browne, Clare, Glyn Davies, M. A. Michael, and Michaela Zöschg (2016). *English Medieval Embroidery: Opus Anglicanum*. New Haven / London: Yale University Press/V&A.
- Crane, Susan A. (2013). The Pictures in the Background: History, Memory and Photography in the Museum. In: *Memory and History: Understanding Memory as Source and Subject*. Ed. by Joan Tumblety. London: Routledge, 123–140.
- Crimp, Douglas (1993). *On the Museum's Ruins*. Cambridge MA: The MIT Press.
- Daston, Lorraine (2015). Epistemic Images. In: *Vision and Its Instruments: Art, Science, and Technology in Early Modern Europe*. Ed. by Alina Payne. University Park, Pennsylvania: The Pennsylvania State University Press, 13–35.
- Derrida, Jacques (1996). *Archive Fever: A Freudian Impression*. Chicago: University of Chicago Press.
- Domanska, Ewa (2006). The Return to Things. *Archaeologia Polona* 44:171–185.
- Edwards, Elizabeth (2017). Location, Location: A Polemic of Photographs and Institutional Practices. *Science Museum Group Journal* 7 (Spring 2017). DOI: 10.15180/170709. URL: <http://dx.doi.org/10.15180/170709>, accessed August 17, 2019.
- Edwards, Elizabeth and Sigrid Lien, eds. (2014). *Uncertain Images: Museums and the Work of Photographs*. Farnham: Ashgate.
- Edwards, Elizabeth and Christopher Morton, eds. (2015). *Photographs, Museums, Collections: Between Art and Information*. London: Bloomsbury.
- Faria, Nuno (2016). *Inquéritos ao Território: Paisagem e Povoamento. Roteiro*. Lisbon: Museu Nacional de Etnologia.
- Foucault, Michel (1970). *The Order of Things*. London: Routledge.
- Gell, Alfred (1998). *Art and Agency. An Anthropological Theory*. Oxford: Clarendon Press.
- Hamber, Anthony J. (1996). “A Higher Branch of the Art”: *Photographing the Fine Arts in England, 1839-1880*. Amsterdam: Gordon and Breach.
- Haworth-Booth, Mark and Anne McCauley (1998). *The Museum and the Photograph: Collecting Photography at the Victoria and Albert Museum 1853-1900*. Williamstown, MA: Sterling and Francine Clark Art Institute.

- Hooper-Greenhill, Eilean (1992). *Museums and the Shaping of Knowledge*. London: Routledge.
- Ingold, Tim (2011). *Being Alive: Essays on Movement, Knowledge and Description*. Abingdon: Routledge.
- Kratz, Corinne A. (2011). Rhetorics of Value: Constituting Worth and Meaning through Display. *Visual Anthropology Review* 27(1):21–48.
- Malraux, André (1965). *Le Musée imaginaire: les voix du silence*. Paris: Gallimard.
- Morgan, Mary S. (2011). Travelling Facts. In: *How Well Do Facts Travel? The Dissemination of Reliable Knowledge*. Ed. by Peter Howlett and Mary S. Morgan. Cambridge: Cambridge University Press.
- Pinney, Christopher (2005). Things Happen: Or, From Which Moment Does That Object Come? In: *Materiality*. Ed. by Daniel Miller. Durham NC: Duke University Press, 256–272.
- Riegl, Alois (1982). The Modern Cult of Monuments: Its Character and Its Origin. *Oppositions* 25 (Fall 1982): 21–51.
- Rose, Gillian (2001). *Visual Methodologies: An Introduction to the Interpretation of Visual Materials*. London: Sage.
- Spyer, Patricia, ed. (1998). *Border Fetishisms: Material Objects in Unstable Spaces*. New York and London: Routledge.
- Strathern, Marilyn (1996). Cutting the Network. *Journal of the Royal Anthropological Institute* 2(3):517–535.
- Willumson, Glenn (2004). Making Meaning: Displaced Materiality in the Library and Art Museum. In: *Photographs Objects Histories: On the Materiality of Images*. Ed. by Elizabeth Edwards and Janice Hart. London: Routledge, 84–99.

Chapter 4

The Accidental Trace and the Science of the Future: Tales from the Nineteenth-Century Archives

Lorraine Daston

Introduction: glass and paper forever

This glass photographic plate of a small square of the night sky, taken on a clear winter's night in Potsdam in 1894, is one of the around two million such astrophotographic plates stored in observatories all over the world (Lankford 1984, 29) (see Fig. 1). There are approximately 600,000 plates at the Harvard College Observatory, 20,000 at the Bologna University Observatory, 80,000 at the Odessa Astronomical Observatory, to give just a few examples (Hudec 1999). The designation of these collections as “archives” is mostly retrospective, but the glass plate pictured here was destined from the outset to be part of an archive: the vast astrophotographic survey of the sky as seen from the earth known as the *Carte du Ciel*. Launched at the Paris Observatory in 1887 and concluded (not completed) in 1974, the *Carte du Ciel* was intended as the legacy of nineteenth-century astronomy to the science of the future, in the form of approximately 22,000 such glass photographic plates: “the unimpeachable and imperishable state of the sidereal sky, which, in future centuries, will serve as the certain basis for the solution of the grand problem of the general constitution of the universe” (Flammarion 1887, 169). This fragile glass plate, one of the only 34 of the Potsdam Observatory's 1,200 *Carte du Ciel* plates to survive the bombings in World War II (Urban and Corbin 1998), was meant to endure “to the year 3000 at least”—that qualification added as a concession not to the impermanence of all things human but rather to doubts about “whether the chemical deposited on the glass will remain eternally unalterable.”¹

This paper squeeze of a Roman inscription in Spain (see Fig. 2) is one of the approximately 20,000 such squeezes (*Abklatsche*) held by the *Corpus Inscriptionum Latinarum*, another self-consciously archival project of the nineteenth century, this time in classical philology.

The technique of making paper squeezes of ancient inscriptions goes back at least to the sixteenth century, and the plan to publish all known Latin inscriptions in a single collection is almost as old (Larfeld 1907, 5–6, 39–53, 92–94). But the ambitions of the project proposed by the German legal historian and classicist Theodor Mommsen to the Prussian Academy of Sciences in 1847 (and officially begun in 1853) surpassed all of these earlier initiatives. The Berlin *Corpus Inscriptionum Latinarum* would not just collect previously published inscriptions. It would actively seek out as yet unpublished inscriptions from all over the territories that had once comprised the ancient Roman empire; it would weed out the

¹ Ernest Mouchez to David Gill, April 30, 1887, Bibliothèque de l'Observatoire de Paris, MS IV.A, “Comité international de la *Carte du Ciel*,” carton 7.



Fig. 1: Glass photographic plate from the Carte du Ciel survey, Potsdam Observatory, Plate 5, taken January 11, 1894. The plate is approximately 16 cm x 16 cm; each plate covered two square degrees of the sky, courtesy of the Leibniz-Institut für Astrophysik, Potsdam.

errors and forgeries in previously published collections of inscriptions. Wherever possible, its researchers would inspect the stones themselves—and make squeezes of the inscriptions.

The paper squeeze is the simplest of reproduction technologies, and it was precisely its simplicity that recommended it to philologists in the field, trekking to a remote North African village or clambering up a ladder to inspect an Italian bridge. The great advantage of the method was that it required little skill, could be used wherever paper and water were available, shipped easily, and produced a haptic negative of the original inscription, complete with every scratch and squiggle (Hübner 1881, 5–6). The squeeze could “not only replace the study of the original but even surpass it” in the opinion of its proponents (Hübner 1881, 5). These paper archives would also, hoped Mommsen and his collaborators in the CIL, outlast original inscriptions long at risk from war and weather and, more recently, from the construction of roads, railways, and other modern conveniences.

What are glass and paper, among the most fragile and ephemeral of substances, as compared to the durability of stone and the eternity of the stars? Yet in the latter half of the nineteenth century, astronomers and philologists turned to these materials—and to the mechanical (or chemical-mechanical) methods of reproduction they made possible—to create archives that would in the vision of their architects endure for centuries and even millennia. Both the 22,000 glass photographic plates of the Carte du Ciel and the 20,000 paper squeezes

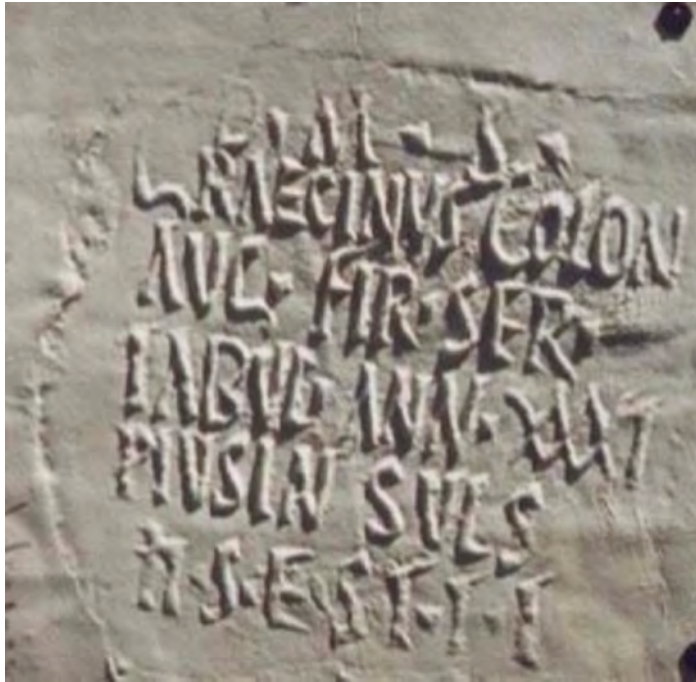


Fig. 2: Paper Squeeze by Emil Hübner of Latin inscription from Écija (Roman Astigi), Spain, CIL II, 1480 “Inscriptiones Hispaniae latinae” (1869–92).

of the *Corpus Inscriptionum Latinarum* were expected to outlast the starry sky and ancient stones they mirrored. The premise of the *Carte du Ciel* was that the so-called fixed stars were in fact moving—but at a glacially slow pace that could only be detected by comparing their relative positions in the present and the far future. Never again would the heavens as seen from the earth circa 1900 look precisely the same; there was no stepping twice into the slow-moving river of sidereal time. The glass archive would freeze that moment in time and permit the astronomers of the year 3000 (at least) to track trajectories of known stars, discover new ones, and follow all manner of other celestial phenomena that unfolded on a superhuman timescale.

The philologists behind the *Corpus Inscriptionum Latinarum* may not have thought in terms of millennia, but they did project their discipline forward to future centuries, secure in the knowledge that the philological study of ancient Greek and Latin languages and literature was already at least a thousand years old. They too were haunted by the fear of losing a key source, Latin inscriptions, to the depredations of time—and by the mid-nineteenth century at a rate that could be all too easily observed in a single human lifespan. As Europe, its colonies, and the Ottoman Empire modernized, the old Roman stones were dug up, smashed, and displaced, effacing the inscriptions and erasing valuable information about original context. Both glass and paper archives were salvage operations, efforts of science present to make science future possible.

This volume is about photo-objects, and for that reason most of this paper will focus on the photographic archive of the *Carte du Ciel*. But from time to time I will return to the paper archive of the *Corpus Inscriptionum Latinarum* as an important corrective to claims of singularity made on behalf of the natural sciences as opposed to the humanities and on behalf of photography as opposed to other media. With the *Corpus Inscriptionum Latinarum*, it was the humanities (not the natural sciences) that invented Big Science; the humble paper squeeze is every bit as mechanical, detail rich, and indexical as the sensitive photographic plate—and every bit as subject to interpretation.

Before the two cultures

Once upon a time but not so long ago, before there were two cultures, there was Big Science—or rather (to use the mid-twentieth-century language of the two cultures) there was Big Science—and Big Humanities. The humanities were in fact in the vanguard: the *Corpus Inscriptionum Latinarum* begun in 1853 by the Prussian Academy of Sciences was the prototype of many subsequent grand undertakings, including the *Carte du Ciel* inaugurated at the Paris Observatory in 1887. These two projects were emblematic of the rising prestige of both classical philology and astronomy in the nineteenth century, philologists dazzling the public by deciphering ancient languages and reconstructing ancient texts and artifacts, and astronomers making headlines with sensational discoveries of new planets and ever more precise predictions of orbits and eclipses. The *Corpus Inscriptionum Latinarum* (known simply as the CIL to all scholars of classical antiquity) and the *Carte du Ciel* were also emblematic of how the humanities and the sciences during this period shared the practices and priorities of compiling archives for future research, often at the expense of present research. Before there were Two Cultures, made famous by British scientist and novelist C.P. Snow's Rede Lecture of that title at the University of Cambridge in 1959 (Snow 1959),² there was a common culture of the sciences of the archives: those human and natural sciences that depend on collections of data and objects in order to pursue research in the present and insure the possibility of research in the future (Daston 2012; Daston 2017).

Berlin, 1858: historian of Roman law Theodor Mommsen, barely forty years old, addresses the Prussian Academy of Sciences on the newly approved *Corpus Inscriptionum Latinarum*.³ Mommsen was not yet the celebrated scholar and statesman he would later become, but he lectured the distinguished members of the Historical-Philological Class of the Prussian Academy of Sciences with serene self-confidence in his ability to pull off the Herculean task of collecting all Latin inscriptions from the length and breadth of the ancient Roman Empire—and all this in four years (Mommsen 1905a, 37; Mommsen 1847, 4–8) (see Fig. 3). Although Mommsen did not make good his promise to complete the project within four years, in 1863 he and his team of young philologists began to turn out volume after volume of transcribed Latin inscriptions, producing fifteen folio volumes by 1899.

² On the ensuing debate, see Ortolano 2009.

³ Theodor Mommsen, *Ueber Plan und Ausführung eines Corpus Inscriptionum Latinarum* (Berlin: A. W. Schade, 1847), in *Acta der wissenschaftlichen Unternehmungen der philosophisch-historischen Klasse*, vol. 17a: *Sammlungen lateinischer Inschriften, 1836–1848*, Archiv der Berlin-Brandenburgischen Akademie der Wissenschaften, PAW-II-VIII.96; Harnack 1900, v. I.2, 896–914; Wickert 1962, 20–64.



Fig. 3: Latin inscription on a wall in Cáceres, Spain, CIL II 697.

This was the context in which Mommsen invented Big Science (*Großwissenschaft*), both the word and the activity (Bruch 2005; Rebenich 2005). Addressing the Prussian Academy of Sciences in 1890, he observed that

[s]cience [*Wissenschaft*, embracing both the natural and human sciences] also has its social problem; as in the big city and big industry, big science cannot be achieved by the lone individual, although it can be directed by one, a necessary element of our cultural development and one whose proper bearers are or should be the academies (Mommsen 1905b, 209).

With generous financial backing from the state, the institutional continuity of the academy, and industrial organization, Mommsen and the Historical-Philological Class of the Prussian Academy pioneered Big Science with project after project throughout the nineteenth century: first the *Corpus Inscriptionum Latinarum*, then the *Thesaurus Linguae Latinae*, Byzantine numismatics, prosopography of late antiquity, the Aristotle lexicon, and on and on (Rebenich 1999). Their colleagues in the Physical-Mathematical Class of the Prussian Academy looked on with envy and increasing alarm as, year after year, their humanist colleagues cashiered the lion's share of the Academy's budget for their projects (Diels [1906] 1993, 667).⁴ By

⁴ At least in the Berlin Preußische Akademie der Wissenschaften, the number of projects conducted by the Philosophisch-Historische Klasse (including Mommsen's) far outnumbered those initiated by the Physikalisch-Mathematische Klasse in the Kaiserreich: Grau 1993, 178–216.

1900, Arthur Auwers, astronomer and Secretary of the Physical-Mathematical Class, was anxiously prodding his colleagues to come up with research projects that could compete with the juggernauts already launched by the Historical-Philological Class. In principle, Auwers insisted, the natural scientists also subscribed to the model of lavishly funded big projects, “Großbetrieb der Wissenschaft,” that had brought the Prussian Academy so much fame and fortune. But in practice, Auwers admitted, the scientists had left such glittering undertakings entirely to the humanists.⁵

Auwers was not the only astronomer to have taken note of the triumphant rise of Big Science in philology. Let us now shift the scene from Berlin to Paris. It is April 1887, and the Paris Observatory awaits distinguished guests, the world’s astronomical elite, who expected a lavish reception (see Fig. 4). Nor were they disappointed: nine-course banquets and evening concerts leavened the long days of deliberations on whether reflecting or refracting telescopes were best suited to astrophotography and the merits of making a star catalog as well as a photographic map of the heavens.⁶ Admiral Ernest Mouchez and subsequent directors of the observatory staged the *Carte du Ciel* meetings with all the pomp and circumstance of a diplomatic congress, for which the Observatory was decked out with phalanxes of Louis XIV armchairs upholstered in red velvet and galaxies of silver candelabra, all requisitioned from official state storehouses for the occasion.⁷ Whenever the French government balked at the mounting expenses, the Observatory director countered that the success of the project was “a point of honor for France.”⁸

The 58 astronomers from sixteen countries, plus three colonies, met in Paris and planned what one contemporary called “the greatest venture yet undertaken in astronomy,” namely, a complete photographic map of the sky, including all stars to the fourteenth magnitude, made possible by the new astrophotographic techniques pioneered by Edward Pickering at Harvard and the brothers Paul and Prosper Henry at the Paris Observatory (Norman 1938; Hoffleit 1950; Lankford 1984). Only the combined and prolonged efforts of almost a score of observatories in both the northern and southern hemispheres could produce what promoters hailed as an “imperishable monument,” a photographic record of “the authentic state of the universe visible from the earth at the close of the nineteenth century.” The proportions of the project were indeed monumental: eighteen observatories around the world, from Helsinki at +60.9 degrees latitude to Melbourne at -37.5, labored for decades to amass charts projected in 1912 to stack 32 feet high and weigh about 4,000 lbs. Armed with this snapshot of the sky circa 1900, future astronomers would be able, it was hoped, to detect changes in the heavens which unfolded on too long a time scale to be perceptible within a short human lifetime—the appearance of new stars, nebulae, and comets, the telltale motion of as yet undiscovered planets, the extended periods of variable stars, the incremental proper motions of the so-called fixed stars.

As the deliberations of the 1887 International Congress and of subsequent meetings (1889, 1891, 1896, 1900, and 1909) of the Permanent Committee make clear, the intricate coordination of telescopes, photographic plates, micrometric measurements, and myriad

⁵ Quoted in Grau 1993, 195.

⁶ On the *Carte du Ciel*, see Débarat et al. 1988; Weimer 1987 and Lamy 2008; Débarat et al. 1988.

⁷ “Soirées. Dîners à l’occasion des réunions du Comité de la *Carte du Ciel*.” Bibliothèque de l’Observatoire de Paris, MS 1060.IV-A-2-3, Carton 25.

⁸ Admiral Mouchez, Directeur de l’Observatoire de Paris, au Ministre de l’Instruction Publique, April 25, 1891, Bibliothèque de l’Observatoire de Paris, MS 1060.IV-A-2, Carton 24.



Fig. 4: Group photograph of the 1887 International Congress of the Carte du Ciel, Paris.

other details to insure that the parts of the map would be commensurable required that participants relinquish control not only over instruments and methods, but also over the choice of research area for decades to come. The levels of sacrifice demanded by the scientific collectivity were enormous: the cost in time and money of new instrumentation and training, the substitution of efficiency for painstaking precision, the monopolization of resources and personnel for long periods of routinized labor, the steadfast resistance to the temptation to neglect old collaborative commitments in pursuit of an exciting new discovery. Some observatory directors, including Pickering at Harvard, judged the costs of collaboration to be too great and declined to participate.⁹

The science of the future

Tons of glass photographic plates and thousands of paper squeezes taken from ancient stones: what the Corpus Inscriptionum Latinarum and the Carte du Ciel produced were not discoveries but the archives from which future discoveries were supposed to come. Under what circumstances does a discipline decide to invest the lion's share of its resources, both human and material, into building an archive for the future rather than in pursuing research in the present?

⁹ Pickering did, however, serve on the photometric commission of the Permanent International Committee of the Carte du Ciel: Lankford 1984, 38; E. C. Pickering to E. Mouchez, August 14, 1889.

Classical philology and astronomy are both sciences of the archives, but not in the usual sense of historical archives. Historians consult archives in order to investigate the past; in contrast, the *Corpus Inscriptionum Latinarum* and the *Carte du Ciel* were firmly turned toward the future. The proponents of the *Corpus Inscriptionum Latinarum* and the *Carte du Ciel* described their projects as “monuments,” the modern age’s answer to ancient pyramids and medieval cathedrals. The form these nineteenth-century monuments took, however, was not architectural but archival: compendia of the working materials that nineteenth-century scholars and scientists imagined would enable their successors to conduct research for centuries (if not millennia) to come. “It is the foundation of historical science,” Mommsen preached to his fellow academicians in Berlin, “that the archive of the past be put in order” (Mommsen 1905a, 37). All future research, whether tracking the development of the Latin language or identifying a new star, would be made possible by the discipline’s carefully assembled archive. At least in the imagination of their founders, the archives are forever.

In contrast, the results of science and scholarship were all too ephemeral—at least that seemed to be the moral drawn from the accelerating pace of progress in both realms by the mid-nineteenth century. As early as the 1820s, the classical philologists had begun to worry about being surpassed and, still worse, forgotten by their own students, as new discoveries and critical methods overflowed the pages of the new journals established to publish them at a faster clip than traditional book presses could keep up with (Turner 1983). A few decades later, their colleagues in the sciences also began to feel time’s hot breath upon their necks. By 1844, Alexander von Humboldt reflected sadly on the fact that “all that is connected with empiricism and with fathoming of phenomena and physical law takes on a new aspect in a few decades . . . so that as one commonly says, outdated scientific writings fall into oblivion as [no longer] readable” (Humboldt [1844] 1874, xxiv). By 1900, the tempo of scientific advances had quickened to the point that French applied mathematician and physicist Henri Poincaré could write elegiacally about how ephemeral scientific theories had become, describing them as “ruins piled upon ruins” (Poincaré [1902] 1968, 173).

This is the background against which the tremendous disciplinary exertions of the nineteenth-century sciences of the archives on behalf of the future become comprehensible. The scale of cost and commitment demanded by the *Corpus Inscriptionum Latinarum* and the *Carte du Ciel* were unprecedented. The investments in time, talent, and money were unprecedented in the history of science; the sacrifices were even greater. The finest young philologists were sent out to transcribe inscriptions in regions where they faced danger and even death. (One of Mommsen’s predecessors, the young Danish philologist Olaf Kellermann, had died of cholera in Rome while gathering inscriptions.¹⁰) Observatories pledged to the *Carte du Ciel* tied up resources that could have been used for new instruments and research initiatives for decades to come.¹¹

Nineteenth-century archival projects such as the *Corpus Inscriptionum Latinarum* and the *Carte du Ciel* stamped the model of the most prestigious, expensive, and “longue durée” science ever after. And I do mean “longue.” Since their inception, regimes rose and fell; two world wars laid waste to large parts of the globe; economic, technological, and political pressures transformed science and scholarship; astronomy and classical philology underwent their own revolutions. Yet, as we will see, these projects survived. What justified such

¹⁰ Mommsen feared a similar fate if he stayed in Italy: Mommsen 1976, 168.

¹¹ White 1988, 48; cf. Lankford 1984, 32, on the converse advantages to American observatories which did not participate in the *Carte du Ciel*.

enduring commitments, more binding than treaties, more long lasting than nations, more costly than even the most extravagant monument in brick and mortar? Above all, why labor for an uncertain future, at the expense of an urgent present?

To create and curate an archive is to assume disciplinary continuity, sometimes across centuries or even millennia. There is always a utopian element in the sciences of the archives, a vision of a community that will endure—and cherish the collections so carefully laid up as provisions for future research. Yet in the mid-nineteenth century, when the sciences of the archive invented Big Science and Big Humanities, the rosy vision of science stretching into the far future was shadowed by fear: not the fear that science and scholarship would disappear or fail, but rather that they might succeed too well. By 1850, scientific progress had accelerated to a dizzying tempo: today's established truths could so quickly become tomorrow's errors, and scientific revolutions occurred even more frequently than political ones.

This is the paradox of the first wave of Big Science: never before had the natural and human sciences advanced at such a dizzying speed; never before had humanists and scientists dared to conceive such gigantic projects, spanning continents and generations; never before had governments invested so heavily in the sciences; never before had the sciences been so prestigious as proofs of cultural superiority, both with respect to other European nations and other cultures past and present. Yet the price of all this glittering success was gnawing uncertainty. Would anything from the scientific present be salvaged for the scientific future, or would it all be forgotten, like the science of past centuries—or indeed, past decades? What present science could secure were no longer eternal truths, only the archives of the future.

The accidental trace

These were the conditions of epistemological uncertainty that persuaded generations of philologists and astronomers to dedicate themselves and the resources of their institutions to these gigantic archival projects for the future. No-one knew how long the current doctrines of the discipline would last; no-one knew the directions that future research would take. These uncertainties were engraved (sometimes literally) in the materials of the archive. Here, I will concentrate on the *Carte du Ciel* because it generated a photographic archive, with only an occasional side-glance at the CIL.

Without a doubt, it was the invention of astrophotography that made the *Carte du Ciel* conceivable, most spectacularly demonstrated in the images obtained by the brothers Henry with their refracting telescope at the Paris Observatory. Even the Americans, who had made the first astrophotographs (Draper 1864),¹² were impressed: “they [the Henry brothers’ lunar photographs] surpass everything I have yet seen,” enthused the director of a Pennsylvania scientific instrument firm, “and I have seen the photographs of Prof. E. C. Pickering [of Harvard]”¹³ (see Fig. 5). Innovations in gelatin dry plates, which had far lower exposure times, and the Eastman method of manufacturing glass photographic plates coated with the new silver bromide emulsions dissolved in gelatin, greatly expanded the scope of astropho-

¹² For the photographic initiatives of Edward and William Pickering at the Harvard College Observatory, see Sobel 2016.

¹³ J. A. Brashar to Paul and Prosper Henry, September 9, 1890, *Papiers des frères HENRY*, MS 1133-1, Bibliothèque de l’Observatoire de Paris.



Fig. 5: Photograph of the moon, M. M. Henry, 1886, Observatoire de Paris.

tography (Lankford 1984, 22–23). For the purposes of the *Carte du Ciel*, the promise of astrophotography was threefold: the possibility of capturing millions of stars with immeasurably less effort and greater precision than by traditional methods of observation, measurement, and drawing; the greater sensitivity of the photographic plate, which could, with sufficiently long exposure times, register stars too faint to be captured by the human eye even as fortified by the telescope; and the mechanical objectivity of the plates, which would preserve details that a human draftsman might overlook as insignificant but which later—a decade, a century, a millennium hence—might turn out to be of urgent scientific interest. The mantra “untouched by human hands”¹⁴ had a double meaning in the context of the *Carte du Ciel*: on the one hand, emancipation from “long and tedious observations,” and on the other, suppression of any subjective impulse to edit out the apparently accidental.¹⁵

Historians of science and photography have been understandably skeptical about such claims to mechanical objectivity. They rightly point to the inevitability (and desirability) of human intervention at every stage of making a photographic image, from choice of equipment and emulsion to composition to development to reproduction in print (Tucker

¹⁴ “No hand of man has tampered with these pictures,” David Gill, “The Applications of Photography in Astronomy,” lecture to the Royal Institution, June 3, 1884.

¹⁵ Pierre Jules Janssen, quoted in Winterhalter 1889, 23.

2005; Wilder 2009). Without these skilled interventions of the human hand, eye, and mind, the images would be scientifically useless. But these well-taken points do not imply that nineteenth-century scientific enthusiasm for images produced effortlessly and impersonally was mere rhetoric: such claims must be assessed in comparison to existing alternatives for producing images, not some absolute standard of autopoiesis. In the case of images of the astronomical objects or ancient inscriptions, the alternatives were laborious indeed, with a considerable margin for interpretation and plain old error. Mapping stars (or transcribing ancient transcriptions) by hand required unimaginable levels of precision and attention to detail, especially detail that appeared meaningless to the observer at the time but that might turn out to be full of significance for future researchers (Nasim 2013). No wonder the astronomers waxed euphoric over the possibilities of astrophotography.

But however great the advantages of dry, gelatin-coated glass plates over manual star-mapping were, there was a hitch: in order to justify the international and trans-generational scale of the *Carte du Ciel*, the results of the sky map would have to be made available to astronomers everywhere by publication, and heliogravure (also known as photogravure) methods altered the stellar images in alarming and unexpected ways.¹⁶ True to the spirit of preserving every detail in the photographs, no matter how apparently accidental or insignificant, the Permanent Committee of the *Carte du Ciel* laid down the iron rule that the images must under no circumstances be retouched. Yet even the most experienced (and expensive, at 200 French francs a plate) photogravure firms encountered maddening and mysterious difficulties in reproducing *Carte du Ciel* plates. Some of the faintest stars disappeared in certain parts of the copper plates; the distances between some stars were distorted; printing altered the magnitudes of some stars and even created others with no counterpart on the plate, because of irregularities in the way paper absorbed ink from the copper plate (see Fig. 6).¹⁷ The problems were so grave that the best French heliogravure firm, Dujardin, quit because the ban on retouching faint stars compromised the quality of the work, thereby giving up a lucrative commission that promised to continue for decades.¹⁸

The photographic plates had also been a source of headaches—there was endless debate over whether the emulsion and exposure times could or should be standardized, whether the uniformity or sensitivity should be prioritized in choice of emulsion (uniformity won), whether the grid (*réseau*) imprinted on the plates would distort or obscure stars, whether the emulsion would deteriorate with time, whether each observatory should store its own plates or whether a central bureau of the Permanent Committee should test all plates and preserve them.¹⁹ But the organizers of the *Carte du Ciel* thought they had a back-up archive. They hoped that the far sturdier and chemically more stable copper plates from which the pho-

¹⁶ On heliogravure techniques of reproduction, see Nadeau 2008.

¹⁷ “*Carte Photographique du Ciel*. Observatoires français [1898],” Trépied to Observatoire de Paris, March 14, 1901, Bibliothèque de l’Observatoire de Paris, MS 1060 IV-A-2; Documents imprimés non insérés aux procès-verbaux [of the April 1909 meeting of the Permanent Committee], Bibliothèque de l’Observatoire de Paris, MS 1060-IV-A-2, 4e Partie/Boîte 24.

¹⁸ “Congrès 1909. Rapport au Ministre après le Congrès,” Bibliothèque de l’Observatoire de Paris, MS 1060-IV-A-2, 4e Partie/Boîte 24. In a letter to the Minister of Public Instruction dated April 21, 1898, the director of the Paris Observatory Loewy confided that the costs of publishing the plates would probably total 1,500,000 French francs and perhaps take as long as a century: “Correspondence du Mars 1894–Avril 1900,” Bibliothèque de l’Observatoire de Paris, MS 1065.

¹⁹ Concerning the réseaux, W. H. Christie to E. Mouchez, May 17, 1892, Bibliothèque de l’Observatoire de Paris, MS 1060-V-A-2/ Boîte 29; concerning the standardization of plates and the desirability of a central bureau, David Gill, “Notes for the réunion of the Permanent Committee [1889],” Bibliothèque de l’Observatoire de Paris,

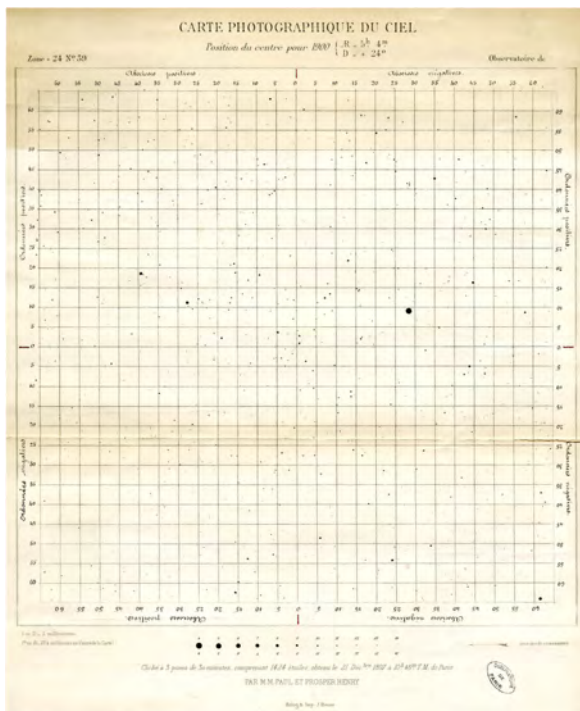


Fig. 6: Heliogravure of Carte du Ciel photographic plate, courtesy of Bibliothèque de l’Observatoire de Paris.

togravure publication of the sky map would be printed would perfectly duplicate the finicky glass plates. Now it was the more robust copper plates that would allegedly provide an “in-alterable... [and] rigorous inventory of a part of the sky at the beginning of the twentieth century” left to “the generations to come,” as Benjamin Baillaud, Director of the Paris Observatory, boasted to the Minister—in the same breath in which he presented the staggering one-million-franc price tag for this duplicate archive.²⁰ The hobgoblins that bedeviled the copper plates struck a triple blow to the Carte du Ciel: the costs skyrocketed beyond what even the wealthiest observatories could afford; the dream of a second, more durable archive of copper rather than glass evaporated; and all of the labor saved by replacing drawing by photography would now be expended in the still more mind-numbing and error-prone task of proofreading the copper plates and print proofs against the photographic plates, dot by tiny dot.²¹

MS 1060-IV-A-2/Boite 22; concerning the deterioration of the film, I. Roberts to F. Tisserand, April 1, 1896, Bibliothèque de l’Observatoire de Paris, MS 1060-IV-A-2/Boite 22.

²⁰ “Congrès 1909. Rapport au Ministre après le Congrès,” Bibliothèque de l’Observatoire de Paris, MS 1060-IV-A-2, 4e Partie/Boite 24.

²¹ “Documents imprimés non insérés aux procès-verbaux [of the April 1909 meeting of the Permanent Committee],” Bibliothèque de l’Observatoire de Paris, MS 1060-IV-A-2, 4e Partie/Boite 24: “Avant de donner le bon à

No matter how painstaking the proofreader, this process was bound to introduce accidents of both commission and omission into the printed images. These were no longer the accidental traces preserved by the impersonal, indiscriminate medium of the photographic plates, however; rather, they were the artifacts of film, photogravure, and the human eye acting in unintentional and unpredictable combination. The photographic accidental trace, so pregnant with future discoveries in the minds of the moving spirits behind the *Carte du Ciel*, was in danger of being swamped by all manner of other accidental traces, all of them unintentional but none having anything to do with the starry sky. No wonder the *Carte du Ciel* was never finished.

Conclusion: morals from the tale of two archives

What was the fate of these two grand scientific archives of the nineteenth century? Both were almost shipwrecked by two world wars and the havoc wrought with international scientific collaboration by national hostilities. If anything, the *Corpus Inscriptionum Latinarum* was the harder hit of the two, since it was centralized in Berlin, the capital of the country that lost both world wars and was largely destroyed by allied bombing during the second one. War, imperialism, modernization, and the vicissitudes of time and weather took a further toll on the original inscriptions themselves; at least the stars were safe from earthly mayhem. When Germany was divided into East and West and then reunited, the CIL suffered the further disruption of migrating first to the German Democratic Republic and then, after reunification and the dissolution of the East German Academy of Science, to the Federal Republic of Germany. Yet it is the CIL, now housed at the Berlin-Brandenburg Academy of Sciences and Humanities, which ultimately survived and continues to publish new volumes of inscriptions.

The *Carte du Ciel* catalog, giving positions of all stars down to the eleventh magnitude, was eventually completed (the last installment was published in 1962), but it was rarely used because of the inconvenience of converting rectangular coordinates to the customary right ascension and declination. The actual *Carte du Ciel*, the map of the sky, was never finished, bogged down by all the difficulties surrounding the publication of the photographic plates. For much of the twentieth century, the *Carte du Ciel* was an embarrassment to astronomers: a vast waste of labor and money and the ruin of the observatories that had remained loyal to the project and been left behind in what turned out to be the century of astrophysics. It had become a *Sleeping Beauty* archive, its photographic plates slumbering in the dustier corners of the world's observatories.

But around 1990, *Sleeping Beauty* awakened. By comparing the positions of the *Carte du Ciel* catalog with those of the new *Tycho* catalog made with data from the European Space Agency's *Hipparcos* satellite, it was in fact possible to calculate the proper motions of almost a million stars, just as *Mouchez* and the other initiators of the *Carte du Ciel* had hoped (Jones 2000). Far more surprising, yet expected precisely because it was so unexpected, was the evidence supplied by the *Carte du Ciel* photographic plates for the existence of dark matter, which can only be inferred from its gravitational effects because it does not interact

tirer, les astronomes comparent étoile par étoile l'épreuve au cliché original, et notent toutes les remarques qui peuvent intéresser ceux qui serviront de ces cartes."

with electromagnetic radiation.²² This was exactly the sort of accidental trace the monumental scientific archives projects of the nineteenth century had counted on: the predictable unpredictable.

These are phenomena familiar to historians of photography: Kelley Wilder has written perceptively about the “collect-everything” impulse that characterized scientific archives in conjunction with photography at the turn of the twentieth century (Wilder 2009, 79–80); Robin Kelsey has flagged William Talbot’s fascination with the accidental details revealed retrospectively by his photographs (Kelsey 2008). But these features are not medium-specific, and neither are the fantasies associated with reproduction so perfect that it preserves even imperfections. The paper squeezes of the CIL, which also miraculously survived two world wars, the demise of Prussia, the division and reunification of Germany, and numerous disciplinary upheavals in classical philology, aspire to be just as blindly mechanical in their mode of reproduction as the *Carte du Ciel*’s photographic plates. And like the photographic plates, the squeezes hold out the promise of answers to questions never dreamed of by the CIL’s originators. The misspellings, abbreviations, and other infelicities of the stonemason that a transcription might have silently corrected have become precious sources for tracking regional variants of spoken Latin in the hands of a later generation of epigraphers. Like the published heliogravure plates of the *Carte du Ciel*, the published transcriptions (and increasingly photographs) of the originals were essential to making the CIL into a much-thumbed reference work for philologists worldwide. But as in the case with the *Carte du Ciel*, behind these published compendia stand the real archives, the glass plates and the paper squeezes, slumbering in cabinets and drawers until an unforeseen question suddenly awakens them into relevance (see Fig. 7).

Every new medium conjures up its own archival fantasies. In the sixteenth century, the printing press inspired dreams of a universal library containing every book ever written. In the nineteenth century, photography fired imaginations with Borgesian visions of perfect reproductions of everything, stored forever on glass plates, neatly boxed and labeled (Edwards 2012). In the twentieth century, film and microfiche nurtured schemes like Albert Kahn’s *Archive de la Planète* and Paul Otlet’s *Bibliographie universelle* (Amad 2010; Otlet 1906; Lemov 2015). In the twenty-first century, digitalization has once again plunged both the sciences and the humanities into archival delirium, as projects to create warehouses of data to serve future research once again channel funding and energy away from present research. Notoriously, the very material properties that ignite such fantasies in the end undermine them in the end: the magical ability of photographic plates to capture dazzling detail in split seconds is subverted by the fragility of glass and the unstable chemistry of emulsions; the compactness of microfiche is neutralized by crumbling celluloid and unwieldy readers; the vast capacity and swift searchability of digital databases is countered by electricity-gobbling servers and outmoded hardware (does anyone remember the floppy disk?). It is as if some nemesis inherent in each new medium ultimately is its own undoing, like the tragic flaw of a Greek hero. But no disappointment in past technology seems to dim the phantasmagoric hopes attached to the latest technology that promises to preserve everything, faithfully and forever.

Where do such fantasies of a perfect medium come from, and why are they so resilient in the teeth of experience and evidence? Historians of photography have pointed out sug-

²² Frédéric Arenou and Catherine Turon, “(Cent ans après...) Hipparcos, une troisième dimension pour la *Carte du Ciel*,” in Lamy 2008, 177–211.



Fig. 7: Original envelope for Potsdam Carte du Ciel photographic plate, courtesy of the Leibniz-Institut für Astrophysik, Potsdam.

gestive analogies between legends of magic mirrors or the veil of Veronica and the myths that stubbornly cling to photography, despite over a century of efforts by practitioners and historians to demystify the medium (Geimer 2011). But these fantasies are far older, dating back at least to Aristotle and a metaphor that haunts the history of epistemology (and the history of reproductive biology): the seal imprinting soft wax. Aristotle invokes this metaphor to explain both how perception faithfully conveys information about the world to the mind (Aristotle n.d.(b)) *and* how the traits of the parents (particularly of the father) are reproduced in the embryo at the moment of conception (Aristotle n.d.(a)). In both cases, the mechanism depends on detaching form from matter.

For millennia now, the dream of the perfect copy has depended on the philosophical habit of separating form from matter. Long after seals and wax were replaced by print impressed on paper, then light chemically fixed on film, and now electronic impulses coded into LED computer screen displays, the Aristotelian conviction that form is independent of and superior to matter lingers. Whether we read texts in stone or on paper, view images of paint on canvas or as pixels on screen, our default stance is to extract form from matter. Perhaps this is why the very material properties that make new media so stimulating to the imagination paradoxically breed fantasies that obliterate those same material properties.

Nowhere is this amnesia more glaringly on display than when old media are in the process of being converted to new ones. In the case of the Carte du Ciel plates, the promise of automating the analysis of tens of thousands of plates and sharing data among astronomers worldwide is fueling efforts to digitize all the surviving glass plates stored in the world's observatories (see Fig. 8). Although there is little reason to think that either current hardware

or software will prove more long-lasting than glass plates, astronomers now envision the archive of the future as digital. The squeezes of the CIL are also being digitized. So far, no-one is talking about discarding either plates or squeezes. But if the past history of scientific archives is anything to go on, fantasies of form will eventually prevail over the gritty reality of matter.

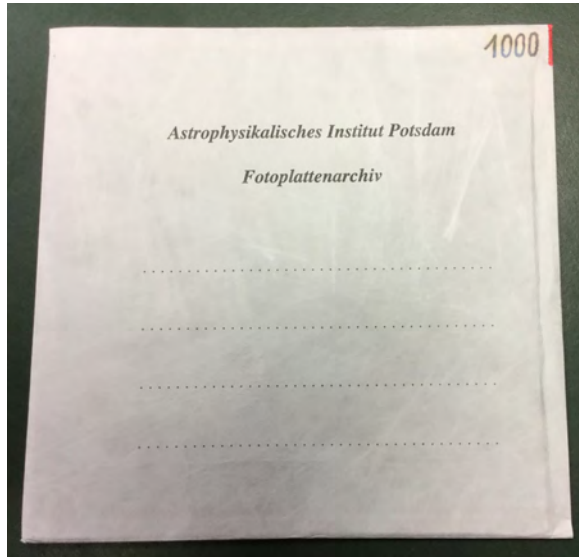


Fig. 8: Envelope of Carte du Ciel photographic plate that has been digitized, courtesy of the Leibniz-Institut für Astrophysik, Potsdam.

List of Figures

Fig. 1: Glass photographic plate from the Carte du Ciel survey, Potsdam Observatory, Plate 5, taken January 11, 1894. The plate is approximately 16 cm x 16 cm; each plate covered two square degrees of the sky. Courtesy of the Leibniz-Institut für Astrophysik, Potsdam.

Fig. 2: Paper Squeeze by Emil Hübner of Latin inscription from Écija (Roman Astigi), Spain, CIL II, 1480 “Inscriptiones Hispaniae latinae” (1869–92).

Fig. 3: Latin inscription on a wall in Caceres, Spain, CIL II 697.

Fig. 4: Group photograph of the 1887 International Carte du Ciel, Paris.

Fig. 5: Photograph of the moon, M. M. Henry, 1886, Observatoire de Paris.

Fig. 6: Heliogravure of Carte du Ciel photographic plate, courtesy of Bibliothèque de l’Observatoire de Paris.

Fig. 7: Original envelope for Potsdam Carte du Ciel photographic plate, courtesy of Leibniz-Institut für Astrophysik, Potsdam.

Fig. 8: Envelope of Carte du Ciel photographic plate that has been digitized, courtesy of Leibniz-Institut für Astrophysik, Potsdam.

References

- Amad, Paula (2010). *Counter-Archive: Film, Everyday, and Albert Kahn's Archive de la Planète*. New York: Columbia University Press.
- Aristotle (n.d.[a]). *Generation of Animals*, IV.3, 767b1–20.
- (n.d.[b]). *On the Soul*, III.12, 424a16–20.
- Bruch, Rüdiger vom (2005). Mommsen und Harnack: Die Geburt von Big Science aus den Geisteswissenschaften. In: *Theodor Mommsen: Wissenschaft und Politik im 19. Jahrhundert*. Ed. by Alexander Demandt, Andreas Goltz, and Heinrich Schlange-Schöningen. Berlin: Walter de Gruyter, 121–141.
- Daston, Lorraine (2012). The Sciences of the Archives. *Osiris* 27:156–187.
- ed. (2017). *Science in the Archives: Pasts, Presents, Futures*. Chicago: University of Chicago Press.
- Débarat, Suzanne, John A. Eddy, Heinrich K. Eichhorn, and Arthur R. Uppgren, eds. (1988). *Mapping the Sky: Past Heritage and Future Directions*. Dordrecht: Kluwer.
- Diels, Hermann [1906] (1993). *Die Organisation der Wissenschaft*. Spektrum.
- Draper, Henry (1864). *On the Construction of a Silvered Glass Telescope, Fifteen and a Half Inches in Aperture, and Its Uses in Celestial Photography*. Washington, DC: Smithsonian Institution.
- Edwards, Elizabeth (2012). *The Camera as Historian: Amateur Photographers and the Historical Imagination, 1885–1918*. Durham, NC: Duke University Press.
- Flammarion, Camille (1887). Le Congrès astronomique pour la photographie du ciel. *L'Astronomie* 6:161–169.
- Geimer, Peter (2011). Self-generated Images. In: *Releasing the Image: From Literature to New Media*. Ed. by Jacques Kalip and Robert Mitchell. Stanford: Stanford University Press, 27–43.
- Grau, Conrad (1993). *Die Preußische Akademie der Wissenschaften zu Berlin*. Heidelberg: Spektrum.
- Harnack, Adolf (1900). *Geschichte der Königlich Preussischen Akademie der Wissenschaften zu Berlin*. 3. Berlin: Reichsdruckerei, v. I.2, 896–914.
- Hoffleit, Dorrit (1950). *Some Firsts in Astronomical Photography*. Cambridge, MA: Harvard College Observatory.
- Hübner, Emil (1881). *Über mechanische Copien von Inschriften*. Berlin: Weidmann'sche Buchhandlung.
- Hudec, René (1999). An Introduction to the World's Large Plate Archives. In: *Treasure-Hunting in Astronomical Plate Archives*. Ed. by Peter Kroll, Constanze la Dous, and Hans-Jürgen Bräuer. Frankfurt am Main: Verlag Harri Deutsch, 28–40.
- Humboldt, Alexander von [1844] (1874). *Kosmos*. Vol. 1. Stuttgart: J. G. Cotta'scher Verlag.
- Jones, Derek (2000). The Scientific Value of the Carte du Ciel. *Astronomy and Geophysics* 41:5.16–5.20.
- Kelsey, Robin (2008). Photography, Chance, and The Pencil of Nature. In: *The Meaning of Photography*. Ed. by Robin Kelsey and Blake Stineson. New Haven: Yale University Press, 15–33.
- Lamy, Jérôme, ed. (2008). *La Carte du Ciel. Histoire et actualité d'un projet scientifique international*. Paris: Observatoire de Paris.
- Lankford, John (1984). The Impact of Photography on Astronomy. In: *Astrophysics and Twentieth-Century astronomy to 1950*. Ed. by Owen Gingerich. Cambridge/New York: Cambridge University Press, 16–39.
- Larfeld, Wilhelm (1907). *Handbuch der griechischen Epigraphik*. Vol. 1. Leipzig: O. R. Reisland.
- Lemov, Rebecca (2015). *Database of Dreams*. New Haven, CT: Yale University Press.
- Mommsen, Theodor (1847). *Ueber Plan und Ausführung eines Corpus Inscriptionum Latinarum*. Berlin: A. W. Schade.
- (1905a). "Antrittsrede," delivered 8 July 1858 to the Königlich Preussische Akademie der Wissenschaften. In: *Reden und Aufsätze*. Ed. by Theodor Mommsen. 2nd unrevised. Berlin: Weidmannsche Buchhandlung, 35–38.
- (1905b). "Antwort auf Harnack," delivered 3 July 1890 to the Königlich Preussische Akademie der Wissenschaften. In: *Reden und Aufsätze*, 208–210.
- (1976). *Tagebuch der französisch-italienischen Reise 1844/1845*. Ed. by Gerold Walser and Brigitte Walser. Bern/Frankfurt am Main: Verlag Herbert Lang.
- Nadeau, Luis (2008). Heliogravure. In: *Encyclopedia of Nineteenth-Century Photography*. Ed. by John Hannavy. New York: Routledge, 645–646.

- Nasim, Omar (2013). *Observing by Hand: Sketching the Nebulae in the Nineteenth Century*. Chicago: University of Chicago Press.
- Norman, Daniel (1938). The Development of Astrophotography. *Osiris* 5:560–594.
- Ortolano, Guy (2009). *The Two Cultures Controversy: Science, Literature and Cultural Politics in Postwar Britain*. Cambridge: Cambridge University Press.
- Otlet, Paul (1906). *L'État actuel de l'organisation bibliographique internationale*. Brussels: Au siege de l'Institut.
- Poincaré, Henri [1902] (1968). *La Science et l'hypothèse*. Paris: Flammarion.
- Rebenich, Stefan (1999). Die Altertumswissenschaften und die Kirchenväterkommission an der Akademie: Theodor Mommsen und Adolf Harnack. In: *Die Königlich Preußische Akademie der Wissenschaften zu Berlin im Kaiserreich*. Ed. by Jürgen Kocka, Rainer Hohlfeld, and Peter Walther. Berlin: Akademie Verlag, 199–233.
- (2005). 'Unser Werk lobt keinen Meister': Theodor Mommsen und die Wissenschaft von Altertum. In: *Theodor Mommsen: Gelehrter, Politiker und Literat*. Ed. by Josef Wiesehöfer. Stuttgart: Franz Steiner Verlag, 185–205.
- Snow, Charles Percy (1959). *Two Cultures and the Scientific Revolution*. New York: Cambridge University Press.
- Sobel, Dava (2016). *The Glass Universe: The Hidden History of the Women Who Took the Measure of the Stars*. London: 4th Estate.
- Tucker, Jennifer (2005). *Nature Exposed: Photography as Eye Witness in Victorian Science*. Baltimore: Johns Hopkins University Press.
- Turner, R. Steven (1983). Historicism, Kritik, and the Prussian Professoriate, 1790–1840. In: *Philologie et herméneutique au 19ème siècle II*. Ed. by Mayotte Bollack and Heinz Wismann. Göttingen: Vandenhoeck & Ruprecht, 450–489.
- Urban, Sean E. and Thomas E. Corbin (June 1998). The Astrographic Catalogue: A Century of Work Pays Off. *Sky and Telescope*:40–44.
- Weimer, Théo (1987). *Brève histoire de la Carte du Ciel en France*. Paris: Observatoire de Paris.
- White, Graeme L (1988). The Carte du Ciel - The Australian Connection. In: *Mapping the Sky: Past Heritage and Future Directions*. Ed. by Suzanne Débarat, John A. Eddy, Heinrich K. Eichhorn, and Arthur R. Upgren. Dordrecht: Kluwer, 45–51.
- Wickert, Lothar, ed. (1962). *Theodor Mommsen - Otto Jahn: Briefwechsel 1842–1868*. Frankfurt am Main: Vittorio Klostermann.
- Wilder, Kelley (2009). *Photography and Science*. London: Reaktion.
- Winterhalter, Albert G. (1889). The International Astrophysical Congress and a Visit to Certain European Observatories and Other Institutions: Report to the Superintendent. In: *Washington Observations for 1885, Appendix I*. Washington DC: Government Printing Office.

Into The Archive

Chapter 5

Where is the Archive? The Reality of Conducting Research on Atatürk Photographs

İdil Çetin

The photographs of Mustafa Kemal Atatürk (1881–1938), the founder of the Turkish Republic (1923), have remained in circulation after his death in 1938 all through the republican history to this day. The press plays its part in this by publishing various Atatürk photographs from time to time, mostly on special occasions. Labels such as “the photographs never seen before” or “photographs recently taken out of the archives” frequently accompany these pictures in the newspapers. Upon closer inspection, however, it becomes evident that most of them, allegedly brought to light for the very first time, were actually printed and distributed in various forms before. The archives these pictures were taken from remain ambiguous; their names are rarely mentioned. Thus, the archive turns into a big, abstract entity that is virtually impenetrable. This paper will focus upon my experience of conducting research on Atatürk photographs in Turkish archives and discuss the contrast between the emphasis placed on the archive and what this archive actually means when it is kept away from you.

Invisible photographs

The Atatürk photographs first entered into circulation in the press in 1912 when Mustafa Kemal Atatürk was an Ottoman military commander. They continued to be published from time to time in the coming years along with news concerning his military duty in the Ottoman army. The number and variety of his photographs increased throughout the Turkish War (1919–1922), during which he gradually became the leader of the resistance movement, known as the National Forces, revolting against the occupation of the Allied Powers after World War I. Although the National Forces claimed to protect the nation and the state as well as the Ottoman dynasty and the caliphate throughout the Independence War (Şeker 2009, 1169), once the war ended with the victory of the National Forces, there came about a change in the regime: the dynasty and the caliphate were abolished and the new Turkish state, a republic, was declared. Mustafa Kemal Atatürk became the head of this new regime as a result of the legitimacy he gained as the leader of the Independence War, and remained in this role until he passed away in 1938.

The establishment of a new state required breaking ties with the Ottoman Empire. During the fifteen years he served as the president of the country as well as with the cadres of the period, Mustafa Kemal Atatürk determined the path that the new country should follow. This path was achieved through various reforms, as a result of which the country underwent a radical transformation affecting everything from its judicial system to its educational system, social life, fashion, and alphabet. The press was an important medium for helping the people become accustomed to the reforms. Newspapers and magazines made great use of

photographs for this purpose, which were meant to display the changing face of the country and to compare the old, which was propagated as “bad,” and the new, which was considered “good.” The photographs of Atatürk were also very prominent during these years. Like the press, they, too, helped familiarize the citizens with the radical transformations the country was undergoing, as they showed the leader introducing or performing the reforms himself.

The photographs of Atatürk also served to show the leader of the country, the man who “saved the country and set it free” and who was now “modernizing it,” on a daily basis. The time in which these photographs were first taken and circulated in the republican era was a period when mass politics backed up with a leader cult were very prominent in many countries. Systems where the country was under the rule of a single party and a “classless society” converging around the leader of this party emerged after World War I not only in Italy, Germany, and the USSR, but also in Romania, Poland, Hungary, Portugal, and Spain, among others (Arendt 1958, 309). All of these states made great use of visual media in order to differentiate themselves from the systems left behind and to display what the new regime represented. This involved a visual regime around the leader cult where the visibility of the leader, among other symbols, was of utmost importance.

Although early republican Turkey was similar in this sense, there were differences in certain aspects. For example, when it comes to the photographs of Atatürk, for a very long time, maintaining this visibility was not a deliberate undertaking of the state. There was never an institution specializing in this area. His photographs were taken mainly by photo-journalists and were circulated in the press. They were edited, if necessary, by the editors of the newspapers and not by any government officials. But what might be effectively different with Turkey (a country which, unlike those mentioned above, did not undergo a further change of regime) is that this visibility in general and the photographs of Atatürk in particular have remained in circulation to this day. This circulation was enabled by legislation in some cases, as the textbooks used in schools are still supposed to have his picture on the very first page and the state institutions are required to hang up portraits of him. Pictures of Atatürk are also still very prominent during national holidays. Exhibitions of his photographs are organized from time to time as well as numerous albums containing Atatürk’s photographs, with the latest ones being published continuously. The press also plays its part in this circulation, as photographs of Atatürk continue to be published particularly on special occasions such as national holidays and anniversaries of other major events.

The circulation of these photographs throughout the republican history has certainly had its ups and downs. We witness a rise in Atatürk symbolism at times when the state ideology, Kemalism, derived from the name of Mustafa Kemal Atatürk, was believed to be at stake. Therefore, the Islamist and Kurdish movements in the 1990s, for example, two movements that oppose the secular and nationalist foundations of the state, brought a rise in Atatürk symbolism in their wake (Bozdoğan and Kasaba 1997, 3–14). The coming to power of the Justice and Development Party of Turkey (AKP) in 2002 also triggered this tendency. Photographs of Atatürk became widespread again; those who embraced the Kemalist ideology showed their discontent with the current government by turning back to Atatürk.

As an undergraduate student, I was intrigued by the rise in this symbolism back then, that is, how these photographs, which were taken eighty to ninety years previously, could still be very much contemporary for many people. This curiosity then evolved into a dissertation topic when I started my PhD in Political Science. My aim was to look at what these

photographs meant in the present and what kinds of affiliations and ways of remembering the past they represented for Turkish citizens at the time. My original intention was to carry out interviews using photo-elicitation, that is, showing a pile of photographs to my interviewees in order to see how they responded to them. However, I gave up on this plan during the pilot interviews in 2013, when I realized that the people I was speaking to responded to these photographs from within the current political framework. What they saw in these pictures, depending on their relationship with Kemalism and Atatürk, was either the “good deeds” or the “bad deeds” of today. This would be a perfectly legitimate dissertation topic: looking at what kinds of approaches these photographs from the past offered for our present political understanding. But I realized that this would be more an analysis of the current political situation and not of the photographs themselves.

While I was preparing for the interviews, I was already looking at how these photographs were originally published. As mentioned above, the majority of Atatürk photographs were taken by photojournalists of his time and then printed in newspapers and magazines. Hence, during this initial phase, I was going through all the newspapers and magazines of the early republican period because I wanted to see the difference between what they were meant to show originally and what they later came to mean. It was during this period that I became aware that there had never been any research on these photographs throughout the entire republican history. Work has been done on the status of Atatürk and on how his image was incorporated into objects such as T-shirts, mugs, and crystal spheres. There is even a study on tattoos depicting Atatürk images or his signature.¹ But there was never any research on his photographs. It was very strange to realize how these photographs, which could be seen all around us, were somehow “invisible” in the sense that they had never been analyzed before. Consequently, I decided to take a closer look at them during the period in which they were first taken and circulated and to explore the visual regime of the early republican period with its foundations built around the visibility of Mustafa Kemal Atatürk.

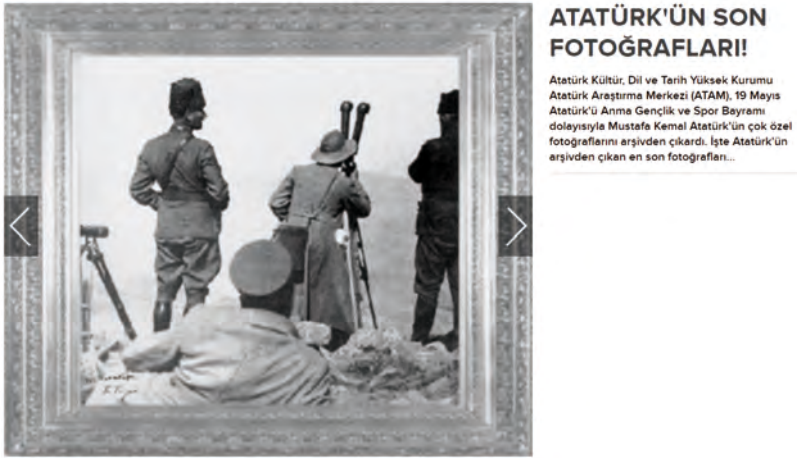
Photographs recently taken out of the archives

The fact that there has never been any research conducted on the photographs of Atatürk seems even more incredible since there is a constant interest in them. As stated earlier, exhibitions, albums, and newspapers continue to show and circulate these photographs. In addition, online journalism gives rise to the opportunity of publishing hundreds of photographs at once, which could not have been done in printed newspapers.

When these photographs are circulated today, it is very common to hear or read phrases such as “photographs never seen before” or “photographs recently taken out of the archives.” However, when we look at these pictures, it is possible to see that they were in fact circulated previously. For example, Habertürk, a Turkish news agency, published many photographs of Atatürk in 2013 with the heading “The Last Photographs of Atatürk!” (*Atatürk’ün Son Fotoğrafları!*) (see Fig. 1).

It is stated in the explanation that the Atatürk Research Center of the Atatürk Supreme Council for Culture, Language and History (ATAM) had brought very special photographs of Atatürk to daylight for the national holiday on May 19, which is the Commemoration of Atatürk, Youth and Sports Day. One of the photographs published there, displaying Atatürk

¹ For examples of this research, see Tekiner 2010; Özyürek 2004; Erim 2011.



ATATÜRK'ÜN SON FOTOĞRAFLARI!

Atatürk Kültür, Dil ve Tarih Yüksek Kurumu Atatürk Araştırma Merkezi (ATAM), 19 Mayıs Atatürk'ü Anma Gençlik ve Spor Bayramı dolayısıyla Mustafa Kemal Atatürk'ün çok özel fotoğraflarını arşivden çıkardı. İşte Atatürk'ün arşivden çıkan en son fotoğrafları...

Fig. 1: Mustafa Kemal Atatürk on the Front During National Independence War, published on the website of Habertürk news agency as “The Last Photographs of Atatürk.”

on the front during the Independence War, was in fact widely circulated earlier, for example, in a photographic book from 2006 (Akşit 2006, 89) (see Fig. 2).

Another example can be seen on the website of *Sabah* newspaper, where three hundred “least known” photographs of Atatürk were published in 2014 (*Atatürk'ün Çok Az Bilinen 300 Fotoğrafi*). One of the photographs there was in fact part of another very famous photographic book in 2009 (Benazus 2009, 240) (see Figs. 3–4).

The same photograph can be seen in the 1972 *Milliyet* newspaper in an article entitled “The Photographs of Atatürk Never Published Before” (*Atatürk'ün Hiçbir Yerde Yayımlanmamış Fotoğrafları*) (see Fig. 5).

The second photograph on this page, which is also allegedly brought to daylight for the very first time, can be traced back to a series of a portraits from an exhibition where “the unseen pictures of Atatürk were exhibited” in 1973 (*Atatürk'ün Görülmemiş Resimleri Sergilendi*) (see Fig. 6).

These are just a few examples of a phenomenon which was prevalent throughout the republican history; that is, bringing out the photographs of Mustafa Kemal Atatürk over and over again while claiming to display them for the very first time and, thus, attempting to present Atatürk as new, contemporary, and relevant for all ages. What is common to most of these examples is that the names of the archives from which these photographs were taken are rarely mentioned. This ambiguity surrounding the specific archive turns it into an indefinite structure that appears inaccessible at times.

The contrast between the emphasis placed on the fact that these photographs were taken from archives and the indifference to the specific archives themselves, which manifests itself in the failure to mention their names, initially escaped my attention. I only became aware of this issue when I went to the archive by myself, not to look for any particular photograph, but for what was written about these photographs. My dissertation also involves the decisions made by early republican state officials concerning the question of who is able to disseminate



Fig. 2: Mustafa Kemal Atatürk on the Front During National Independence War, published in Akşit, İlhan: Mustafa Kemal Atatürk, Akşit Yayınları, İstanbul 2006, p. 89.

these photographs in which media and when. Consequently, I went to the Directorate of Republican Archives of the Prime Ministry to find out more about these decisions. During my time there, I began to come across files that were about specific photographs but did not include the pictures in question. For example, there was one file about a crisis that occurred in 1935: a magazine called *La Turquie Moderne* published a photograph of Atatürk, which triggered an exchange of letters with the state departments claiming that this was a fake photograph of Atatürk and that the magazine had to be punished for circulating it.² The file in the archive contains many documents, most of which say that the photograph in question or the periodical in question could be found in the attachment, but none of them were in the file. Another file about the operations of an electricity company in the early republican period contained both photographs of the facility and of Atatürk.³ Although the connections between these different photographs were not clear at first, I later found out that Atatürk happened to visit the company in the past and that photographs from this visit were deemed appropriate to be added to a file about the operations of this facility.

This was the first time I became aware of the question of how these photographs were stored in the archives. The sentence “the photographs recently taken out of the archives” was

² The Directorate of Republican Archives of the Prime Ministry, Ankara, 30-18-1 / 59-85-9.

³ The Directorate of Republican Archives of the Prime Ministry, Ankara, 230-0-0 / 12-48-1.



Fig. 3: Mustafa Kemal Atatürk Drinking Coffee, published online on the website of *Sabah* newspaper, November 10, 2008.

so natural for me that it took me some time to realize that I had not seen as many Atatürk photographs as I should have in this archive. In fact, I came across only two pictures in a file where I least expected to find them. This is how the issue of the archive became a matter of curiosity to me and I began to visit various institutions to look for the photographs of Atatürk. My aim was not to find new photographs, ones that had “never been seen before.” I was just curious about how the photographs were stored.

Once I was at the Directorate of Republican Archives of the Prime Ministry in Ankara, I began to search for the photographs of Atatürk. The archive does not have a separate photography section, but there are many files on the photographs of Atatürk. His photographs were sent to various institutions all around the country to be hung up from 1935 onward. There are hundreds of files about this matter. Some also concern photographs donated to institutions and individuals when requested. There are even more files about how to hang up his portraits in state institutions. But none of the files contain any actual photographs of Atatürk. Apart from the one file about the operations of the electricity company, it was not possible to find a single photograph of Atatürk in this archive.

One of the archives I decided to go was the Presidential Archive, which is currently located within the Presidential Palace in Istanbul. The issue with this archive is that it is not possible to access it. If you need to consult this archive, you have to fill in a form with information on what is required from the archive and why. The form is then sent to the General Secretariat of the Presidential Office. After a while, you receive a CD with the materials deemed relevant to what is stated in the form. Therefore, it is not possible to search for materials personally nor to see the complete collections or the storage situation. Instead,



Fig. 4: Mustafa Kemal Atatürk Drinking Coffee, published in Benazus, Hanri: *Çağdaş Atatürk Fotoğrafları* [Contemporary Photographs of Atatürk], vol. 1, Tudem Yayınevi, İstanbul 2009, p. 240.

you are given a pile of files containing photographs that could be found in any Atatürk photo book.

Another archive that did not allow me to go through the materials was the archive of the Directorate General of Press and Information, in Ankara. When I made a formal application to receive permission to enter the archive, I was initially told that it could not be consulted by individuals, only by institutions. However, I was later told that they were willing to help me because my research was about Atatürk. Despite their good will, I was still not allowed to go into the archive by myself. Instead, I was given the web address of the Anatolian News Agency, a Turkish news agency owned by the state. Normally, Anatolian News Agencies use this website to sell photographs taken by registered photojournalists. I was told that there were many pictures of Atatürk on the website. I could take a look at them, choose a maximum of twenty, and then they would give them to me for free.

Yet another archive I went to belonged to the Turkish History Society, also in Ankara. This institution was founded in 1931 by Atatürk himself in order to carry out research on Turkish history. When I was granted permission to see the archive, I was initially asked to go through the list of all the digitized materials and to choose which I would like to see.



Fig. 5: Mustafa Kemal Atatürk Drinking Coffee and Atatürk's Portrait, published in *Milliyet*, November 13, 1972, p. 7.

The problem with this list was that it did not include much information about the photos. It contained only the titles given to the photographs by archivists and sometimes the titles were as short as “Mustafa Kemal Atatürk.” Going through this list, I had to draw up my own list of the materials I wanted to see by looking at their titles only. My personal list was then transferred to the archive employees who were then required to sort all the materials mentioned one by one. I later discovered, during an informal conversation over a tea break with some of the employees, that there were also a couple of glass plates of Atatürk, but these were not cataloged. They promised to show them to me one day but could not do so immediately because, they told me, it was “hard to find them.”

The final archive I visited was that of the National Library in Istanbul which used to have a section called the Atatürk Archive. This was a separate room full of documents, photographs, postcards, stamps, and books about Atatürk. All the documents were stored in unclassified or uncataloged files or boxes, which made it very difficult to go through them without knowing, for example, what year they were dated. The location of this archive changed recently. A new small room was constructed on the top floor, like a showcase. There is still a sign saying “Atatürk Archive” on the door, but it now contains only books about Atatürk. All the visual materials had been transferred, I was told, to the non-book materials section of the library. When I applied to go through the photographs, it turned out that all the materials were still uncataloged and scattered. Although the employees there



Fig. 6: Atatürk's Portrait, published in *Milliyet*, October 27, 1973, p. 5.

were willing to show them to me, it was hard to locate the files. In the end, I was able to see only four photographs and around fifty postcards.

Fear of archives

This was my overall experience in the five state archives. There are a few reasons why I encountered these difficulties in terms of finding photographs. One is related to the general problem of archive keeping in Turkey. Part of this general problem is related to the fear, on the part of the state, that something inconvenient might be found in the archives, which results in strict censorship. Therefore, most of the time, users are not allowed to consult the archives by themselves or they can access only a very small fraction of the materials. Moreover, the recent digitization of many archives caused a second process of censorship, as all the materials were checked once again while being digitized. One becomes aware of this censorship only when a document previously seen in the archive can no longer be found in the catalog. Another part of the general problem with archive keeping in Turkey is related to a kind of oblivion, a willful oblivion even, toward the documents of the past. This willful oblivion can be traced back to the early republican period, that is, to a time when the ties with the old regime were being broken and the documents of the past were therefore destroyed, went to waste, or were left somewhere to rot. The same can be seen happening over and over again throughout the entire republican history. In his book on the Turkish archives, *The Story of a Slaughter; a Raid*, Rifat Bali analyzes the archives of various state

institutions in Turkey and describes what happened to each of the individual documents, such as archival materials sent to the SEKA paper factory or sold to waste collectors (Bali 2014).

This also applies to the documents about Atatürk: there is a fear that something inconvenient might be found, which would jeopardize the image of Atatürk. A law regarding crimes against Atatürk, enacted in 1951 and still in effect to this day, shows how protecting the image of Atatürk is still very important (*Atatürk Aleyhinde İşlenen Suçlar Hakkında Kanun*).⁴ Consequently, strict censorship is applied to documents related to him in the archives. Although it is more difficult to prove this same process when it comes to Atatürk because he is still such an important figure in Turkey, we know of at least one example where a document of Atatürk was found in a garbage disposal. Atilla Oral, a journalist from Turkey, wrote a book about a letter Atatürk sent to the Turkish History Society and criticized this society, which Atatürk himself established to carry out research on Turkish history, distorted this history and did not write about it objectively (Oral 2011). Atilla Oral describes how this letter was thrown into the garbage from the archives of Turkish History Society and calls it an act of censorship. It is possible to interpret this as willful oblivion as well, since the documents that did not fit the image built around Atatürk were deliberately lost. But it is not possible to have an accurate idea about the scale and frequency of this situation, as we do not know whether there are other cases in which documents about Atatürk were destroyed or almost destroyed.

Apart from this general problem with archive keeping in Turkey, another particular difficulty I faced was that I was looking for *photographs* of Atatürk. Photography is still not a very common research object or subject in Turkey. It mostly remains within the confines of fine arts departments and there is only a small number of researchers who focus on the history of photography or who approach photographs from a socio-scientific perspective. This means that photographs are not treated as important documents in the archives. Some archives do not have a photography section—so coming across a photograph can be quite accidental. Even in cases where there is a photography section, the number of photographs, which are already very poorly cataloged or classified, can be very limited.

I must say that in all the archives I went to, I was only able to see what I saw because of the helpfulness of the people working there. But no matter how willing they were to help, there was an institutional or formal attitude which predetermined their ability to do so. The fear of the archive and the tradition of willful oblivion affect the institutional framework, which in turn posits a barrier that is difficult to overcome. Allan Sekula refers to the archive as a “territory of images” (Sekula 2002, 444). In my case, however, this is not a “territory” that you are allowed to enter on your own or walk around in freely. The archive, in my experience, is not a place to begin investigating either. Rather, it is somewhere to go at a later stage of research in order to be able to compare what you already know and what you are allowed to see.

The archive, in my case, did not contribute to a better understanding of or a fruitful confusion about a research subject, there is no way to just “let the photos talk.” Instead, it provides insights into how the *state* perceives and approaches this subject matter, which is ultimately also a part of the photograph’s history—if it is possible to identify and permeate those processes. The limited number of materials that are accessible in the archives, if any,

⁴ “Atatürk Aleyhinde İşlenen Suçlar Hakkında Kanun” [Law on Crimes Against Atatürk], *Resmî Gazete*, July 25, 1952, 3:32, p. 1842.

together with the fact that, in most cases, you cannot choose the materials you need to see yourself, makes it very difficult to give new meaning to historical events or personalities. Rather, the archive provides an image of what kind of meaning is attached to these events or personalities by the state authorities. This was why I was told in one of the archives that this archive could not be used by individuals but only by institutions. An institution, especially a state institution, would know how to handle the material and what not to use in order not to jeopardize any meaning previously attached. On the other hand, individuals, they believe, always carry the risk of going against the established meanings. Therefore, the archive, in my experience, does not represent a place where a researcher can ascribe new meanings to the past; instead, it stands for what should be kept and protected as it is. Aleida Assmann says about the archive that the materials to be found there are “stored and potentially available, but ... not interpreted,” as a result of which the archive becomes “a space that is located on the border between forgetting and remembering” (Assmann 2011, 336). In my personal archival experience, however, the limited number of materials available to study, the difficulty in accessing these materials, and the institutional or formal attitude which predetermines what can be seen and what can be done means that the archive is not a place where anyone can freely interpret the materials that have not yet been interpreted, but rather somewhere to rehearse the meanings already attached.

Early in the present paper, I said that the names of the archives from which the allegedly “new” photographs were taken are rarely mentioned. Consequently, the archive turns into a big abstract entity that is impenetrable. Although the archive is very much *there*, as an institution, with its door, and desks and files, the fear of the archive and the tradition of willful oblivion predetermines what can be seen and what can be done. It should also be noted, however, that although the state of these archives works as a barrier to accessing information, the researcher is in no way powerless against the “naturalization” of what the archive is to offer (Schwartz and Cook 2002, 3). The inability to access information inescapably draws the critical gaze towards the archive. The failure to encounter archival materials leads us to question the very structures of the archives and the objectivity attributed to them and, hence, to give back to the archive some of the specificity they attempted to erase.

List of Figures

Fig. 1: Mustafa Kemal Atatürk on the Front During National Independence War, published on the website of Habertürk news agency as “The Last Photographs of Atatürk!,” May 18, 2013, <https://www.haberturk.com/galeri/gundem/427757-arsivden-cikan-ataturk-fotograflari/1/69>, accessed February 5, 2017.

Fig. 2: Mustafa Kemal Atatürk on the Front During National Independence War, published in Akşit, İlhan: Mustafa Kemal Atatürk, Akşit Yayınları, İstanbul 2006, p. 89.

Fig. 3: Mustafa Kemal Atatürk Drinking Coffee, published on the website of Sabah newspaper as “The Least Unknown 300 Photographs of Atatürk,” Sabah, https://www.sabah.com.tr/galeri/turkiye/ataturkun_cok_az_bilinen_300_fotografi/129, accessed December 1, 2015.

Fig. 4: Mustafa Kemal Atatürk Drinking Coffee, published in Benazus, Hanri: *Çağdaş Atatürk Fotoğrafları* [Contemporary Photographs of Atatürk], vol. 1, Tudem Yayınevi, İstanbul 2009, p. 240.

Fig. 5: Mustafa Kemal Atatürk, Drinking Coffee, published in “Atatürk’ün Hiçbir Yerde Yayımlanmamış Fotoğrafları” [The Photographs of Atatürk Never Published Before], Milliyet, November 13, 1972, p. 7

Fig. 6: Atatürk’s Portrait, published in “Atatürk’ün Görülmemiş Resimleri Sergilendi” [The Unseen Pictures of Atatürk Were Exhibited], Milliyet, October 27, 1973, p. 5.

References

- Akşit, İlhan (2006). *Mustafa Kemal Atatürk*. İstanbul: Akşit Yayınları.
- Arendt, Hannah (1958). *The Origins of Totalitarianism*. Cleveland and New York: Meridian Books.
- Assmann, Aledia (2011). Canon and Archive. In: *The Collective Memory Reader*. Ed. by Jeffrey K. Olick et al. Oxford and New York: Oxford University Press, 334–337.
- Balı, Rıfat (2014). *Bir Kıyımın, Bir Talanın Öyküsü* [The Story of a Slaughter, of a Raid]. İstanbul: Libra Kitabevi.
- Benazus, Hanri (2009). *Çağdaş Atatürk Fotoğrafları* [Contemporary Photographs of Atatürk]. Vol. 1. İstanbul: Tudem Yayınevi.
- Bozdoğan, Sibel and Reşat Kasaba, eds. (1997). *Rethinking Modernity and National Identity in Turkey*. Seattle and London: University of Washington Press.
- Erim, Bilun (2011). *Making The Secular Through The Body: Tattooing the Father Turk*. MA thesis. Middle East Technical University.
- Oral, Atilla (2011). *Atatürk’ün Sansürlenmiş Mektubu* [The Censored Letter of Atatürk], İstanbul: Demkar Yayınevi.
- Özyürek, Esra (2004). Miniaturizing Atatürk: Privatization of State Imagery and Ideology in Turkey. *Ethnologist* 31(3):374–391.
- Schwartz, Joan M. and Terry Cook (March 2002). Archives, Records, and Power: The Making of Modern Memory. *Archival Science* 2(1):1–19. ISSN: 1573-7519. DOI: 10.1007/BF02435628. URL: <https://doi.org/10.1007/BF02435628>, accessed August 17, 2019.
- Şeker, Nesim (2009). İmge, Bellek ve Tarih: Milli Mücadele Dönemi [Image, Memory and History: National Struggle Period]. In: *Modern Türkiye’de Siyasi Düşünce. Vol. 9: Dönemler ve Zihniyetler*. Ed. by Tanıl Bora and Murat Gültekin. İstanbul: İletişim Yayınları, 1163–1194.
- Sekula, Allan (2002). Reading an Archive. In: *The Photography Reader*. Ed. by Liz Wells. London and New York: Routledge, 443–452.
- Tekiner, Aylin (2010). *Atatürk Heykelleri: Kült, Estetik, Siyaset* [Ataturk Statues: Cult, Aesthetics, Politics]. İstanbul: İletişim Yayınları.

Chapter 6

In the Family: Photographic Archives from India

Suryanandini Narain

This paper seeks to connect the archive and the family through photography. I argue that the family photograph bears shifts in identity by virtue of the archival context it is found in, and that the character of image archives themselves is determined by the affective potential of the photographs that they hold. Vast differences in photographic and institutional particularities make any coherent definition of the archive difficult, with the family oscillating between being in bright focus or in the shadows of different collections. For the majority of this essay, a range of examples from India will reveal the negotiations that are involved in housing family photographs, indicative of the polyphonous reality of archives.

If every family has its own internal archive, such as a family album, then what roles do formal archives of the state or universities or private institutions in possession of such images perform? Does the transfer of family photographs from the home to the shelves or servers of these institutions simply aid preservation or does it also transform their meanings? What are the expectations from discovering and reconstructing visually guided histories of family photographs in institutional archives or homes?

If objects were to speak, the family album would lament its removal from the home, for this would indicate a departure from the primary context, its reason for existence. There could be a dissolution of ties, death of memory, neglect, or aversion toward the image that caused its ejection from the family. A lack of space for the printed image and the negatives, or full computer hard drives with not enough memory for digitized versions, are the commonly cited reasons for selling, discarding, or deleting bulky albums. And yet it is when the family photograph leaves the home that the gains and losses of its meanings begin, that it acquires a biography and membership of archives with alternative logics. In a paradoxical sense, this departure is therefore both depleting and enriching for the photograph.

The family home, the studio, the institutional archive, the museum, and the commercial establishment are all places of rest for photographs, although this is an uncomfortable rest because the potential for movement is always present, never allowing meanings to solidify. The multiplicity of each photograph has given rise to many possible arrangements and classifications. One type of archive often mutates into another; the family photograph that travels into a digital archive or an institution accumulates and loses meanings with changing contexts. The political histories of nations, the economic compulsions of institutions, and the cultural inclinations of collectors transform archival frameworks, thereby rendering archival contents malleable. The family photograph often makes a long and complex journey through across archival narratives that need acknowledgement at the time of meaning construction. The thrust of this paper will be toward the expansion of the concept of the archive to include informal and sometimes inaccessible spaces, such as family homes, and the hidden histories that these hold.

Without restricting my study to a singular methodology of reading family photographs, I will analyze four photographic archives from India, followed by two contemporary artistic responses on the subject. I hope to bring to light the possible destabilization of known histories and the multiplicity of meanings offered by family photographs in the archive.

Between the home and the archive

Alluding to the different contexts of collecting, photography historian Malavika Karlekar outlines three ways to read the image. The usual one is to view the image as something of general interest, as a record of the past, or as a mnemonic device. Second, the photos may become part of a more specific interpretive or interrogative exercise, adding a significant dimension to accepted history. The third kind of reading is the act of interpreting “orphaned” photographs, visuals that viewers such as Karlekar herself have “chanced upon or sourced without knowing too much about them per se, but only that they fitted into the period and frame of study” (Karlekar 2005, 166–167). I propose extending this method to include all three stages of reading to the same artefact: if we were to begin reading the family photograph by treating it as a mnemonic device, its peculiarities may soon suggest alternatives to historical facts, while the “adoption” of “orphaned” images would further expand embedded meanings that have remained hidden to date. From the archival perspective, these multi-tiered meanings confront the viewer who may be unprepared for a lack of closure, or a constant deferral of the final reading of these photographs.

As a preliminary example, in a film titled *Family Album* (2011), directed by Nishtha Jain, the figure Subhamita Chaudhuri says simply of her family’s images that “these photographs are a part of my life. I have grown up looking at them.”¹ They act as mnemonic tools for Subhamita to meet and converse with departed relatives, reconstruct their lives and glean the role of the camera in the family in bygone times. The narrative undercurrent in the Chaudhuri family archive seems to evoke feminine histories, unacknowledged in family trees and other written documents, alive only in visually guided oral recollections. This family’s self-identity is articulated through verbal reminiscences of events, personalities, and dialogues associated with the people in the photographs, yet the fragility and flexibility of memory make the reconstructions contingent. The Chaudhuri family exemplifies Marianne Hirsch’s theorization of the “familial gaze,” defined as “the conventions and ideologies of family through which they see themselves” (Hirsch 1997, 51). Familial belonging can be read into the folds of a grandmother’s sari, the toys strewn around aunts as babies, and the sunlit corridors of family homes, recollected by the quivering voices of the women in the Chaudhuri family. At a second level, one may examine Jain’s directorial choices in making such a film, with impassioned voice-overs and an emotive sound score permeating the way we receive the Chaudhuri family’s photographs—full of poignancy and nostalgia for a lost era of elite living in India’s colonial capital.

As characters in the film die even before the documentary project is completed, the Chaudhuri family photos become “orphaned” or “found” images, losing subjective meaning while benefiting from historical attribution of time, space, and cultural signification. The reception of the Chaudhuri photographs in a digitized archive would strip them of such subjectivities, as they would appear numbered and cataloged for a reconstruction along any

¹ Subhamita Chaudhuri in the film *Family Album* by Nishtha Jain, produced by Raintree Films, India, 66 minutes, 2011.



Fig. 1: Subhamita Chaudhuri, from Nishtha Jain's film *Family Album*, 2011.

of the trajectories of architecture, textiles, and education in the late nineteenth century in Calcutta's bid for modernity (see Fig. 1 and in addition Figs. 2–4 in Hyperimage).

The first institutional archive that I discuss is perhaps closest to the family home. The School of Women's Studies at Jadavpur University in Calcutta received an India Foundation for the Arts grant in 2007 to collect, archive, and read the economy of photographs, photographic practices and their modes of representing the lives of urban middle-class Hindu women in Bengal from the 1880s to the 1970s. The photographs were acquired from various sources such as neighborhood photo studios, private collections, and families. The intention of this archive was, over a period of two years, to rescue old photographs from damage or loss and curate them in a way that would facilitate fresh analysis of the photographic cultures of urban middle-class Bengali women in their dominant modes of representation. The main archivist and curator, Hardikbrata Biswas, believed that the recontextualization of women's photographs in relation to their past that "played out in spaces that were potentially colonized, infiltrated by patriarchy into private areas of consumption, reproduction, leisure and entertainment" needed to be challenged.² Readings of photographs were invited from within and beyond the family fold, in order to fully realize their potential of meaning-making. New connections between the subjects photographed, the cultural world that they inhabit, as well as the interplay between the photographer and the sitter would give rise to new theoretical formulations (see Fig. 5).

Phase one of the project saw the documentation, digitization, and archiving of photographs from Kolkata and other districts of West Bengal. After the classification and digitization of roughly 10,000 photographs, the hard copies were returned to the owners, thus restoring the album to the contextual bedrock of the family. This step ensured that no stories were lost to the owners of the albums, that their inheritance remained intact. The documen-

² From the web page of the *India Foundation for the Arts*, <http://www.indiaifa.org/school-women%E2%80%99s-studies-jadavpur-university.html>, accessed December 10, 2016.



Fig. 5: Hardikbrata Biswas and Samita Sen, in conversation about the archive Family Album, School of Women's Studies, Jadavpur University, Kolkata, film still from youtube.

tation process involved extensive interviews with the owners of the albums,³ contributing to the content of an anthology of critical essays that was subsequently published. The archive chiefly contributed to a larger project by the same department at Jadavpur University, titled *Re-Negotiating Gender Relations in Marriage: Family, Class and Community in Kolkata in an Era of Globalization*.

A subsequent paucity of funds led to the unfortunate closure of the project, rendering the archive inaccessible to the world. The initial effort to open up intimacies of home and family through photography ended with their regression into the same depths from which they first came, making further expansion, extraction, or extrapolation impossible. It is as if the most primal stories of photographs seeking to emerge from the bedrock of the family fell short of flight, for the gravity of the home embedded them into their spaces of birth and primary meaning again.

Next is an older and larger collection of images that resides at the Hitesranjan Sanyal Memorial Archive of the Centre for Studies in Social Sciences, Calcutta. This nodal institution hosted several important members of the Subaltern Studies Group and developed its visual and material archive from diverse sources within the Bengal region. Established in 1993, the Archive has now expanded to include “popular prints and paintings, modern art, studio, family, salon, commercial and news photography, advertisements and commercial art, posters, covers, labels, hoardings and other publicity material.”⁴ It is also a part of larger archival initiatives in the world such as the Endangered Archives Programme of the British Library and is in the process of collaborating with the South Asia Materials Project (SAMP)

³ Sen, Biswas, and Dhawan 2011.

⁴ From the web page of the Hitesranjan Sanyal Memorial Archive, <http://www.cssscal.org/archive.php>, accessed December 11, 2016.



Fig. 6: The Hitesranjan Sanyal Memorial Archives, Centre for Studies in Social Sciences, Calcutta, courtesy of Ritwika Misra, 2017.

to further expand access. It runs with an open access policy, although seeking permission from donors for the reproduction of images (see Fig. 6).

The photographs collected by this archive are nomenclatured according to the donor, cutting across the usual larger categorizations. One such seminal collection is attributed to Siddhartha Ghosh. The images that now belong to his unclaimed estate, inaccessible after his death in 2002, were fortunately digitized at the centre in 1999. Originally a scientist at the Central Glass and Ceramic Research Institute, Ghosh was associated with the center in the 1990s. His keenness to explore Bengali photographic history propelled him into the lives and private collections of important and ordinary figures of his time whom he befriended. These included the family of poet laureate Rabindranath Tagore, historian Barun De, and Maharaja Birchandra, prince of the kingdom of Tripura, among others. He did not have a singular, organized method of acquiring the images, with several of them being “borrowed” from friends never to be returned. Archiving was not a professionalized or even organized system at the time, apart from government initiatives to survey and document the architecture and people of India, giving Ghosh exceptional freedom and access that was not always uniform or systematic. Although these photographs were extracted from their original locations, they benefited from Ghosh’s affective and scholarly investments, and helped develop the first regional history of Indian photography in his publication titled *Chhobi Tola: Bangalir Photography Charcha* (Tola 1988).⁵ During his own lifetime, several families opened their albums for Ghosh to select images from, his impulse to preserve these images terminating with his death. His own family lay no claim to his collection, and it fell to the Centre for Studies in Social Sciences, Calcutta (CSSSC) and its research initiatives to form inter-

⁵ This can be translated as follows: “Taking Photographs: A Discussion on Bengali Photographic Practice.”

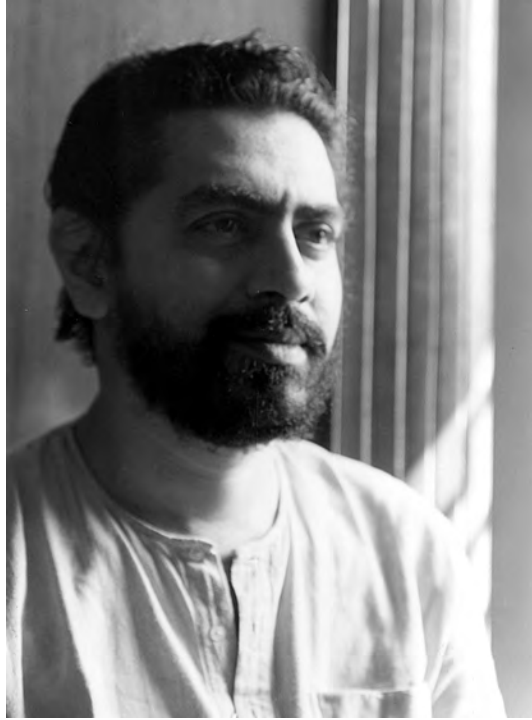


Fig. 7: Portrait of Siddhartha Ghosh, late twentieth century, courtesy of Sanjeet Chowdhury and the Hiteshranjan Sanyal Archives, Centre for Studies in Social Sciences, Calcutta.

connections and linkages, finding friends and relatives for photographs within the archive (see Fig. 7).

The 2011 exhibition *The City in the Archive: Calcutta's Visual Histories* (Guha-Thakurta 2011) displayed, among several other things, Siddhartha Ghosh's collection. The show was organized under three headings: photographs from studios in the city, from family albums, and those of individual donors. Of particular interest were photographs from Calcutta homes, including cabinet cards from famous studios, wedding portraits with child brides, self-portraits, and family cameos. The true value of the exhibition surfaced in its reception, as people recognized their ancestors, identifying them and adding to the archive's knowledge base. As such, the Hiteshranjan Sanyal Memorial Archive succeeds in the aims of *Family Album* at Jadavpur University, mentioned above. It allowed new interconnections to surface between home and institutional archive, between subjective narratives of image donors and scholarly research informed of historical externalities.

A contrast to the two archives already discussed is the much larger collection of photographs at the Alkazi Foundation for the Arts in New Delhi, spanning a shorter period of time but a regionally wider scope. The collection stems from the initiative of Ebrahim Alkazi, who as an art connoisseur, collector, and bibliophile began acquiring photographs in the 1980s. Its previous locations in New York and London have situated the archive interna-



Fig. 8: View of the storage and archival research at the Alkazi Foundation, photo taken from the Alkazi Foundation's website.

tionally as a leading repository of Indian artefacts, bearing a format and reputation that correlate to international standards and methods of preservation. Here, one can find the greatest names in Indian colonial photography such as Samuel Bourne, Lala Deen Dayal, Cecil Beaton, and Felice Beato. The subjects of the images vary from architectural views of cities such as Lucknow and the erstwhile Vijayanagara Empire to portraits of royalty such as the Begums of Bhopal, exquisite platinum prints of the Nepalese royal family's portraits to affordable postcards and cabinet cards of exotic destinations and dancing girls, subsumed under "bazaar art." The archive in New Delhi holds all the images in hard copy, meticulously preserved in dehumidified rooms and acid-free sleeves with a digitized catalog (see Fig. 8).

The visual material here can be divided into two groups: on the one hand, images originating from families produced for their pleasure and "memory" and, on the other hand, images mass produced in multiple copies for commercial sale and circulation, in the form of postcards or souvenir albums. While the history of the latter is easy enough to trace from the detailed versos, the family albums espouse a certain loss as they remain devoid of personal history, with no names to faces, events and contexts forgotten forever. Recalling Karlekar's differentiation between the various ways of reading photographs, even though the internal mnemonic narratives of such images remain obscured, valuable larger social and historical readings may be established.

To give an example, during my research at the Foundation, I found several wedding albums, and I compared the 1911 official state wedding album of the Maharaja of Kapurthala (photographed by the famous Bourne and Shepherd Studio) to the 1921 scrap wedding album of the Rani of Mandi.⁶ I was drawn to the figures of the French-educated Rani Brinda and

⁶ The 1911 album documents the wedding of Maharaja Jagatjit Singh of Kapurthala's eldest son and heir to the throne Prince Paramjit Singh to Princess Brinda of Jubbah, while the second album is the personal scrap album of

Anita Delgado of Spanish origins who clearly did not quite fit the visual norm of the family group photograph. Research revealed that the former did not yield an heir to the throne, and the latter got divorced, tentatively explaining their visual displacement. Yet I could only read into the contentious positions of these princesses by historicizing a social milieu that was modernizing in ways contrary to what they were familiar with in Europe. I found myself mapping a larger national history onto the fact that their photographs were removed from the albums. There were also glaring dissimilarities between the projections of the Kapurthala state souvenir album and the private memories embedded in the Mandi scrap album which awaits a more affectively sensitive study of official versus personal family photographic portrayals of royalty intended for different audiences. The personae of the two princesses as women of wealth, education, and culture were emblazoned on their bejeweled bodies that posed for the camera, yet my readings remained incomplete beyond what the archival status of these albums was able to reveal (see Fig. 9 and Fig. 10 in Hyperimage).

A niche between the institutional photographic archive and a family's collection is occupied by the Indian Memory Project, described as "an attempt to trace a history of India, its people, professions, development, traditions, cultures, settlements and cities through pictures found in personal family albums and archives."⁷ This online project initiated by Anusha Yadav, a professional photographer, seeks to virtually document pre-1990s family photographs as shared by their current guardians and owners. Images can be submitted to the site manager with details such as dates, names, locations, and professions of the subjects, who must be people of the Indian subcontinent. Their importance, the event, and historical value should all be explained by accompanying text.

The purpose here is not wholly academic, with the contents of the web page openly available to everyone, in line with practices of sharing personal data through online social networking methods such as blogging, Facebook, and Instagram. The photographs and texts sent by people from across the world are scanned by the moderator and uploaded, expressing narratives in the first person. This archive's logic rests on the trust it instills in the family as bearer of truthful narratives behind photographs. Anusha says "this is the maximum validation and information one can ever get. No one knows better than family, and we trust that they are being factual and truthful."⁸ Anusha's confidence is of course questionable, as the mnemonic functions of family photographs have always been contingent on their owner/narrator, mutating across generations, homes, and intentions.

The Indian Memory Project's overall effort to identify people, narrate their stories and their larger cultural milieu spills beyond the frames of the photographs. Some people prefer to show and tell about relatives posing with famous people, recognizable for their star quality. Others share intimate images of loved ones or unseen historic images that mark personal and familial change. Yadav writes on a series of photographs of her own mother and five aunts posing in identically sized studio portraits,

the wedding of Rani Amrit Kaur of Kapurthala, daughter of Jagatjit Singh, married to the Raja of Mandi Joginder Sen Bahadur. Maharaja Jagatjit Singh's affection for all things French made him educate Rani Brinda in France for five years before she married his eldest son Raja Paramjit Singh. Anita Delgado, a Spanish dancer he met during the wedding of King Alfonso XIII of Spain, also received an education in Paris for several months before he took her as his wife and brought her to Kapurthala.

⁷ From the web page of *Indian Memory Project: About*, <https://www.indianmemoryproject.com/about/>, accessed December 10, 2016.

⁸ Author's interview with Anusha Yadav, Mumbai, 2012.

this is a collective image of my mother and her sisters, photographed holding their degrees with pride, between 1961 and 1971, as it was the custom at the time for women to be photographed to prove that they were educated. Some of these images were also then used as matrimonial pictures.⁹

She goes on to reveal how one sister died under mysterious circumstances, another eloped, and how education and domestic skills were highly prized assets. Family photographs and feminine narratives have a unique affiliation in the larger scheme of historical documentation, even as this affiliation is based on an oral-visual method rather than a textual one. Matrimonial portraits define a particularly important moment in the lives of Indian women who undergo arranged marriages, and the use of graduation photographs for the purpose of marriage complicates the contradictory nature of demands that modernity poses on the feminine figure. Through microhistories revealed in the Indian Memory Project, readings of the nation at various points in time are made possible, the visual not only substantiating but initiating investigation into pockets of interest (see Fig. 11).



Fig. 11: My mother Shalini (center, bottom row) and her five sisters Kusum, Madhavi, Suman, Aruna, and Nalini, unknown photographer, Agra, Uttar Pradesh, 1961–1971, courtesy of Anusha Yadav, Indian Memory Project.

⁹ From the web page of *Indian Memory Project: Six triple degree holding sisters of Agra*, <https://www.indianmemoryproject.com/50/>, accessed December 10, 2016.



Fig. 12: Gallery view of the exhibition *Museum Bhavan*, courtesy of Dayanita Singh, 2015.

Archives in motion

To contrast the institutional archive's frameworks that, in the above progression of examples, seem to gradually expand one's grip on historical exactitude, giving ground to a greater affective presence of memory, I would like to look at extensions of the photographic family archive in contemporary art practice in India. Dayanita Singh's 2016 show called *Museum Bhavan* in Delhi's Kiran Nadar Museum of Art was unusual in that the photographer was also its curator, keeper, seller, and critic. This exhibition of a photographer's own archive of images was organized not using walls, but wooden panels bearing grids with bars that held photos in their place. The structures were cleverly designed hybrids that could be collapsed or expanded as the artist wished, into suitcases, photo frames, shelves with reserve images, even furniture boxes, making the museum—and its meanings—mobile. The images were constantly on the move, changing places with other images by a logic internal to the artist, so that no arrangement remained the same on any two days. Each panel formed a "museum" titled by Dayanita, so there was the *Museum of Little Ladies*, the *Museum of Chairs*, the *Museum of Love*, the *Museum of Men*, the *Museum of Chance*, among others. The family finds shape in the relationships that Dayanita attributes to her museums. With herself as the "mother," they become each other's cousins, parents and siblings, confidants, friends, and witnesses (see Fig. 12).

Moving walls—Tetris-like image blocks in motion—clicking into place and making space for each other, encircling, expanding, and receding, make *Museum Bhavan* an archive in motion, a theatrical drama where relationships can knit themselves, travel, and unravel freely. For the artist, her images speak to each other and to the viewer in perceptible tones—making titles unnecessary. Visiting *Museum Bhavan* is an inversion of the usual exhibitionary experience, challenging what a museum or an archive has meant all this while. One cannot absorb *Museum Bhavan* simply by scanning its member images from a single point;

there is no such flatness to it. Instead, one has to enter it, weave one's way through it, get lost in it, and then find one's way out. Through a lifetime of work, the artist has found the conventional catalog limiting, the titles of photographs constrictive, curators indifferent, archives rigid. The physicality of *Museum Bhavan* makes it a complete sensorial experience, unexpectedly going beyond the visual—with the artist even making “conversation chambers” for visitors enclosed within panel walls. Here, we may talk to chairs and machines, gaze at beautiful women from Bombay society, or respond to the questions that beseeching gazes of children bear.

Museum Bhavan is as much a comment on the archive as it is one itself. Its instability calls into question the idea of permanence that conventional archives embody. Its emotive content, uncontrollable spillages of meaning, and changing stories foreground affect as both an approach to understanding and a technique for presenting photographs. It remains for the viewer to make connections between an ascetic child from the *ghats* of Banaras looking at the portrait of the eunuch/transgender Mona Ahmed in her graveyard, as the latter dances to Zakir Husain's throbbing tabla in another frame, and an empty bedroom yearns occupants to fill its spaces with the living. Dayanita's photographic subjects are often well acquainted with her, and the photographs and their arrangements both reveal or conceal what she knows about them and their lives. *Museum Bhavan* remains a whimsical yet serious archive, one that may transform at will, as it also establishes undeniable connections between moments in the photographer's own life as a witness to the world.

The artist Vivan Sundaram works with a substantial photographic archive of his maternal family. Vivan's engagement with images of his famous aunt, the painter Amrita Sher-Gil whom he never met, or those of his own demure mother Indira and of his flamboyant grandfather Umrao Singh Sher-Gil, presents him several points of entry into a desired past. In his work titled *Re-take of Amrita* (2001), he moves as a participant interventionist into the history of his family, as someone both within and outside the memories embedded in the photographs, with legitimate access to reshuffle the fixity of the figures photographed. His engagement echoes the loving acts of collage making from personal scrapbooks and albums, repositioning figures and inventing backdrops to interweave memory with myth and retrospective desire. Photographic production here is more than a one-step process, as Sundaram intervenes to produce meanings in continuity, complementarity, and contestation to the ones originally intended. The artist attempts to read into personalities through these reconstructions. His grandfather Umrao Singh Sher-Gil, often appearing solo in carefully arranged gestures and settings is thus, “a highly self-conscious, obsessive, self-absorbed man who images his handsome body, his subjectivity, his being and his melancholy” (Sundaram 2008, viii).

With his “digital wand,” Sundaram plays with photographs, furthering the already performative personalities of Amrita and Umrao and the more introvert Indira into imagined scenes and conversations. He combines multiple photographs as well as Amrita Sher-Gil's paintings into a series, proposing a narrative that would perhaps uncover hidden truths. Sundaram's archive dwells in the realm of fantasy, as much as it knits together family montages in scenes of domestic intermingling. The multiple use of mirrors and the doubling of figures further puts to question the stasis of past personal relationships that we come to currently accept. Amrita, now dressed in a sari, admires her reflection only to have herself looking back in a western suit, visually contemplating but also displaying her identity as a person from two continents. Digitally maneuvered, her mother, Marie Antoinette, appears at the pi-



Fig. 14: Self-portrait of Umrao Singh Sher-Gil at his study table, c. 1933, glass plate negative, Vivan and Naveena Sundaram Collection, New Delhi, copyright: Vivan and Naveena Sundaram.

ano, her nephew—Vivan himself—in Umrao’s arms, the sisters smiling next to each other, creating a scene that completely skews all sense of chronology that the world knows of the Sher-Gil family. It is as if, on the inside, families never really are what they seem on the outside (see Fig. 13 in *Hyperimage* and Figs. 14–16).

In conclusion, the photographic archive attempts to position itself as the keystone against erosion of memory and material in time. It addresses what Geoffrey Batchen calls “an impossible desire: the desire to remember and to be remembered” even as photographs themselves “remind us that memorialization has little to do with recalling the past; it is always about looking ahead toward that terrible, imagined, vacant future in which we ourselves will have been forgotten” (Batchen 2004, 98). The photograph cannot thus guarantee remembrance, for it is the archive that must do this job. Yet, as I have shown, the relocation of photographs erases part of their meaning as their context transforms, some images carrying over their histories, while others are stripped bare, still others waiting to discover new stories, new interconnections, indeed, new family in the archive. The past always keeps in mind the future, something that separates it from the family album which is intended to preserve a certain version of the past. The archive must be able to not only organize what it presently has but also be capable of gathering more photographs: to allow a variety of sequences to make meaning, accommodate debate and dialogue between its many members that may sometimes end in surprising insights. The archive must challenge its own linearity or the sense of assumed completeness that a family album possesses, its categorizations and sequencing of images subscribing to a history that is external to, yet not exclusive of, ties of kinship. Like the ever-expanding population of India, family photographs and their residences will hopefully reveal new truths or confirm well-loved



Fig. 15: Remembering the past, looking to the future, from the series *Re-take of Amrita* by Vivan Sundaram [Umrao Singh, Paris, early 1930s; Amrita, Bombay, 1936, photo, Karl Khandalavala; Marie Antoinette, Lahore, 1912; Indira, Paris, 1931]; digital photomontage, 38.1 x 53.3 cm, 2001, copyright: Vivan Sundaram.

myths in their growing complexity. Yet the tensions of loss and gain of information will never settle, always leaving the image incomplete of its full potential to convey meaning. It is only the acknowledgement of the parallel existence of the institutional archive, the virtual voluntary collection, the digitized or material-based archive, artistic interpretations, and the many, many family collections that enables a well-rounded photographic understanding of India's people.

Postscript

The conference *Photo-Objects: On the Materiality of Photographs and Photo Archives in the Humanities and Sciences* importantly identified the diversity of photographic archives from across the world. Each institution was shaped by the local characteristic features of its politics, cultures of collecting, image making, and ideas of preservation. This wide range of image repositories leads one to conclude that the archival impulse is universal; its intentions and constraints have no modular resolution for photographic classification, in either physical or ideological terms. From the examples above, it is clear that even internally, the Indian situation does not settle at a single, resolved definition of how images must be ordered, documented, or preserved, spawning many ways of archiving, and hence understanding, photographs. Importantly, these variations are inflected with the affective power of the familial, which subsumes meanings in a foremost sense. The absence of the family "orphans," the image of its completeness, and the presence of the family creates a conundrum of meanings, difficult to contain within the archive. Ultimately, the unfulfilled desire



Fig. 16: Bourgeois family: Mirror frieze, from the series *Re-take of Amrita*, by Vivan Sundaram [from left: Indira, Paris, 1930; Umrao Singh and Vivan, Simla, 1946; Marie Antoinette, Lahore, 1912; Small earring, 1893, Georg Hendrik Breitner; Amrita, Simla, 1937; Amrita, Budapest, 1938, photo, Victor Egan], digital photomontage, 38.1 x 66 cm, 2001, copyright: Vivan Sundaram.

embedded within the family album is for the resurrection of time and bodies, the lives of those whose eyes interlock our gazes with theirs.

List of Figures

Fig. 1: Subhamita Chaudhuri, from the film *Family Album*, directed by Nishtha Jain, 2011.

Fig. 2 (in Hyperimage only): Subhamita Chaudhuri, looking through a stereoscope, from the film *Family Album*, directed by Nishtha Jain, 2011.

Fig. 3 (in Hyperimage only): Chobi Ghosh, from the film *Family Album*, directed by Nishtha Jain, 2011.

Fig. 4 (in Hyperimage only): Shelly Deb of the Nabakrishna Deb family, from the film *Family Album*, directed by Nishtha Jain, 2011.

Fig. 5: Hardikbrata Biswas and Samita Sen, in conversation about the archive *Family Album*, School of Women's Studies, Jadavpur University, Kolkata, still, <https://youtu.be/jBIhmLcssEc>, accessed January 21, 2014.

Fig. 6: The Hitesranjan Sanyal Archives, Centre for Studies in Social Sciences, Calcutta, courtesy of Ritwika Misra, 2017.

Fig. 7: Portrait of Siddhartha Ghosh, late twentieth century, courtesy of Sanjeet Choudhury and the Hitesranjan Sanyal Archives, Centre for Studies in Social Sciences, Calcutta.

Fig. 8: View of the storage and archival research at the Alkazi Foundation, <http://www.cssscal.org>, accessed December 11, 2016.

Fig. 9 (in Hyperimage only): Indian Wedding Guests from the wedding album of Sri Tikka Paramjit Singh of Kapurthala with Princess Brinda of Jubbal, Bourne and Shepherd [attributed], platinum print, 1911, 20.1 x 36.5 cm, ACP: 98.57.0001(3) Alkazi Collection of Photography.

Fig. 10 (in Hyperimage only): Maharani Brinda Devi from HH Maharani Madalasa of Sirmur's scrap album, G. L. Manuel Freres, gelatin silver print, 1912–1933, 19.3 x 13.5 cm, ACP: D2008.07.0005-00037, Alkazi Collection of Photography.

Fig. 11: My mother Shalini (center, bottom row) and her five sisters Kusum, Madhavi, Suman, Aruna, and Nalini, unknown photographer, Agra, Uttar Pradesh, 1961–1971, courtesy of Anusha Yadav, Indian Memory Project.

Fig. 12: Gallery view of the exhibition Museum Bhavan, courtesy of Dayanita Singh, 2015.

Fig. 13 (in Hyperimage only): Style, from the series *Re-take of Amrita* by Vivan Sundaram [Indira, Simla, 1937; portrait of sister, 1936, by Amrita Sher-Gil], digital photomontage, 55.9 x 25.9 cm, 2001.

Fig. 14: Self-portrait of Umrao Singh Sher-Gil at his study table, c. 1933, glass plate negative, Vivan and Naveena Sundaram Collection, New Delhi, copyright: Vivan and Naveena Sundaram.

Fig. 15: Remembering the past, looking to the future, from the series *Re-take of Amrita* by Vivan Sundaram [Umrao Singh, Paris, early 1930s; Amrita, Bombay, 1936, photo, Karl Khandalavala; Marie Antoinette, Lahore, 1912; Indira, Paris, 1931]; digital photomontage, 38.1 x 53.3 cm, 2001, copyright: Vivan Sundaram.

Fig. 16: Bourgeois family: mirror frieze, from the series *Re-take of Amrita*, by Vivan Sundaram [from left: Indira, Paris, 1930; Umrao Singh and Vivan, Simla, 1946; Marie Antoinette, Lahore, 1912; small earring, 1893, Georg Hendrik Breitner; Amrita, Simla, 1937; Amrita, Budapest, 1938, photo, Victor Egan], digital photomontage, 38.1 x 66 cm, 2001, copyright: Vivan Sundaram.

References

- Batchen, Geoffrey (2004). *Forget Me Not*. New York: Princeton Architectural Press.
- Guha-Thakurta, Tapati (2011). *The City in the Archive: Calcutta's Visual Histories*. Calcutta: Seagull Arts, Media Resource Centre, and the Ford Foundation.
- Hirsch, Marianne (1997). *Family Frames: Photography, Narrative and Post Memory*. Harvard University Press.
- Karlekar, Malavika (2005). *Re-Visioning the Past: Early Photography in Bengal 1875–1915*. New Delhi: Oxford University Press.
- Sen, Samita, Ranjita Biswas, and Nandita Dhawan, eds. (2011). *Intimate Others: Marriage and Sexualities in India*. Calcutta: School of Women's Studies, Jadavpur University and Stree Publications.
- Sundaram, Vivan (2008). Forward. In: *His Misery and His Manuscript*. Ed. by Umrao Singh Sher-Gil. New Delhi: Photoink, viii.
- Tola, Chhobi (1988). *Bangalir Photography Charcha*. Ananda.

Chapter 7

In the Eye of the Archive: A Triumphant Autopoiesis of Photography

Katharina Sykora

A fortunate find

A visit to the photo archive at the Kunsthistorisches Institut (KHI) in Florence's Via dei Servi. The year is 2014. I am working on *Photographic Interleavings* and conducting research on self-reflective picture-in-picture examples from the field of photography. For this purpose, I take down from the shelf the slipcase dealing with the architecture of the Palazzo Capponi-Incontri in Florence, the former home of the KHI's photographic collection. I find exterior and interior views of the building. This architectural shell of the photography collection found its way as a photographic representation into the archival box, which in turn makes up, together with other boxes, the collection that the institute's Fototeca, or photo library, contains in its interior: a kind of inward eversion has occurred, and a *mise en abyme* of the triad of representation, photographic objects, and their containers.



Fig. 1: Box with the Photographs of the Triumph of Photography in the Fototeca, Kunsthistorisches Institut in Florenz – Max-Planck-Institut.

Aside from this architectonic self-representation of the Fototeca situated in the official archive that is open to the outside world for the purpose of scholarly research, there is another more historiographic and internal form of self-representation. It is found in a plastic binder with assorted photographs taken at special occasions that took place at the KHI



Fig. 2: Exhibition of mounted photographs of the Triumph of Photography in the Fototeca: Firenze com'era, Kunsthistorisches Institut in Florenz – Max-Planck-Institut.

Florence. They often involve celebrations or the visits of important people, all unrelated to everyday life at the institute. The general public does not have access to this binder, which in its own way can be equated to a random collection of pictures that is close to the genre of the family photo album.

However, my fortunate discovery, which raised my questions concerning photographic interleaving onto a different plane and shifted my perspective to problems of materiality, the objectness and handling of photography and archives, was made in the above-mentioned official slipcase. It contained a bundle of photographs that, at first sight, did not appear to directly correspond to the category of the interior or exterior architecture of the Palazzo Capponi-Incontri. In fact, it seemed in some ways to have more in common with a private photo album dealing with the history of the Kunsthistorisches Institut. What I found were ten black and white photographs mounted on cardboard (see Fig. 1). They were taken on June 20, 1969 at the in-house celebration marking the acquisition of the institute's 250,000th photograph.

We see with these photos two ephemeral presentation modalities used to celebrate a selection of the Fototeca's photos. In both cases, we are confronted with picture-in-picture



Fig. 3: Anchise Tempestini presenting the Triumph of Photography in the Fototeca, Kunsthistorisches Institut in Florenz – Max-Planck-Institut.

representations that, however, vary in terms of space-time structure and inform us about different ways of dealing with photographic objects.

The first group (see Fig. 2) concerns photographs from the collection's holdings that were filed in open drawers of the Fototeca's catalog cabinets. According to the labels inscribed on the cardboards of the mounted photos by the then head of the photograph collection, Dr. Irene Hueck, they involve *Sehenswürdigkeiten*, that is, points of interest or historic sites, *Rariora und Curiosa*, that is, rarities and curiosities, as well as *Ehrwürdige Aufnahmen*, that is, venerable photographs of the archive. It cannot be established from the photographs whether these largely architectonic depictions pertain to the categories of the reference catalog or whether they were randomly filed there. However, their unusual presentation in the drawers of the wooden cabinets and within the neutral space of the catalog room integrates them into a visual order suggesting systematic classification, regularity, and clarity through the frontality with which the prints are lined up in a paratactic structure opposite the camera. Based on the arrangement of paintings in museums, at the same time, it fits in with registry and reference structures. In other words, it primarily addresses our comparative and systematic sense of sight. The presentation also underscores the two-dimensionality of a photograph as a plane and static object in front of us, suggesting to the beholder a contem-

plative or inquiring observation. Summa summarum and as a picture-in-picture, the whole arrangement makes us reflect upon the prevailing archival and museological systematization as a normative code of reception.

By contrast, the second manner of dealing with the photographs in the Florentine archive (see Fig. 3) involves the festive procession format of the type that enjoyed great popularity in Florence during the Renaissance and Baroque periods. Photos from the archive were mounted on three *carrelli*, the trolleys used to transport books in the library and photograph boxes in the Fototeca,¹ and then paraded across the entire length of the Fototeca on the second floor of the Palazzo Capponi-Incontri past a small invited circle of “institute staff members, scholarship holders, and regular visitors.”² The photos make the handling of the photographs comprehensible as an act of *bricolage*. They show that the pictures have been cropped, folded, pasted on top of each other and applied to the frames of the *carrelli*. Unlike their systematized formation in the catalog cabinets, the photos on the *carrelli* evoke a reception that is more in accordance with an imagined sense of touch. It directs our attention more to the three-dimensionality of the configurations that invoke a physical reenactment. In short, the photo sculptures of the Florentine procession with their character of an associative collage represent a haptic and affective individual access, that is, a “wild” approach to the archive.

Taking a closer look at the photos in this triumphal procession of photography, I would like to examine in particular the three central ways of dealing with the archive’s photos that they offer. These are actions of recombination, of setting in motion, and of performance. These primary means of handling the photo objects in turn bring about methods of displaying that recall the *ars combinatoria* of the assemblage, the *kinesis* of the procession and the performativity of theatrical declamation. My hypothesis is that it involves invitations for a playful handling of the photos that open up a meta-level of reflection about photographic objects as actors and agencies in the fields of archives, exhibitions, and performances. I also wish to show that this incentive for a “wild” approach to the photos has an explosive quality, jeopardizing and desacralizing both the official and unofficial instruction guidelines for the use of the photographic archive;³ or, put positively, that the triumphal procession of photography in the *Fototeca* blasts the boundaries of the archive to such an extent that it opens up for us paths of a non-intentional, ludic, artistic, and poetic means of dealing with the photo objects.

Assemblage and inset image: forms of material and the deictic autopoiesis of photography

If we take a closer look at the materials and pictorial contents of the three “processional wagons,” we notice how heterogeneous they are: the first wagon (see Fig. 4), dedicated to the *Founding Time of the Fototeca*, has a full-length picture of Umberto I at the top, Italy’s king during the very first years of the archive, then the large-format photographic reproduction by the Brogi company of the Dante portrait attributed to Giotto in the Bargello,

¹ See information from Dr. Irene Hueck, e-mail correspondence, October 14, 2016.

² See information from Dr. Irene Hueck, e-mail correspondence, October 14, 2016.

³ I employ the term “wild act” in reference to Claude Lévi-Strauss’s “savage mind” (Levi-Strauss 1966) and base my use of the word desacralization on Giorgio Agamben’s notion of profanization, insofar as the “holy,” which is suited as a vessel of collective cultural memory, is not destroyed in the process of desacralization but remains preserved as a strong reference (Agamben 2005).



Fig. 5: The Triumph of Photography in the Fototeca: Wagon 1, Founding Time of the Fototeca, Kunsthistorisches Institut in Florenz – Max-Planck-Institut.

No less heterogeneous are the materials and representations from the second wagon (see Fig. 6), which was concerned with *Firenze com'era* (Florence as it was). Crowned by an engraving by the Parisian Lemercier company showing a view of Florence as seen from the Porta San Niccolò is a large-format photograph of the sculpture hall in the Uffizi in the center, flanked by staged photos of folkloristic genre figures and masquerade scenes.

The other side also presents a mixture of different materials and genres (see the middle wagon in Fig. 4). An engraving of the Piazza Santa Croce on the occasion of the erection of the Dante statue on May 14, 1865 is to be seen above a large photograph of the cloisters at the monastery of San Marco. At the bottom, figures of a nun and folkloric women overlap the photo of the cloister while the de-contextualized full-length figure of Cimabue seems to be marching in the direction of the San Marco monastery on his left. Above it towers an engraving of the Basilica della Santissima Annunziata. At the edges of the *carrello*,

zur Förderung des KHI Florenz was founded in 1898 and given a new charter and structure in 1903 that was based on mixed public and private financing and organizationally supported by a central and a local committee (Hubert 1997, 189). The establishment of a photo collection was planned from the outset: “the foundation consisted of circa 3000 photographs assembled by Herrmann Ulmann and made available in 1898 to the Institut following his death.” Translation from Hubert 1997, 125. See also Dercks 2013 and Dercks 2014.



Fig. 6: The Triumph of Photography in the Fototeca: Wagon 2, Firenze com'era, Kunsthistorisches Institut in Florenz – Max-Planck-Institut.

large and mid-format Brogi depictions of women with titles such as *The Spring of Life* or *Interrupted Reading* overlap Cimabue's portrait. The dense interweavings of these large and small, cropped and bent photographs evoke a general narrative that at the same time leads our eyes into an art historical *mise en abyme*.

The final wagon (see Fig. 7) is dedicated to a profoundly Florentine theme, namely, the opulent early modern processions that took place in the city to mark secular and religious occasions and which the triumphal procession of photography looks back at as precursors. For the most part, views of sites in the city known for such celebrations are mounted on the *carrello*, particularly the Piazza Santa Croce, where the populace was provided entertainment in the form of horse races and tournaments as well as Calcio Fiorentino,⁵ an early form of football, and water sports. But the illustrations also include images from later periods such as the engraving from 1791 of a wild horse race at the city of Prato or the lithograph of a

⁵ Calcio fiorentino was played between 1530 und 1739. According to Bredekamp (2002, 9), however, it was part of the collective memory in Florence throughout the nineteenth century. In 1930, Calcio was "redesigned" under Mussolini. According to Medina Lasansky (2004, 64–69), in particular, the remodeling of the parade (*corteo*) was a fascist reinvention. I would like to thank Costanza Caraffa, head of the photo library at the KHI in Florence, for this information.

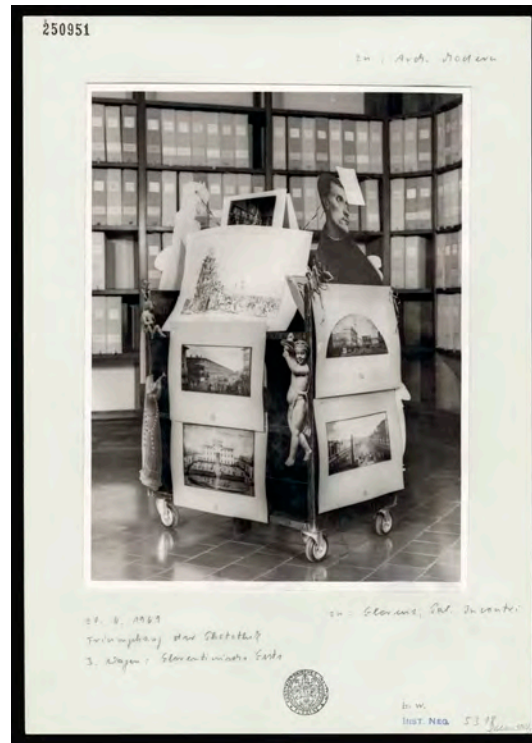


Fig. 7: The Triumph of Photography in the Fototeca: Wagon 3, Florentine Festivals, Kunsthistorisches Institut in Florenz – Max-Planck-Institut.

triumphal wagon of Jupiter that was constructed for a performance in Florence's Teatro della Pergola on January 6, 1838.

On the reverse (see the right wagon in Fig. 4) further sites of Florentine festivities, for example, a horse race on the Piazza Santa Maria Novella or a cavalcade on the Piazza della Signoria, are crowned by the self-portrait of Elisabeth Vigée-Lebrun painted in 1790 during her Italian exile. The in part very detailed *vedute* with meticulous small staffage figures are counteracted on the edges of the *carrello* by large cut-out reproductions of cherubs and angels whose gestures seem to render homage to the procession of photographs on the final wagon. They not only function as a means of material cohesion between the mounted views of the city of Florence but also as an iconographic hinge between the representational levels of the processions in the illustrations and the June 1969 triumphal procession of photography in the Fototeca (see Fig. 8, compare in Hyperimage the fourth angel from left on upper row with the three front prints on right wagon in Fig. 4).

This brief survey demonstrates how contingent the materials and pictorial contents of the triumphal procession of the Fototeca were despite the topics assigned to each of the wagons. In particular, large-format duplicates from the areas of Christian iconography and folkloristic genre pictures were selected that came from the old holdings of the commercial



Fig. 8: Collezione Brogi in miniatura, Serie Fiorentina, Plate No. 35, Kunsthistorisches Institut in Florenz – Max-Planck-Institut.

Brogi company, which were acquired for the Fototeca in 1966.⁶ In the process, photographs were used that were already far removed from their original pictorial context in Brogi's compilation and then in part de-contextualized again by the actors of the Fototeca's triumphal procession who cropped them.

It is precisely this heightened de-contextualization that allows the entirely new contingent arrangement of the photos on the *carrelli*. Historical details in iconic art now come into contact with folkloristic genre scenes, photographic reproductions of city views with kitschy (partly photographic) portraits of women, damaged prints with meticulously mounted, inscribed, and numbered photographs. Cropped angels, nuns, and artists encounter majesties, and museum galleries full of splendid Renaissance sculptures find themselves situated right next door to a cluttered Rococo interior full of burlesque dancers. In short, the sole materially and visually stringent principle seems to be the juxtaposition of opposites—and that is a decidedly anti-archival principle.

However, another principle is effectuated in the photographs of the Florentine procession that is no less significant in the call for a playful *ars combinatoria*. I refer here to the

⁶ See information from Dr. Irene Hueck, e-mail correspondence, October 14, 2016, Caraffa 2011, 11–44, 21 ff.

picture-in-picture process that stimulates viewers to reflect on photographic mediality and materiality. The framing images make us aware of the object character of the photos within the pictures and vice versa.⁷ Consequently, the picture-in-picture interleavings undermine the coding of photographs as transparent evidential media and pure carriers of information for which they are often employed as archival source material. The indexical pointer of photography, its “there, that’s it” (Barthes 1984, 41), is transformed into a representation of precisely this deictic gesture (Sykora et al. 2016). In the case of the photographic interleavings, we are concerned with a medial *mise en abyme* that draws our attention to the reproductive character of the photos. On the other hand, the photographic layerings provide information on the different steps of their material handling as art historical source material, decorative objects for a festive performance, objects of archival classification or scholarly presentation. We synchronously see primary black-and-white pictures of artworks that were then used for the playful procession of photography, captured for the institute by a professional photographer. His photos were then mounted on cardboard, numbered, labeled, and classified by the head of the Fototeca at the time on July 17, 1969, cataloged in a database in 1993, and digitized in 2017. They were then shown to conference participants during my lecture on February 15, 2017, and are now available to readers of this publication.

Yet the photographs not only reference their object character through their complex framing but also demonstrate their materiality themselves. The surfaces and edges of many of the photographs are plainly visible. Scratches and incision marks where the figures are cropped clearly demonstrate the material limits of the pictures, making the limits of the photographic representations and the white reverse of the prints visible and giving a comment on the state of the photo’s material history and aging processes. It is precisely this damage to the photo objects and the spaces that open up between them that, however, tempt us to syntagmatically bypass the material and temporal gaps or mentally supplement the sections hidden by superimpositions. Such traces of non-archival handling open up for us the potential of a different way of dealing with the photos. It enables an epistemic practice that is particularly suited to discoveries: the optical unconscious identified by Walter Benjamin, that is, the unobserved details and surprising connections that unintentionally found their way into the photograph, are more easily visible in these kind of non-hermetic, broken up image arrangements and to a more vagabonding gaze rather than one that is burdened by codes and conventions.⁸

Such an epistemic procedure strikingly resembles Aby Warburg’s *Mnemosyne* picture atlas (see Fig. 9), the principle of which was also presented by the Hamburg scholar to an interested audience at the Florentine Institute on the occasion of a visit in October 1927. His presentation was based on a group of images of Medici festivities as depicted on the Valois Tapestries in the Uffizi (Mazzucco 2013). Following the founding of the KHI in the late nineteenth century, Warburg was one of those who not only favored the establishment of a library there but also a photo archive. As is well known, Warburg made use of his own image collection as a resource for representing the psychological influence of classical antiquity on the visualization of emotions in the Renaissance. Proceeding from this evo-

⁷ I borrow the terms “inset image” (*Einsatzbild*) and “framing image” (*Umgebungsbild*) from Stoichita (1997).

⁸ See Griselda Pollock’s thoughts on the optical unconscious—based on Walter Benjamin—as a paradoxical characteristic of photographs, i.e., the phenomena and their relationships that are unintentionally encompassed in the image and latently preserved there to later ostensibly offer themselves for decoding to the analytical eye of the viewer (Pollock 2011).



Fig. 9: Aby Warburg's Picture Atlas Mnemosyne, 1927–1929, Plate 79, Warburg Institute Archive London.

lutionary perspective, he attempted to develop a general achronological cultural history of basic psychological formations, which, however, proved to be an unsolvable contradiction. But

while Warburg's aspirations for an almost universal cultural theory culminated in an evolutionary history of the 'formation and influence of expressive values', the picture panels represent an autonomous experimental form in its own right based on the montage of the pictures on the panels, due to interpictureality (in conformity with intertextuality) and the possibilities for an endless reconfiguration of the respective constellations, through which the picture panels receive the character of an *ars combinatoria*. (Tremel, Weigel, and Ladwig 2010, 614)

Warburg certainly also applied this to the picture collection at the KHI when he stated during his 1927 Florence lecture: "The Institute is not an instrument symbolising possession, but one epitomising musicality. Anyone who dares to may play on it." (Warburg 1927–1928, 4) After 1924, he himself developed this combinatory approach into a method:

Not only did he continuously arrange and re-arrange the photographs on the screens, he also cut up the photographs of the screens, trying out new con-

figurations on a separate sheet of paper. With both the photographs on and of the screens, Warburg continued to keep his argument in flux, constructing, de-constructing and re-constructing, but never bringing the project to a close. (Rumberg 2011, 249)

In the process, Warburg preferred the arrangement on vertical panels or hung screens to presentations that lay flat. The constantly rearranged pictorial configurations encompassing engravings, photographic reproductions of artworks, and clippings from illustrated magazines can be comprehended as a pictorial procedure (Rumberg 2011, 249) in which the images show themselves to the viewer like on a cinema screen and then withdraw again (Sierek 2007). The photographs that Warburg had made of the panels—like those on the Florentine cardboards showing the *carrelli*—not only served as an aide-mémoire and as a means of preserving an ephemeral pictorial arrangement but also an instruction to show the photos in the future again and again in different variations. This means that a repeated performance is inherent to both their materiality and configuration. Philippe-Alain Michaud's statement about Warburg's ways of dealing with his picture panels can therefore be transferred to the photos of the Florentine procession:

In this sense, it is based on a cinematic mode of thought, one that, by using figures, aims not at articulating meanings but as producing effects. [...] The essence of the cinema resides not in images but in the relation among images, and the dynamic impulse, or movement, is born of this relationship. (Michaud 2004, 278, 282)

With reference to the triumphal procession of photos in the Fototeca, this indicates that their specific kinetic potential did not unfold solely during the brief occurrence that took place on June 20, 1969. Like their precursors, that is, the drawings and paintings depicting the early modern Florentine triumphal processions, their mediality of immobilization is instead turned into an agency of permanent performability. For although each

artistic fixation with its limitation to the visual appears deficient as opposed to the attractiveness of an 'event' that claims all the senses [...] that which seems to mean a loss of authenticity is reversed into a triumph over the short-livedness of the factual performance. [...] To the extent, namely, that the visualization of the triumphal intention releases the event from its ties to time and place, its effectiveness is optimised. [...] The transportable triumph remains activatable wherever and whenever the need arises. (Kimpel 2001, 110)

Whimsical archons

This does not mean, however, that we can ignore the event and the actors of the plot in which the photos have a share. These actors in the procession are already present in the framing photos through the selection and montage of the photo objects on the *carrelli*. Moreover, a very special actor is the focus of attention in two of the photographs: Anchise Tempestini, the Fototeca's research assistant, can be seen next to the three triumphal wagons, pointing in their direction with the gesture of a curator or street ballad singer (see Fig. 10 in Hyperimage). Through this demonstrative gesture of the archon, the deictic self-disclosure of the photo

objects by means of their materiality and picture-in-picture interleaving attains a further quality: that of a theatrical staging.

In fact, Tempestini composed a long poem for the themes of each wagon in the rhythmic tradition of the *canzoni* accompanying the festive Florentine processions of the Renaissance, which he recited to the audience (see Fig. 11 in Hyperimage). The historical *canzoni* were intended to explain the meaning of the pictorial complexities on the wagons but, to outsiders, the performances remained “rather abstract, so that they had to use their imagination in order to interpret what they saw on the wagons” (Carew-Reid 1993, 110).⁹ This also applies to Tempestini’s poems, which were certainly more comprehensible for the procession visitors of June 1969 than they are for us. But his praise of Florence, of the KHI, and of photography were also understood as visual components of the procession and intended to last, which is illustrated by the fact that Tempestini wrote this praise by hand and attached his words between the photographs on the *carrelli*. Moreover, his texts were meticulously mounted on the back of the cardboards with the photos and placed in the same archive slipcase as the photographs, unfolding their witticism there not only thanks to their ingenious allusions but also because of the pseudo-seriousness of their archival preservation and presentation.

Conclusion

With the performance of the triumphal procession of photography, its photographic recording, and the whimsical reflection of archival procedure, the participants have not only considerably expanded their use of photography for in-house celebrations¹⁰ but also their professional handling of archival material. This effect can readily be transferred to our reception. If we, along with Gillian Rose and Elizabeth Edwards, posit that “the researcher is ‘produced’ by the agency of the photographs and of the archive” (Edwards 2011, 53), then the group of photographs from June 20, 1969 is not only a curious find that directs our attention retrospectively to an unruly practice in the center of the archive but also contains a forward-looking promise for us scholarly users of the Florentine photo archive: If we take the combinatory, material agency of the photos literally and take up their exceptional use through their archons during the 1969 triumphal procession, we can attain a form of freedom in our access to archives such as the Fototeca; in other words, when we twist and turn the photographic objects playfully until stray aspects flare up in a colorful kaleidoscope marked by material breaches, cuts, and scratches, a photographic autopoiesis may unfold that perhaps leads us in the direction of a “gayer science.”

⁹ “Des chants et des poèmes étaient censés expliquer le sens des structures triomphales. Leurs textes étaient cependant écrits en fonction de valeurs et de notions souvent abstraites pour les non-initiés, qui devaient plutôt user de leur imagination pour interpréter ce qu’ils voyaient sur les chars.”

¹⁰ Irene Hueck mentions that her predecessor, Dr. Eva Brües, had already invited the entire staff of the institute to the Fototeca in 1964 on the occasion of the stamping of the 200,000th photograph (see information from Dr. Irene Hueck, e-mail correspondence, October 14, 2016).

List of Figures

- Fig. 1:* Box with the photographs of the Triumph of Photography in the Fototeca, Kunsthistorisches Institut in Florenz – Max-Planck-Institut, photo: Julia Bärnighausen, August 2017.
- Fig. 2:* The Triumph of Photography in the Fototeca: Firenze com'era, 1969, unknown photographer, silver gelatin print, 18 x 24 (photo), 34 x 24 cm (cardboard), inv. no. 250945, Kunsthistorisches Institut in Florenz – Max-Planck-Institut.
- Fig. 3:* Anchise Tempestini presenting the Triumph of Photography in the Fototeca: Firenze com'era, 1969, unknown photographer, silver gelatin print, 17 x 22.8 cm (photo), 34 x 24 cm (cardboard), inv. no. 250947, Kunsthistorisches Institut in Florenz – Max-Planck-Institut.
- Fig. 4:* The Triumph of Photography in the Fototeca, 1969, unknown photographer, silver gelatin print, 17 x 22.6 cm (photo), 34 x 24 cm (cardboard), inv. no. 250949, Kunsthistorisches Institut in Florenz – Max-Planck-Institut.
- Fig. 5:* The Triumph of Photography in the Fototeca: Wagon 1, Founding Time of the Fototeca, 1969, unknown photographer, silver gelatin print, 23 x 17 cm (photo), 34 x 24 cm (cardboard), inv. no. 250952, Kunsthistorisches Institut in Florenz – Max-Planck-Institut.
- Fig. 6:* Mounted Photograph of the Triumph of Photography in the Fototeca: Wagon 2, Firenze com'era, 1969, unknown photographer, silver gelatin print, 23.9 x 18.1 cm (photo), 34 x 24 cm (cardboard), inv. no. 250952, Kunsthistorisches Institut in Florenz – Max-Planck-Institut.
- Fig. 7:* Mounted Photograph of the Triumph of Photography in the Fototeca: Wagon 3, Florentine Festivals, 1969, unknown photographer, silver gelatin print, 23.9 x 18.1 cm (photo), 34 x 24 cm (cardboard), inv. no. 250951, Kunsthistorisches Institut in Florenz – Max-Planck-Institut.
- Fig. 8:* Collezione Brogi in miniatura, serie fiorentina, plate no. 35, albumen print, 19.5 x 24.7 cm, inv. no. 616642, Kunsthistorisches Institut in Florenz – Max-Planck-Institut.
- Fig. 9:* Aby Warburg. The Mnemosyne Atlas, October 1929: Mass. Devouring of God. Bolsena, Botticelli. Paganism in the Church. Miracle of the Bleeding Host. Transubstantiation. Italian Criminal Before the Last Rites, panel 79, Warburg Institute Archive, Warburg Institute London.
- Fig. 10 (in Hyperimage only):* Mounted Photograph of Anchise Tempestini presenting the Triumph of Photography in the Fototeca, 1969, unknown photographer, silver gelatin print, 17 x 23 cm (photo), 34 x 24 cm (cardboard), size, inv. no. 250948, Kunsthistorisches Institut in Florenz – Max-Planck-Institut.
- Fig. 11 (in Hyperimage only):* Mounted text handwritten by Anchise Tempestini, 1969, two sheets of 15.3 x 10.8 cm each, verso of inv. no. 250947, Kunsthistorisches Institut in Florenz – Max-Planck-Institut.

References

- Agamben, Giorgio (2005). *Profanierungen*. Frankfurt am Main: Suhrkamp.
- Barthes, Roland (1984). *Camera Lucida*. London: Fontana Paperbooks.
- Bredenkamp, Horst (2002). *Florentiner Fußball. Die Renaissance der Spiele*. Frankfurt a. M.
- Caraffa, Costanza (2011). From Photo Libraries to Photo Archives: On the Epistemological Potential of Art-Historical Photo Collections. In: *Photo Archives and the Photographic Memory of Art History*. Ed. by Costanza Caraffa. Berlin and Munich: Deutscher Kunstverlag, 11–44.
- Carew-Reid, Nicole (1993). *Les Fêtes Florentines au temps de Lorenzo il Magnifico*. Paris: Olschki.
- Dercks, Ute (2013). Ulrich Middeldorf Prior to Emigration: The Photothek of the Kunsthistorisches Institut in Florenz (1928–1935). *Art Libraries Journal* 28(4):29–36.
- (2014). ‘And because the use of the photographic device is impossible without a proper card catalogue’: The Typological-Stylistic Arrangement and the Subject Cross-Reference Index of the KHI’s Photothek (1897–1930s). *Visual Resources: An International Journal of Documentation* 30(3):181–200.
- Edwards, Elizabeth (2011). Photographs: Material Form and the Dynamic Archive. In: *Photo Archives and the Photographic Memory of Art History*. Ed. by Costanza Caraffa. Berlin and Munich: Deutscher Kunstverlag, 47–56.
- Hubert, Hans (1997). *Das kunsthistorische Institut in Florenz*. Florence.
- Kimpel, Harald (2001). Der Triumph im Kopf: Imaginäre Umzüge als Ansichtssachen. In: *Triumphzüge: Paraden durch Raum und Zeit*. Ed. by Harald Kimpel and Johanna Werckmeister. Marburg: Jonas Verlag, 110–127.
- Levi-Strauss, Claude (1966). *The Savage Mind*. London: The University of Chicago Press.
- Mazzucco, Katia (2013). *Bild und Wort dans la conférence d’Aby Warburg sur les tapisseries Valois: methode pour une Bildwissenschaft*. URL: <https://journals.openedition.org/imagesrevues/2972>, accessed October 1, 2016.
- Medina Lasansky, Diana (2004). *The Renaissance Perfected: Architecture, Spectacle, and Tourism in Fascist Italy*. University Park, Pennsylvania: Pennsylvania State University Press.
- Michaud, Philippe-Alain (2004). Crossing the Frontiers: Mnemosyne Between Art History and Cinema. In: *Aby Warburg and the Image in Motion*. Ed. by Plippe-Alain Michaud. New York: Zone Books, 277–291.
- Pollock, Griselda (2011). Aby Warburg and Mnemosyne: Photographic aide-mémoire, Optical Unconscious and Philosophy. In: *Photo Archives and the Photographic Memory of Art History*. Ed. by Costanza Caraffa. Berlin and Munich: Deutscher Kunstverlag, 73–97.
- Rumberg, Per (2011). Aby Warburg and the Anatomy of Art History. In: *Photo Archives and the Photographic Memory of Art History*. Ed. by Costanza Caraffa. Berlin and Munich: Deutscher Kunstverlag, 241–252.
- Sierek, Karl (2007). *Foto, Kino und Computer: Aby Warburg als Medientheoretiker*. Hamburg: Philo Fine Arts.
- Stoichita, Victor I. (1997). *The Self-Aware Image: An Insight Into Early Modern Meta-Painting*. Cambridge: Cambridge University Press.
- Sykora, Katharina, Kristin Schrader, Dietmar Kohler, Natascha Pohlmann, and Daniel Bühler, eds. (2016). *Valenzen fotografischen Zeigens*. Kromsdorf and Weimar: Jonas Verlag.
- Tremel, Martin, Sigrid Weigel, and Perdita Ladwig, eds. (2010). *Aby Warburg: Werke in einem Band*. Berlin: Suhrkamp.
- Warburg, Aby (1927–1928). Untitled. *Kunsthistorisches Institut Florenz: Jahresbericht 1927/28*.

Getting One's Hands Dirty

Chapter 8

Photographing Ottoman Modernity

Zeynep Çelik

Photographs of the Middle East have attracted a great deal of scholarly attention during the past four decades or so, paralleling the surge in postcolonial studies. Researchers have scrutinized the political implications of Orientalist and colonial images in provocative ways but overlooked the nineteenth-century modernity in the region. Nevertheless, modernity was a huge and complicated undertaking that extended from sciences to arts, literature, education, governmental and institutional structures, architecture, and urban and infrastructure planning. The physical aspects of the project were well documented through photographs, triggered by the Ottoman imperial interest in photography and reaching a peak during the reign of Sultan Abdülhamid II (1876–1908).¹

Clearly not as seductive as images of exotic places and people, and consequently not so appealing to foreign tastes, the photographs that documented Ottoman modernity covered many categories, including infrastructure projects (railroads, bridges, tunnels, ports, and urban transportation), government buildings, schools, and factories. Medical science, the topic of the present paper, played a key role in this repertoire.

The importance attached to the modernization of health care by the Ottoman state is manifested in the proliferation of medical schools and hospitals throughout the empire. Closely following advances in Europe, Ottoman doctors struggled to keep up with the latest in medical methods and technologies and pursued the common nineteenth-century practices, particularly in army hospitals and the better-equipped state hospitals. Photographs of the time show a wide range of hospitals throughout the empire. They emphasize modern buildings and equipment, professional staff, and well-cared-for patients. Some photographs were collected in albums dedicated to a single building, others dispersed in groups organized according to region.² A number of these images also found their way into popular publications disseminating information on the new architecture of health care in larger cities such as Beirut and Damascus as well as in smaller towns such as El-Deir on the Euphrates and Sanaa in Yemen, often with formal references to local aesthetic traditions.³

¹ For an analysis of this phenomenon, see Çelik and Eldem 2015. This essay is based on Zeynep Çelik's chapter, "Photographing Mundane Modernity," *ibid.*

² Abdülhamid II's albums are now housed in the Istanbul University Central Library (İÜMK). The list of photographs of hospitals is long. For example, psychiatric hospitals in Aleppo and Manisa are represented in single photographs (İÜMK 90454/55 and 90410/4, respectively), as were the military hospitals in Salonika and Damascus (İÜMK 90854/49 and 90460/3, respectively), and the municipal hospital in Jerusalem (İÜMK 90504/71). An entire album is devoted to the Hamidiye Hospital in Damascus (İÜMK 90586), whereas the number of albums and photographs of the Hamidiye Hospital in Istanbul surpasses all others.

³ On the proto-regionalism of the hospital building and their photographs in *Servet-i Fünun*, see Çelik 2008, 187–189.

Medical photography encompassed clinical photographs, those that illustrated particular techniques, specimen photographs, and public-relations photographs and portraiture. Clinical photographs for purely scientific use feature frequently in these collections, including X-rays of body parts. Discovered in Germany by Wilhelm Conrad Röntgen in 1895, X-ray pictures became immensely popular and were reproduced in general and scientific periodicals and an “X-ray mania” invaded Europe and the United States (Evens 1995, 912). This discovery, which radically changed medical practice, was quickly adopted by Ottoman doctors under the leadership of Esad Feyzi, a medical student who succeeded in reproducing the technology in 1896 (Özlen 2014, 85). Proudly acknowledging the application of “all kinds of industrial and scientific progress” observed in the “civilized world,” an article in the popular avant-garde illustrated periodical *Servet-i Fünun* that year cast light on the immediate broad appeal of the X-ray as a curiosity device. As evidence of the development of Ottoman scientific skills, the journal presented two examples by Ottoman photographers, revealing the contents of a wallet and the broken lead in a pencil.⁴

The first large-scale medical use of the new technology in the Ottoman Empire took place a year later, in the Hamidiye Medical Hospital in Yıldız, Istanbul, where X-rays were taken of soldiers wounded during the Greco-Turkish War (Özlen 2014, 86). Like other photographs, these X-rays were mounted in decorated paper frames; their legends sometimes record information about the patient, although the latter was represented only skeletally. Such was the case of a soldier who could only be observed through the bones of his foot: his name was Osman bin Ibrahim and he belonged to the Third Army’s Fourth Battalion (see Fig. 1).

Another series was of before and after photographs depicting treatment of the ailments of soldiers and civilians, with captions explaining the problem and its remedy. “Hüseyin from Arapkir” was brought back to life by “extraordinarily rare and important surgery” to remove an enlarged spleen; the gentleman is shown holding the offending organ and pointing to his exposed surgical scar. Surgeries on large hernias and tumors were also recorded, the size of the growth indicating the seriousness of the illness. In some cases, the treatment process was presented in the inscription: The surgeon Cemil Pasha’s intervention to repair the broken left arm and wrist of “Mademoiselle Eleni from Fener” to complete recovery is seen in a set of three photographs.⁵

A modern hospital for women

Istanbul’s Haseki Women’s Hospital, which qualified as an “institution of charity that occupies the first place of honor” (*müessesat-ı hayriye meyanında şimdiki halde birincilik şerefini ihraz etmiş olan*) in 1892, had a long and illustrious history.⁶ The original building had been built in 1551 for Sultan Süleyman I’s wife Hürrem Sultan on the crowded site of Avratpazarı in the middle of the central peninsula of the city. The hospital’s chronogram described it as “a hospital beneficial to the people of the world” and its *waqfiya* (endowment deed) was worded with compassion. For example, the physicians had to be well educated in sciences

⁴ “Dersaadet’de Röntgen Üsulıyla Fotograf Ahzı,” *Servet-i Fünun* 11, no. 277 (30 Haziran 1312 / July 2, 1896): 267.

⁵ There are many photographs of this type in the Abdülhamid II albums. See, for example, İÜMK 90506/0004 for a hernia operation, 90506/00005 for removal of a neck tumor, 90506/008 for removal of an arm tumor.

⁶ “Haseki Nisa Hastahanesi,” *Servet-i Fünun*, v. 2, year 4, no. 85 (15 Teşrinvevvel 1308 / October 27, 1892), 111.



Fig. 1: X-ray of Osman bin Ibrahim's foot (IÜMK 779-41-0021).

and experienced. The list of required qualifications was long: they had to be passionate (*selim kalpli*), ethical (*kerim ahlaklı*), good-tempered (*iyi huylu*), diligent (*iyi iş yapar*), and sweet-tongued (*hoş sözlü*), for instance (Taşkıran 1972, 133). They also had to treat patients as affectionate friends, and avoid “unkind words that can be a heavier burden than the worst kind of affliction in invalids,” with the stipulations forming a striking contrast to Süleyman’s *waqfiya*, where what mattered was “competence in the science of medicine.”⁷

This major health institution of Istanbul underwent significant transformations throughout the centuries. In the nineteenth century, the facilities were not deemed adequate and with the rationale that Istanbul needed a proper women’s hospital, a modern compound was built between 1890 and 1893 to accommodate two hundred patients, on a site in the proximity of the original complex (Taşkıran 1972, 150–219). An album from the Abdülhamid II collection, composed of photographs of the new buildings taken by Abdullah Frères, enables us to reconstruct the new buildings (now destroyed, although the sixteenth-century complex is still standing). A plate by the project architect Patrocle Kampanaki locates the individual structures on a site plan and provides several façade and section drawings (see Fig. 2).

The buildings were sprawled across both sides of a major artery, Yusuf Paşa Haseki Caddesi, and followed the trend of the day in pavilion-type hospital design. To the north of the Yusuf Paşa Haseki Caddesi, on the site of a demolished mansion, the administrative building dominated the street façade, with all other buildings grouped within the gardens (see

⁷ Necipoğlu 2005, 271–273. Today, the neighborhood is called Haseki.

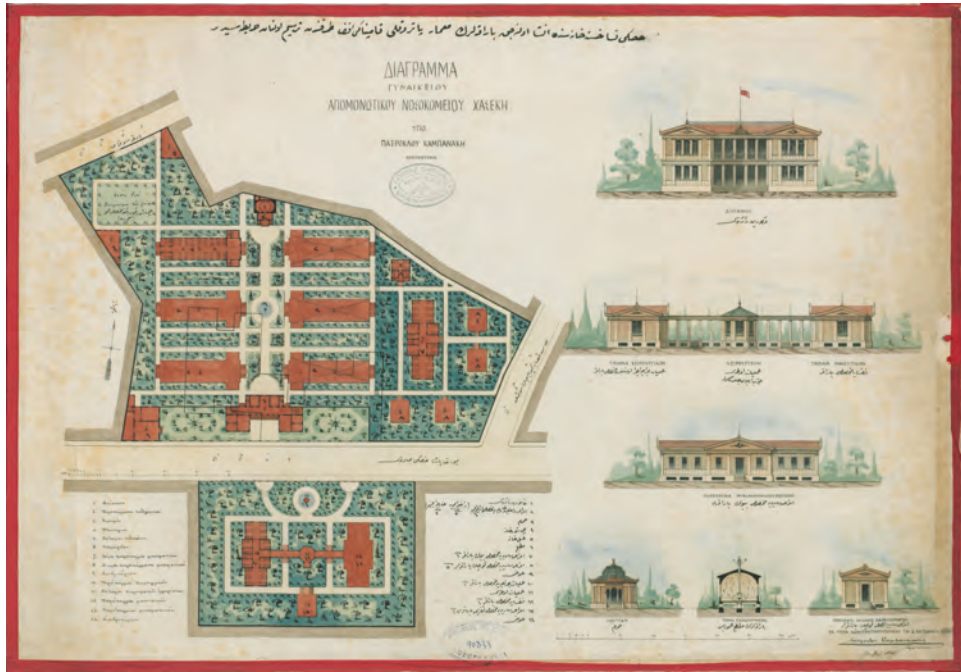


Fig. 2: Patrocle Kampanaki, site plan of the Haseki Sultan Hospital. The key indicates the following: 1. Administrative building, 2. Six pavilions for internal and external diseases, 3. Bathhouse, 4. Laundry, 5. Ablution room, 6. Kitchen, 7. Pavilion for contagious diseases, 8. Smaller pavilions for contagious diseases, 9. Pond, 10. Surgery recovery room, 11. Surgery, 12. Labor recovery room, 13. Pavilion for contagious diseases. Façade drawings on the right depict, from top to bottom, administrative building (no. 1), surgery (no. 11), connected to recovery room and labor recovery rooms (nos. 10 and 12), pavilion for contagious diseases (no. 7). At the bottom, we can see the bathhouse (no. 3), the heating system for pavilions (section drawings), and a small pavilion for contagious diseases (no. 8).

Fig. 3).⁸ On the first floor was a pharmacy, a waiting room, two examination rooms, and storage space. The second floor was occupied by doctors' offices and a corridor, forty meters long, lined with cabinets and bookshelves (Taşkıran 1972, 138). The drawing displays an ornate design for all the building façades, but the photograph shows a much plainer one. This was presumably due to limited funding.

Behind the administration building were six pavilions (*baraklar*), symmetrically arranged: three for internal and three for external diseases. The larger wards were organized in a uniform fashion, with two rows of beds. Beds and cabinets were imported from France and conformed to the standards established by the French *Assistance Publique*; they had painted aluminum frames—"very elegant" (*gayet zarif*)—and were objects of pride (Taşkıran 1972, 312). The pavilions were separated by an axial garden between the administrative building

⁸ This mansion, previously owned by Moralı Ali Bey, had served as the hospital proper since 1879; see Taşkıran 1972, 133. Kampanaki's undated plate is most likely from the early 1890s.



Fig. 3: Haseki Sultan Hospital, administration building (İÜMK 90833-0003).

and the bathhouse, with a pond in the center. To the east was the section for contagious diseases (*emraz-ı sariye*), with a large pavilion surrounded by smaller pavilions. The laundry, the ablution room, and the kitchen were tucked away in the corners of the site.

To the south of the Yusuf Paşa Haseki Caddesi, an octagonal surgery room served as the central showpiece of the complex. It had interior walls of crystal glass and was furnished with surgical equipment imported from Paris (Taşkiran 1972, 313). Hallways connected two symmetrical wards to the surgery room; the west ward was for postsurgical recovery, while that on the east was for women who had given birth. Centrally placed stoves provided efficient heating. In brief, this was a truly modern hospital in all respects. An article in *Servet-i Fünun* applauded its “orderly and perfect” (*muntazam ve mükemmel*) spatial organization, “as wonderful as that of European hospitals”; its surgery facilities and all pavilions displayed “elegance” (*nezafet*) and “perfection” (*mükemmelliyet*). The author writing for *Servet-i Fünun* added that two French doctors who had visited the hospital endorsed these claims; they even expressed admiring awe at the refined sanitary equipment, such as bandages (*sargı bezleri*), which could only be found in a few establishments in Paris at the time.⁹

Haseki Nisa Hastahanesi is the subject of another rare album, from the collection of Ömer M. Koç, documenting the scope and success of surgery carried out in the hospital by focusing on the tumors removed from women’s wombs. The album crosses two genres of nineteenth-century photography: clinical records and portraits. It was the result of collaboration between the surgeon Ahmed Nureddin and the photographer Nicolas Andriomenos, both prominent figures in their fields.

⁹ “Haseki Nisa Hastahanesi,” *Servet-i Fünun*, v. 2, year 4, no. 85 (15 Teşrinvevvel 1308 / October 27, 1892), 111.

Opérateur A Nouredin (as he signed his name on photographs) was a well-respected Istanbul surgeon specializing in womb diseases and complications of pregnancy and childbirth. He had “worked for the improvement of the Ottoman medical world,” according to an homage paid to him while he served as the director of the gynecology department of Haseki Women’s Hospital.¹⁰ Nureddin Bey remained affiliated with the hospital from 1890 to 1924, holding the position of Chief Doctor (*başhekim*) from 1909 onward (Taşkıran 1972, 318, 377, 379, 382). This album dates from his early years in the hospital, most likely the mid-1890s. Photographer Andriomenos, for his part, had run one of the most prominent photographic portrait studios in the Beyazit quarter of Istanbul since the late 1870s, not far from the Haseki Hospital (Öztuncay 2003). It is not surprising that the two teamed up.

Posing with tumors

The first photograph in the album is an aesthetically arranged composition and at the same time a systematic classification (see Fig. 4). It presents jars of tumors removed from sick women on a table, lined up according to size. The caption identifies the contents of each jar: most are fibroid tumors (*verem-i lif*) of the uterus, the exceptions being a tumor resulting from cancer of the cervix in the first jar on the right and two bladder stones, weighing 40 and 17 *dirhems* (129 and 54.4 grams), respectively, in the first jar on the left. The following twelve photographs focus on women, shot individually or in pairs, standing next to their preserved tumors. Captions identify their maladies, which include single and multiple ovarian cysts, cancerous ovarian cysts, and fibroid tumors. One photograph reported a Caesarian section to remove a fetus dead in the womb; no jar is present in that image. The captions explained the medical conditions and the organs from which the tumors were removed.

The women, standing erect and calm, advertise their own successful recovery. Several have been made to pose with a hand on the specimen jar, as though owning their particular tumors and taking pride in having overcome their illnesses. Their simple striped gowns and enveloping white head scarves, embroidered at the edges, lend these modest women an air of elegance and a sense of dignity, despite the uncomfortable exposure of their scars. The longitudinal area of bare flesh on each abdomen complements the small triangle of the face, each expressing a controlled demeanor. With their eyes directly confronting the camera, these women seem to acknowledge their personal contribution to science while claiming victory over their illness.

The photographs are part of a set of studio shots of individuals or small groups. Following a convention for images like this, they are staged in front of elaborate backdrops—although in this case the paraphernalia refers to the hospital’s offices—with ornate European-style furniture and patterned floors, reflecting the upper-class Ottoman taste of the era. In the photographic repertory of Ottoman women, they form a striking contrast to exoticized representations. The patients’ portraits also differ from the studio photographs of upper-class ladies in the simplicity of their uniform clothing and in their deployment as medical objects. The photographs enrich the more conventional documentations of female patients, for example, in the interior views of the clean and orderly wards in the same Haseki Hospital, where they pose seated in their beds, wrapped in modest white cover-ups and sheets.

¹⁰ “Dr. Ahmed Nureddin Bey,” *Servet-i Fünun*, v. 10, no. 242 (19 Teşrinievvel 1311 / October 31, 1895), 120.



Fig. 4: Tumors extracted from wombs (Ömer M. Koç Album).

Medical objectification and female individuality

The formal consistency of these photographs, appropriate for a scientific record, is reminiscent of one of the best-known Ottoman photography projects, *Elbise-i Osmaniye* (*Costumes populaires*), prepared under the direction of Osman Hamdi Bey for the 1873 Universal Exposition in Vienna (Osman and de Launay 1873). Arguing for the “unity in diversity” of the Ottoman population, this protoethnographic collection documented the ethnic groups in the empire through their costumes. The differences between the two collections stem from their particular missions: in *Elbise-i Osmaniye* the figures in rich and varied costumes stand against a bare and uniform wall, the neutrality of the background highlighting the heterogeneity of the clothing; in the medical album, the patients wear uniform clothes but have been photographed in elaborately decorated spaces, lending them an oddly domestic aspect.

It is perhaps the uniformity of their attire that draws attention to the faces of the female patients and emphasizes their individuality, giving them an unexpected agency—a trait lacking in *Elbise-i Osmaniyye*. This is clearly conveyed in another version of the album in the Abdülhamid II collection, which contains only seven photographs of the women who had been treated (duplicates of the Ömer M. Koç album), instead of twelve.¹¹ The longer captions in the Abdülhamid II album provide some personal information about the patients, further disrupting the putative neutrality of their presentation as medical objects. The texts include names, ages, and the Istanbul neighborhoods where they came from, together with more detailed information about their medical conditions. Their areas of residence, dispersed throughout the city, testify to the broad scope of the service Haseki Hospital provided.

¹¹ İÜMK 90608.



Fig. 5: Fibroid uterine tumor (left) and multicystic ovary (right) (Ömer M. Koç Album).

Müzeyyen Hatun, who had been operated on for a tumor that weighed 2.5 kilograms, was 30 years old and lived in Üsküdar. Another patient, 22-year-old Gülferer Kadın, who was from the Sultan Ahmed quarter, had a dead fetus delivered by Caesarian section; her surgery was necessitated by the fact that she had been unable to give birth naturally for eight days, and the fetus had begun to rot. Hatice Kadın, age 35, whose scar was 30 centimeters long and 17 centimeters wide, was a resident of Üsküdar; her photographic partner, 25-year-old Advie Hanım from Kasımpaşa, had had a tumor removed from her intestine which had adhered to her uterus (see Fig. 5).

Mişli (?) Hatun, whose wound was vertically 25 centimeters long, lived in Aksaray and was 40 years old. Only one woman was identified, not by name, but by skin color: a 45-year-old black woman from Kasımpaşa, whose surgery entailed the removal of her entire uterus, together with a tumor (see Fig. 6).

The albums with pictures of female patients treated by dedicated experts in the modern facilities of the Hasekî Hospital present a unique episode in the history of Ottoman medical photography. Whereas most photographs of this type focus on parts of the body (as in the X-rays), these images show women whole, healthy, and dressed, with their hospital clothes parted to expose their postoperative scars and headscarves folded to reveal their faces. They thus break through the convention in which patients are depicted through their illnesses, or people are reduced to ethnographic types or categories of economic class. Instead, these are a striking hybrid: both objectified medical documents and assertive individuals.



Fig. 6: Fibroid cancerous tumor (Ömer M. Koç Album).

Reading Ottoman modernity from photographs documenting the work carried out in different areas (as diverse as medical science, construction, mining, and archaeological excavations) broadens and refines the overall portrait of the empire, shifting the focus of the scholarly discourse on photography in the Middle East. Some of these images circulated widely (such as the photographs of the Hijaz Railroad construction), whereas others did not at all (such as the photographs of female patients). Some display a high artistic value, whereas others are simply utilitarian. Together, they offer views of the Ottoman Empire at work while consistently emphasizing the overarching theme of modernity. Inadvertently, they also celebrate the humble people of the empire, from teams of anonymous laborers on railroad construction sites and archaeological digs to named individuals, among them the soldier Osman bin Ibrahim, wounded by a bullet in his foot, and the patient Gülferer Kadın, who lost her baby but survived thanks to a Caesarian section performed by a skilled surgeon after she had unsuccessfully tried to give birth (see Fig. 7).

Conclusion

It is useful to ask some questions which may not be possible to answer but which trigger meaningful scenarios. What was the nature of the teamwork? How did a young Turkish doctor and a Greek photographer decide on the project and its format? How did they communicate their intentions to the patients? How did they convince them to pose for a public they did not know? What kinds of negotiations and conversations took place between the doctor and the photographer, the doctor and the photographer and the patients, the patients



Fig. 7: Gülferer Kadın, who lost her baby but survived thanks to a Caesarian operation (Ömer M. Koç Album).

themselves, and the patients and their families? Were the patients given copies of their photographs? What was the range of dissemination of the album? How many copies were made? Where were they sent? To Paris? To Vienna? To the new and modern Ottoman hospitals in the provinces, at least the major ones (Bursa, Damascus, and Aleppo)? How did the captions differ for different viewers?

On the basis of open-ended questions like these (and many more), the issues raised by this collection suggest that it was most likely used for different purposes, providing opportunities for scholarly analysis from multiple disciplinary perspectives. Most strikingly, the albums attest to the use of photography for documenting the state of medical science. Provided that multiple copies were produced and distributed, they point to the transmission of scientific information visually. As an anthropological and sociological inquiry into the lives of modest women, the photographs unsettle the prototypes about gender in a “Muslim” society and, as a hybrid category in the history of photography, they transcend the established norms of representing the Middle East and, in particular, Middle Eastern women. They also provide a study that complicates the history of modernization in the Middle East—not as a tale of government initiatives but as a project that has affected ordinary people. Finally, they serve as a proud advertisement of the empire’s modernity.

List of figures

- Fig. 1:* X-ray of Osman bin Ibrahim's foot, unidentified photographer, c. 1896, Istanbul University Central Library (İÜMK), sign. 779-41-0021.
- Fig. 2:* Patrocle Kampanaki, site plan of the Haseki Sultan Hospital, unidentified photographer, 1890, ink and watercolor on paper, İÜMK 90833-0016.
- Fig. 3:* Haseki Sultan Hospital, administrative building, Abdullah Frères, c1892, İÜMK 90833-0003.
- Fig. 4:* Tumors extracted from wombs, Nicolas Andriomenos, c1895, private collection of Ömer M. Koç.
- Fig. 5:* Fibroid uterine tumor (left) and multicystic ovary (right), Nicolas Andriomenos, c1895, private collection of Ömer M. Koç.
- Fig. 6:* Fibroid cancerous tumor Nicolas Andriomenos, c1895, private collection of Ömer M. Koç.
- Fig. 7:* Gülferer Kadın, Nicolas Andriomenos, c1895, private collection of Ömer M. Koç.

References

- Çelik, Zeynep (2008). *Empire, Architecture, and the City: French-Ottoman Encounters. 1830–1914*. Seattle, WA, and London: University of Washington Press.
- Çelik, Zeynep and Edhem Eldem, eds. (2015). *Camera Ottomana: Photography and Modernity in the Ottoman Empire. 1840–1914*. Istanbul: Koç University Press.
- Evens, Ronald G. (1995). Röntgen Retrospective: One Hundred Years of Revolutionary Technology. *Journal of the American Medical Association* 274(11):912–916.
- Necipoglu, Gülrü (2005). *The Age of Sinan: Architectural Culture in the Ottoman Empire*. Princeton and Oxford: Princeton University Press.
- Osman, Hamdy Bey and Marie de Launay (1873). *Les Costumes populaires de la Turquie en 1873*. Constantinople: Imprimerie du Levant Times and Shipping Gazette.
- Özlen, Fatma (October 2014). Röntgen Devrimi. *Tarih* 20:82–89.
- Öztuncay, Bahattin (2003). *The Photographers of Constantinople: Pioneers, Studios, and Artists from 19th Century Istanbul*. Istanbul: Yapı Kredi Yayınları.
- Taşkıran, Nimet (1972). *Haseki'nin Kitabı*. Istanbul: Yenilik Basımevi.

Chapter 9

Handling the Heavens: Things and the Photo-Objects of Astronomy

Omar W. Nasim

In contrasting recent pictorial turns to outmoded linguistic ones, the art historian Keith Moxey rightly emphasizes the *presence* of the image as an object. Rather than “reading” images, Moxey claims that these are now “more appropriately encountered than interpreted.” (Moxey 2008, 132) This encounter with an object is the locus of exchange, meaning, and value that implicate it as an image. However, Moxey’s understanding of presence as an encounter seems to be steeped in the art gallery, where fine art objects are forbidden to the touch of the human hand. Despite their presence as images, we remain locked in an encounter with objects, as if we were still committed to a “spectator theory” of knowledge.

There are certainly good reasons for “Do Not Touch” signs in art galleries or museums. After all, one of the most instinctive things about encountering an object is the urge to touch it, to grasp it in one’s own hands. But objects *are* handled and not just encountered. When objects are handled and not only viewed, their materiality and weight, their three-dimensionality and texture are brought to another level of relief altogether. This is particularly true when we experience the object’s endurance, its flows, and its resistance. What stands out in twisting and turning an object in our hand is its life and temporality, as well as its character as ready-to-hand (*Zuhandenheit*), as Heidegger puts it. Compared to an encounter, then, in touching and in handling we have another kind of presence altogether.¹

Like Heidegger, moreover, I distinguish, in what follows, between things and objects.² I do not take objects to be self-evident givens. Rather, they are designated and sustained by a number of forces within a broader continuum that we might call things (a number of material—physical, chemical, and organic—processes that occur in time). This implies that objects, in their fragility and temporality, may well cease to be the objects that they are; and yet remain things.³ When things and objects are made to align, we have specific object positions that make certain kinds of objects possible, like “magical” “artistic” or “scientific” ones. The forces that sustain an object in position occur at many different levels, including the social and cultural, the institutional and intellectual, and as we shall see below, the material and practical. Despite these forces, however, objects and things are always tending

¹ Margaret Olin does a good job motivating the act of touching photography, mostly in the introduction to her *Touching Photographs* (Olin 2012). The suggestion of treating photographs as three-dimensional objects is most clearly stated in Edwards and Hart 2004.

² Heidegger 1968. More recently, the theorist Bill Brown also distinguishes these in relevant ways (Brown 2001; Brown 2004). Julia Breitbach, who applies Brown’s theory to photography, characterizes Brown’s separation of thing and object as follows: “Things precede and exceed objects, and objects are what the human intellect makes of things” (Breitbach 2011, 33). Breitbach’s own “photo-as-thing-theory,” however, tends to quickly fall back not just into the intellect but also into the purported magical qualities of photography’s access to the “Real” (Breitbach 2011, 38). In sharp contrast to this, my own approach remains at the level of materials and processes—handling—rather than the idealistic qualities of photography.

³ Rubio 2016.

to move apart. There are two ways in which this might happen: one is where things out-strip objects, as in the case of breakage, decay, or a change in function; the second is when objects are no longer sustained by the same forces or things, as in the case of the transition from analog to digital images (Rubio 2016, 62).

These specific object positions in broader thing processes are not just sustained and maintained but are negotiated and achieved, which implies that we may have multiple objects appearing in the life history of one thing, or none at all. Heidegger's example is the hammer.⁴ In the thing's function and normal use, we have the hammer object demarcated. But as soon as it breaks, malfunctions, or is used for another purpose, we have the reappearance of the thing that underlies it and possibly a new realignment. However, unlike Heidegger, more recent variations of this approach, particularly those articulated by Fernando Domínguez Rubio, include a much stronger organic or temporal component, one that takes into account the constant upkeep of objects *as* objects in the sea of ever-changing thinghood.⁵ This has been called the "ecological" approach to objects, and it is what I try out with regard to photo-objects used by astronomers in the nineteenth and twentieth centuries. What we will find are specific, concrete ways of handling such objects embedded within dispositives that precisely demarcate and sustain photo-objects as material objects in astronomical practice, and keep them from dissolving into meaningless things. Ultimately, I am interested in the myriad ways astronomers handled photographs in their practice so as to make photo-objects of very specific sorts possible.

New scenes of operation

As with other objects, photo-objects have a veritable history of being touched, grasped, and handled.⁶ Precisely how these were handled depended on what stage of production they were in: developed photographs, for example, were treated differently than glass plates upon which the emulsion still flowed. Here, however, I am not so much interested in photographic processes that included preparation, exposure, development, and fixing, as much as in what was done with photo-objects after these were relatively completed. For instance, in post-production but before public circulation, a photograph, as a thing, might be labeled, marked, cut, scratched, retouched, mounted, framed, magnified, and enlarged, copied, reinforced, patched up, annotated, measured, and so on. These actions are accompanied by a host of tools such as pens and ink, paper, tape, scissors, diamond cutters, paints, microscopes, reading lenses, lanterns, stickers, glue, cement, wires, rulers, protractors, and so on. Many of these actions and tools existed before photography and in other contexts as well. However, they are reconstituted by their material relationships to things like glass plates or film; they are reconstituted as they gradually give rise to the photo-object as distinct from the thing. But we should also recognize that the actions and tools implicated in the laborious emergence of photo-objects usually occur at workstations that could range from simple desktops to custom-built stages and light tables.⁷ In simple terms, the negative needs to be seated or held fast in precise ways, lit from behind and positioned so as to be handled appro-

⁴ See, for example, Heidegger 1985, in particular, Part 1, Chapter 3, pp. 98–100.

⁵ Rubio 2016. Cf. Ingold 2007; Ingold 2012.

⁶ For more on the epistemological role of the hand in scientific photography, see Nasim 2019.

⁷ For more on the labor side of astrophotography, see Nasim 2018.

priately. Taken all together, actions, tools, and workstations are what constitute the material dispositive of handling photography.

Photo-objects were not given in any immediate way, but were always up for negotiation. Photo-objects had to be coaxed—partly by actions, tools, and workstations—into their positions and prepared for astronomical use. Once formed, the fragility of the photo-object, in the face of the ever-encroaching thing, was acknowledged and dealt with by further handlings. What I will explore are some of the dispositives that gave material shape to astronomical photo-objects. Indeed, I would like to argue that how a thing is handled contributes to what kind of object it will be. For this purpose, I will focus primarily on the photography of the stars. Beginning with the earliest ones made in the 1850s at the Harvard College Observatory, I will proceed to gradually introduce more and more complex varieties of handling and dispositives, until we come to a vast digitization project at the archives of the same observatory, over 160 years later.

For the history of astronomy, one of the most important changes to come with photography was *where* astronomers worked. Previously seated at the telescope in the middle of the night, they were now indoors within prosaic office spaces. This change was radical because it was also a change in dispositives—instead of working at night in a space constrained by large telescopes, for example, daylight was now used to examine the heavens with a microscope. As one astronomer put it at the beginning of the twentieth century:

by making a picture of the sky we simply *change the scene of our operations*. Upon the photographs we can measure that which we might have studied directly in the heavens ... Convenient day-observing under the microscope in a comfortable astronomical laboratory is substituted for all the discomforts of a midnight vigil under the stars. The work of measurements can proceed in all weathers, whereas formerly it was limited strictly to perfectly clear nights. (Jacoby 1904, 92–93, emphasis in original)

However, simply bringing the negatives back into the warmth of the office was not enough to generate photo-objects. Even a good picture required further work on the plate in order for it to acquire the status of an object that could be used by astronomers. In fact, bringing the plates into the office was not always a matter of comfort afforded by new methods as much as it was necessitated by the materiality of things in hand. Consider the case of George Phillips Bond, the mid-nineteenth-century astronomer at the Harvard College Observatory. In the 1850s, with the aid of local Boston photographers John Adams Whipple and James W. Black, using the newly developed collodion process, Bond acquired some of the first photographs ever taken of the stars.⁸ This was an extremely difficult undertaking, but one that showed, at least in principle, that astronomers might be able to continue traditional positional work with photography; in other words, that stars and their positions, distances, motions, and magnitudes might be derived directly from photographic plates themselves, instead of from the surface of the heavens as seen with a telescope. However, not only could the stars being pictured not be seen through the telescope fitted for photography, but when the plates were developed and fixed on the scene, soon after exposure, the stars were often not seen on the negatives. The problem was that the star images formed on collodion glass plates were just too small and ill-shaped, making it difficult to distinguish them from specks

⁸ For more, see Jones and Boyd 1971.



Fig. 1: Collodion plate of the star ξ Bos, George Bond, May 29, 1857, Harvard College Observatory Archives, No. IX.

of dust and other marks found on developed plates. So Bond had to wait for the morning sun, when the star might be found by diffused sunlight directed by mirrors to act as the backlight for a light-lectern upon which the negative plate was positioned and where a magnifying glass might conveniently be used while at the desk. Besides sunlight, mirrors, magnifying lenses, lecterns, and desks, what Bond did directly on the surface of the glass plate was also of crucial importance: he circled the place of the stars in sumptuous black ink (see Fig. 1).

This is a common practice found throughout Bond's photographic work with the stars. And it operated at many different levels, including measurement and identification of the stars throughout the life of the project. The ink circles in fact sustained the photo-object so as to make it ready for astronomical use. Yet Bond's plates remain potentials of what could be achieved, chiefly because the stars were not perfectly round and the system of measurement imposed upon the plates was not as rigid as it could have been; in other words, he employed rudimentary means to measure the stars: a micrometer attached to a microscope, a ruler, and a protractor directly on the surface of the glass plate.

Measuring machines and the maintenance of photo-objects

It was in the 1860s that the first measuring machine was constructed for the purposes of holding and precisely placing a glass plate so that star positions and relative distances could be measured according to a standard scale (see Fig. 2). This was the machine built in New York by Lewis Morris Rutherford, who obtained some of the finest star images using the collodion process. The measuring machine was placed upon some stable surface, leveled and held properly in place by means of adjustable legs. The observer looked down one of three microscopes, two for images on the surface of the glass plate and the third for reading the fine scales of the micrometer screw gauge. Rutherford also made many kinds of marks

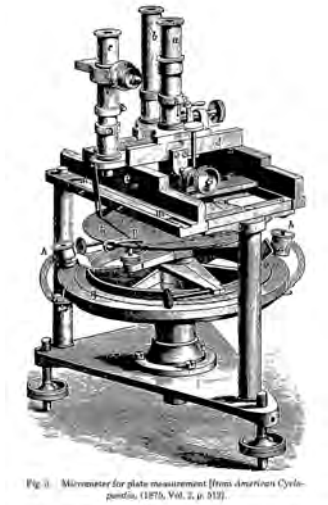


Fig. 2. Micrometer for plate measurement [from *American Cyclopædia*, 1876, Vol. 2, p. 512].

Fig. 2: Lewis Morris Rutherford's Photographic Plate Measuring Machine, from entry for 'Micrometer,' in *American Cyclopædia*, vol. 2, New York, 1875, p. 512.

directly on his glass plate negatives (see Fig. 3), but these ostensibly reflected a brand-new arrangement and a specific history of handlings of his dispositive.

For each star, Rutherford systematically took two exposures, which helped him to measure and identify stars from specks of dust or silver. Once labeled and measured, he marked the work done with an x right on the plate. On the same plate, we can see dates, signatures, names of constellation or structures, and even the particular settings used on the measuring machine. The same glass plates continued to be measured well into the twentieth century, proving the stability of the object established by these dispositive means. Consequently, those who handled Rutherford's glass plates handled photo-objects differently from those handled in Bond's dispositive.⁹

To all intents and purposes, Rutherford's material dispositive would generally be used well into the twentieth century, and was, in a modified form, central to the large-scale *Carte du Ciel* project to photographically map, in cooperation with 20 observatories around the world, all the stars up to the 11th magnitude (Weimer 1987). There were a number of modifications, but one of the most controversial was the question of whether to use glass plates prepared with a *reseau* of squares or not. Depending on which alternative was selected, a different type of measuring machine would be required (see Fig. 4).¹⁰

There are three things in particular that interest me about these newer measuring machines. First, unlike Rutherford's machine where one had to stand and look straight through the microscopes, the new machines were adjusted so that the observer could be comfortably seated at the table. Second, accompanying these changes in arrangement, photo-objects began to be handled, more and more, by women. And finally, a variety of new practices and

⁹ See Gould 1892; Jacoby 1892; Rees 1906; and Harpham 1900.

¹⁰ See, for instance, Hinks 1901.

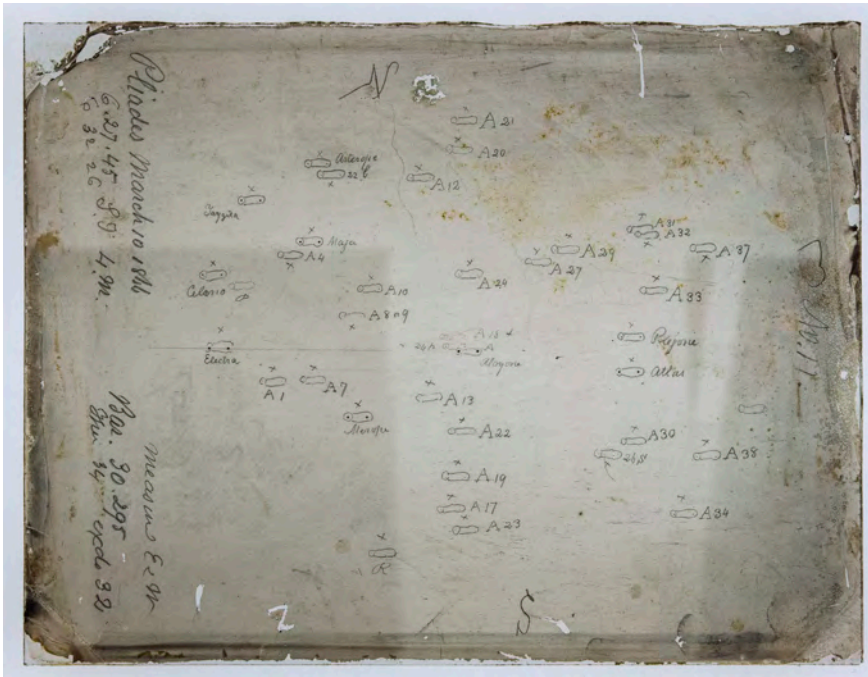


Fig. 3: Lewis Morris Rutherford's collodion plate of the Pleiades, one of three taken on March 10, 1866 and subsequently measured in July 1866, courtesy of Columbia University.

techniques can be found on photo-objects now emerging from within these new dispositive regimes.¹¹

However, the fragility of these photo-objects was also recognized at the time. Despite claims to permanence, many also acknowledged that material and even organic processes could dramatically change the composition of the emulsions and the plates over time—the object thus acquired and stabilized could, at any moment, return to being a thing. It is therefore significant to understand how the elusive object, in the face of the ever-encroaching thing, was re-stabilized. Take the example of the legendary astrophotographer Isaac Roberts, who complained that “the records obtained by photography are peculiarly liable to be lost by accidental breakage of the glass negatives. Besides this there is a certainty that after the lapse of a limited number of years the gelatine films will become discoloured; the images will fade, and the faint stars and the faint nebulosities will entirely disappear from view” (Roberts 1893–1899, 15). For instance, on February 15, 1886, a photograph was taken of a specific region of the sky. Roberts counted 403 star images on the resulting negative. Nine years later, Roberts again counted the number of stars on the same negative, and found only 272; that is, 131 stars had simply disappeared. The solution, thought Roberts, was to find a way to retain the information on these plates by using “permanent ink.” He set out to construct a tracing machine, or what he called a “stellar pantogramer” (Roberts 1888).

¹¹ For the role of women in this new regime of observation, see Sobel 2016.

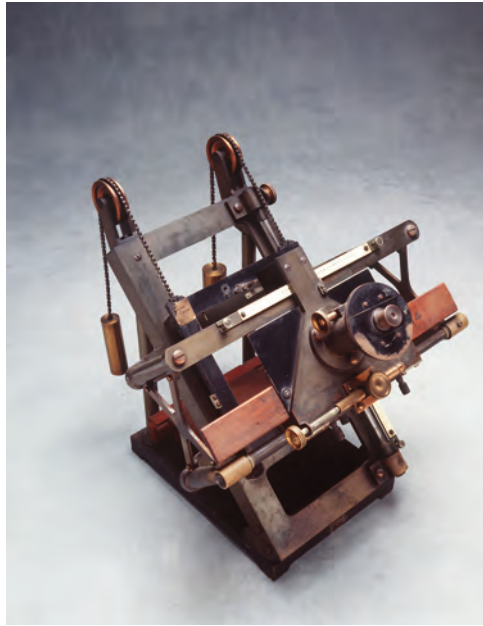


Fig. 4: A measuring machine made by Troughton & Simms in London for the Sydney and Melbourne Observatories and used in their contributions for the vast Carte du Ciel project, source: Museum of Applied Arts and Sciences in Australia.

This was a device that allowed Roberts to accurately transfer stars from glass plates to copper plates so that they could then be printed on paper in the usual manner. Not only were the stars transferred, but their positions and magnitudes. To do this, the pantograver was equipped with a microscope and a micrometer with fine lines to bisect a star's center. As the center was determined using the micrometer on the negative, a finely tuned appendage equipped with a steel pin carrying a diamond point would simultaneously also slide over the copper plate. When the arms were positioned precisely with relation to both plates, the diamond point was used to engrave a dot of varying sizes that corresponded to different apparent magnitudes.

Paper and glass

We have seen plates held up for examination and marked up in a variety of ways. Besides pens, desks, chairs, microscopes, lecterns, and measuring machines, I would like to introduce another element that plays a vital role in holding the object as a photo-object in its precarious position, and that is paper. To see this, consider this image of astronomer Edwin Hubble at work with a glass plate (see Fig. 5). Here we see Hubble using a loupe to examine a glass plate skillfully supported by one hand, while the other uses the tip of a pencil to count. We are lucky, however, to also have another image of the same situation (see Fig. 6), in which Hubble uses the same pencil to write something in a notepad placed next to him.



Fig. 5: “Edwin Hubble scanning a photographic plate,” source: Armagh Observatory online database of images.

The presence of paper is a significant part of handling photo-objects in astronomy. This fact is so easily overlooked that many contemporary archives do not link photographs with corresponding notebooks in their catalogs or collections. As a result of this, it was only after an extensive search at a number of archives at Harvard that I accidentally happened upon George Bond’s notebooks that he used while plates were being exposed, developed, and examined in the office. In these notebooks, he jotted down measurements and results, chemicals and exposure times, as well as atmospheric conditions, other plates used or discarded, difficulties and challenges faced. We even find drawings of some stars as they appear on negatives, along with notes about the material quality of the photo-object and what might be done to improve it. Bond’s notebooks form a part of his dispositives that gradually steadied photo-objects in the face of pending thinghood.

Paper is not just to be seen next to negatives, however. It is also found all around the plates, quite literally. Sometimes paper is pasted directly onto glass plates as labels and at other times it is used to support broken plates; sometimes it is used to direct our attention, focus, and narrow down what is shown while in other cases it brings into relief the three-dimensionality of photographs as objects. Indeed, there are a whole host of ways in which paper was used to hold glass plates so that they could act as photo-objects suitable for handling by the astronomer. The history of paperwork in relation to photography still has to be written (something I do in my forthcoming book on photography).

Before I wrap things up, let me bring to your attention another example of how paper was used as an element of an elaborate dispositive. Let us go back to the Harvard College Observatory in 1895. William Pickering’s photographic work on the Orion Nebula was conducted between 1887 and 1891 (Pickering 1895). What resulted from these years of photographic work was this, a hand-drawn paper map (see Fig. 7). The map is the product



Fig. 6: “Edwin Hubble in his office in the early 1950s,” source: Armagh Observatory online database of images.

of 22 glass plate negatives of the Orion Nebula that Pickering took using five different telescopes, at three different locations in the Americas (Boston, Southern California, and Peru’s Arequipa Region). Each of the 22 plates has its own history of handlings, which includes all kinds of markings and papers, practices and techniques. In fact, how they were all coherently handled *together* within a particular dispositive is what I am interested in. In particular, paper seems to be an essential part to an orchestrated handling of a number of things in order to form an object. The information that is extracted from each of these plates forms some part of the final paper schematic map. From these plates, Pickering began by selecting one that he considered best, and used it to form the initial basis of the paper chart. It was enlarged and then a bromide print was made from it. Pickering took a fresh blank piece of paper and attached it to the back of the print. The positions of the all the more conspicuous stars on the print were then simply *pricked through with a steel pin*, through to the piece of paper behind it. Using these pricked holes, or stars, as the standards, the blank piece of paper was then covered in lines to form a scaled grid. Afterwards, all kinds of information was extracted—using microscopes, pens, paper, and so on—from the other plates, and entered by pencil or ink onto the sheet of paper, already prepared with pin holes and a grid. This is admittedly a complex case, but I think it shows that at some point in the photographic process, paper, whether as prints or blank pieces of paper, was used to identify and hold reference points from many different photo-objects produced using a variety of techniques. In other words, many photo things were transformed into objects by being held together in one place and in another medium such as paper. Indeed, Pickering’s paper map of the Orion Nebula is an integral part of a photographic process.

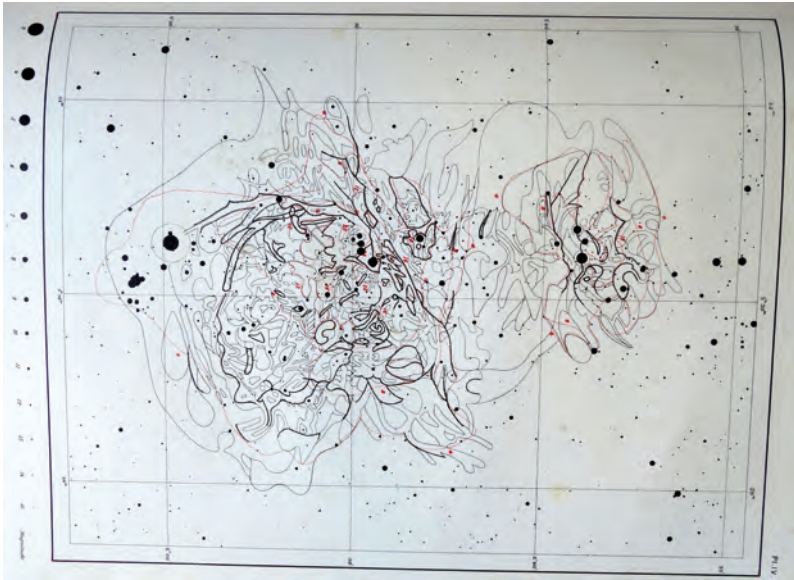


Fig. 7: William H. Pickering's paper map of the Great Nebula in Orion (M42), Plate IV, from "The Great Nebula in Orion," in *Investigations in Astronomical Photography*, Cambridge, 1895.

When objects exceed the thing

Photo-objects are not given. Rather, they are developed in the process of handling within the context of dispositives. It is in the handling of what is presented that we begin to home in on photo-objects as fields of work, as material things that can be shaped into objects, with consequences for how we derive scientific phenomena. The tracings of this handling are themselves materially present and diverse, and show the forces involved in shaping things into objects. Yet in this development, where an object comes to be materially realized, stabilized, and maintained, the thing is ever fighting back (see Fig. 8).

As four-dimensional processes, things resist in sheer defiance of the object. But so far, our examples have focused on how the thing was prevented from falling out of step and exceeding the photo-object, even after it had been stabilized. In contrast to these cases, then, allow me to conclude with an instance of the object exceeding the thing, such that the object is no longer bound to the productive forces and trappings of the thing.

Take this splendid example of a photo-object developed by a series of handlings within a particular dispositive arrangement (see Fig. 9). It is a plate from the Harvard College Observatory that was first produced in the twentieth century, and its objecthood was stabilized and sustained well into the rest of the century. It is in fact just one of half a million photographs at the Harvard College Observatory Archives, the largest historical collection of astronomical photographs in the world. In 2011, the archive acquired funds from the National Science Foundation to convert these photographs into digital images, using state-of-the-art scanners, custom made for the purpose. The Principal Investigator is an astronomer whose goal is to digitize the entire collection so that information found on the plates can be stored



Fig. 8: Chemically disintegrated glass plate of the nebula NGC 3115 (Sextantis), taken with the Mount Wilson 60-inch reflector, December 23, 1911, exposure time of 100 minutes, reproduced with permission of the Royal Astronomical Society.

as 1.5 petabytes of data and processed using software that analyzes sets of values important to contemporary astronomers. In other words, the stability and maintenance of the object has acquired an entirely new dispositive arrangement that literally embeds it into computational processes. The consequence of this recent alternative form of objecthood is that what used to be stabilizing forces that brought and held together photo-objects—such as ink markings and annotations directly on the surface of the glass—are no longer required by astronomers; rather, these forces are now considered noise or interference that only disrupt the digital image and its analysis. This means that before each plate is scanned, it must be cleaned. To quote from the magazine *Popular Science*:

Curatorial Assistant Jaime Pepper begins the process of cleaning a negative before scanning. For now, the team is using brushes, Windex and razor blades for the particularly hard-to-remove annotations. But the team will get some help soon from a custom-built automatic plate washer, funded by a National Science Foundation grant. It will run plates through a conveyor belt, much like a car wash, scrubbing the annotated side with brushes and water.¹²

To date, the Head Archivist and curatorial staff have cleaned well over 250,000 plates—many of them from the late nineteenth and early twentieth centuries. For astronomers, therefore, what remains of the glass plates, after the digital scans have been made, are over 170 tons of mere things; things that might have manifested objecthood for astronomers at one

¹² Boyle 2011.

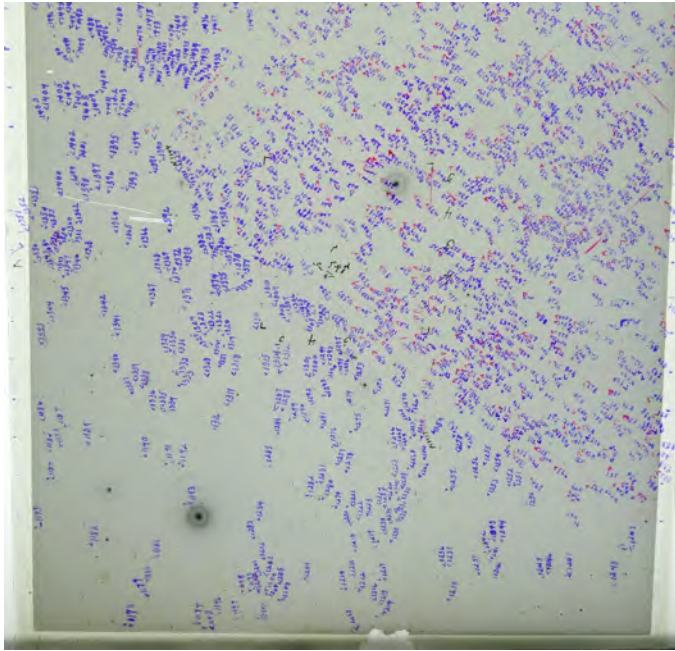


Fig. 9: Region R. A. 10 40; Dec. +24.2, taken on February 2–3, 1943, exposure time of 180 minutes, reproduced with permission of the Harvard College Observatory Archives.

time or other but have now been overcome by objects of another order, digital ones. But just because glass plates are no longer photo-objects for astronomers does not mean they no longer form photo-objects for historians today. In fact, this example shows how shifts in the thinghood of objects and the objecthood of things can create tensions as we move from one century to another, from one discipline to another, indeed, from one dispositive to another.¹³

Conclusion

Let me end here on a positive note and return to art, where we encounter a similar point about the tensions inherent in such shifts. Take a look once again at Fig. 8. At some point in its life history, it contained an image of a nebula (NGC 3115) taken at Mount Wilson Observatory on December 23, 1911 with a 60-inch reflecting telescope. At another unknown point in its history, it disintegrated into a meaningless thing, at least for astronomy; for a thing can always be reconstituted into an object, albeit of another kind, like an art-object. The contemporary photographer Marcus DeSieno constitutes just such art-objects in his visually rich *Cosmos* series. In Fig. 10, we have a piece entitled, *A Photograph of the Milky Way Eaten by Bacteria Found in Unpasteurized Milk*. DeSieno takes swab samples from a variety of places and things (light switches, engagement rings, iPhones, toilet seats, saliva, restaurant tables, etc.) and exposes them to photographic film of celestial objects so that bacteria may

¹³ See, for instance, the reactions to wiping photographs clean recorded in Schechner and Sliski 2016.

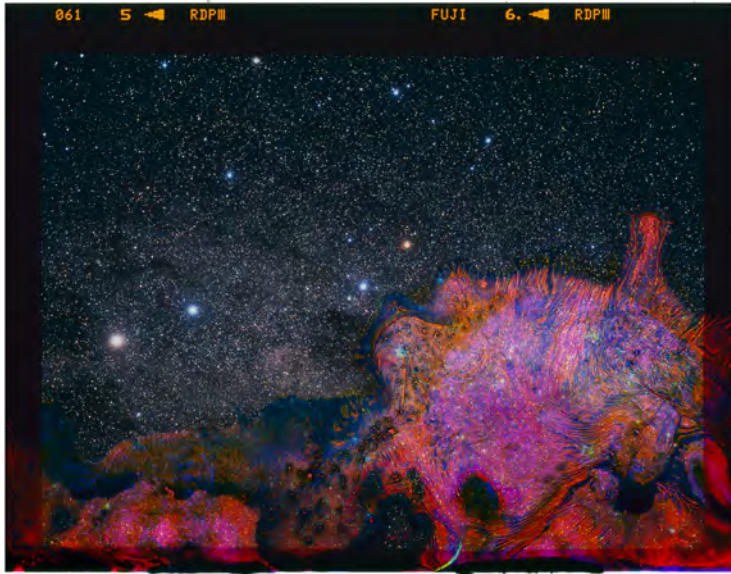


Fig. 10: *A Photograph of the Milky Way Eaten by Bacteria Found in Unpasteurized Milk*, Marcus DeSieno, 2014, Archival Pigment Print of Bacteria Grown on Photographic Film, reproduced with the kind permission of the artist.

grow into them and produce organically striking results. But if he does not take another photograph of the film at a certain point in this process—thus stabilizing the art object—he will be left with mere things. The products are stunning photo art objects that remain things for astronomy (and microbiology, for that matter). Indeed, DeSieno's photo-objects capture the organic character of the dynamic and ever-changing relationships between things and objects.

List of Figures

- Fig. 1:* Collodion plate of the star ξ Bos, George Bond, May 29, 1857, collodion plate, Harvard College Observatory Archives, No. IX.
- Fig. 2:* Lewis Morris Rutherford's Photographic Plate Measuring Machine, from entry for 'Micrometer,' in *American Cyclopædia*, vol. 2, New York, 1875, p. 512.
- Fig. 3:* Collodion plate of the Pleiades, Lewis Morris Rutherford, March 10, 1866, collodion plate, Columbia University © Columbia University.
- Fig. 4:* A measuring machine made by Troughton & Simms, taken from the online image collection of the Museum of Applied Arts and Sciences in Australia: <https://collection.maas.museum/object/231012>, accessed January 9, 2018.

Fig. 5: Edwin Hubble scanning a photographic plate, from the Armagh Observatory online database of images: <https://web.archive.org/web/20170705202609/http://star.arm.ac.uk/images/historical/People/phpshow.php?oldGD&slides&85>, accessed January 9, 2018 (see image #86/456).

Fig. 6: Edwin Hubble in his office in the early 1950s, from the Armagh Observatory online database of images: <https://web.archive.org/web/20170705202606/http://star.arm.ac.uk/images/historical/People/phpshow.php?oldGD&slides&84>, accessed January 9, 2018 (see image #85/456).

Fig. 7: William H. Pickering's paper map of the nebula in Orion (M42), Plate IV, taken from "The Great Nebula in Orion," in: *Investigations in Astronomical Photography*, Cambridge, 1895.

Fig. 8: Chemically disintegrated glass plate of the nebula NGC 3115 (Sextantis), taken with the Mount Wilson 60-inch reflector, December 23, 1911, exposure time of 100 minutes, glass plate, Royal Astronomical Society © Royal Astronomical Society.

Fig. 9: Region R. A. 10 40; Dec. +24.2, February 2–3, 1943, exposure time of 180 minutes, Harvard College Observatory Archives © Harvard College Observatory Archives.

Fig. 10: *A Photograph of the Milky Way Eaten by Bacteria Found in Unpasteurized Milk*, Marcus DeSieno, 2014, Archival Pigment Print of Bacteria Grown on Photographic Film © Marcus DeSieno.

References

- Boyle, Rebecca (November 2011). Recording a Century of Night Skies Through a Scanner Darkly. *Popular Science*. URL: <https://www.popsci.com/science/article/2011-10/recording-century-night-skies-through-scanner-darkly>, accessed December 20, 2016.
- Breitbach, Julia (2011). The Photo-As-Thing: Photography and Thing Theory. *European Journal of English Literature* 15:31–43.
- Brown, Bill (2001). Thing Theory. *Critical Inquiry* 28(1):1–22.
- ed. (2004). *Things*. Chicago: University of Chicago Press.
- Edwards, Elizabeth and Janice Hart, eds. (2004). *Photographs Objects Histories: On the Materiality of Images*. London: Routledge.
- Gould, Benjamin Apthorp (1892). Preliminary notice of the reduction of Rutherford's star-plates. *The Observatory* 14:52–55.
- Harpham, F. E. (1900). The Rutherford Photographs. *Popular Astronomy* 8:129–136.
- Heidegger, Martin (1968). *What is a Thing?* South Bend: Gateway Editions.
- (1985). *Being and Time*. Oxford: Bail Blackwell. Translated by J. Macquarrie and E. Robinson.
- Hinks, Arthur Robert (1901). The Cambridge Machine for Measuring Celestial Photographs. *Monthly Notices of the Royal Astronomical Society* 61:444–458.
- Ingold, Tim (2007). Materials against Materiality. *Archaeological Dialogues* 14:1–16.
- (2012). Toward an Ecology of Materials. *Annual Review of Anthropology* 41:427–442.
- Jacoby, Harold (1892). *Rutherford Photographic Measures of the Group of the Pleiades*. New York: Columbia University.
- (1904). *Practical Talks by an Astronomer*. New York: Charles Scribner's Sons, 92–93.
- Jones, B. Z. and L. G. Boyd (1971). *The Harvard College Observatory: The First Four Directorships, 1839–1919*. Cambridge: Harvard University Press.
- Moxey, Keith (2008). Visual Studies and the Iconic Turn. *Journal of Visual Culture* 7:131–146.

- Nasim, Omar W. (2018). James Nasmyth on the Moon; Or on Becoming a Lunar Being, Without the Lunacy. In: *Selene's Two Faces: From 17th Century Drawings to Spacecraft Imaging*. Ed. by Carmen Pérez González. Leiden / Boston: Brill, 147–187.
- (2019). The Labour of Handwork in Astronomy: Between Drawing and Photography in Anton Pannekoek. In: *Anton Pannekoek (1873–1960): Ways of Viewing Science and Society Modernism in Science, Radical Politics and Art*. Ed. by Jeroen van Dongen and Chaokang Tai. Amsterdam: Amsterdam University Press.
- Olin, Margaret (2012). *Touching Photographs*. Chicago, IL: The University of Chicago Press.
- Pickering, William Henry (1895). *Investigations in Astronomical Photography, (Annals of the Astronomical Observatory of Harvard College): Vol. 32, Part 1*. Cambridge: Harvard Observatory.
- Rees, John Krom (1906). *The Rutherford Photographic Measures*. New York: Columbia University.
- Roberts, Isaac (1888). On an Instrument for Measuring the Positions and Magnitudes of Stars on Photographs and for Engraving them upon Metal Plates, with Illustrations of the Method of using the Instrument. *Monthly Notices of the Royal Astronomical Society* 49(1):5–13.
- (1893–1899). *Photographs of Stars, Star-Clusters and Nebulae: Together with Records of Results Obtained in the Pursuit of Celestial Photography*. 2. London: Universal Press.
- Rubio, Fernando Domínguez (2016). On the Discrepancy Between Objects and Things: An Ecological Approach. *Journal of Material Culture* 47:59–86.
- Schechner, S. J. and D. Sliски (2016). The Scientific and Historical Value of Annotations on Astronomical Photographic Plates. *Journal for the History of Astronomy* 47:3–29.
- Sobel, Dava (2016). *The Glass Universe: The Hidden History of the Women Who Took the Measure of the Stars*. London: 4th Estate.
- Weimer, Théo (1987). *Brève histoire de la Carte du Ciel en France*. Paris: Observatoire de Paris.

Chapter 10

Finding Photography: Dialogues between Anthropology and Conservation

Haidy Geismar and Pip Laurenson

“Bob was made redundant in the end, and he became a postman.”

Catherine Yass in an interview with Geismar and Laurenson, May 12, 2015

Introduction

This paper explores how contemporary art photography is entangled within precarious networks of skills, labor, and materials, many of which are rapidly becoming obsolete. Our research argues for making networks of production more visible for conservation practice within the museum, even if photo-objects are still typically displayed in contemporary art museums as authored by a single artist, without making any of these networks visible. This turn towards the social network within conservation raises many important questions about the responsibility of the museum to preserve ecologies that support and enable artistic production as well as the artworks themselves.

This piece reflects an idiosyncratic and long-term conversation between the authors that draws on a wide range of different methodologies and knowledge-making practices. The authors come from two different disciplines. Pip Laurenson has a background in conservation, was Head of Time-based Media Conservation at Tate from 1996 to 2010 and currently works developing, leading, and supporting research within the museum as Head of Collection Care Research.¹ Haidy Geismar is a social anthropologist, trained in the Material Culture Research section of the Anthropology Department at University College London. Working in Europe, North America, and the Pacific, with a particular focus on historic photographs, she tracks collections as material and social, and now increasingly digital, networks that create new ways of understanding concepts such as the past, property, tradition, and creativity.² Our working partnership and intellectual collaboration draws questions of collections care and conservation into dialogue with academic interests in materiality and uses this as a springboard to advance thinking in both of our fields, bleeding into the practitioner fields of both art conservation and photo processing.

Despite our differences, we both situate this research within what has come to be called the material turn: the movement of a variety of different disciplines towards materials and materiality as ways of understanding key concepts and epistemologies. With regard to photographs, this has entailed a shift from understanding photographs as immaterial images that produce their own meanings to an enhanced awareness that photographs are things in the

¹ Pip Laurenson also holds a chair as Professor of Art, Collection and Care at the University of Maastricht within the Maastricht Centre for Arts and Culture, Conservation and Heritage.

² For example, Geismar 2015.

world that circulate in and out of different contexts, accruing social value and meaning. Not only are these values and meanings coproduced by photographs, they are often reflexively incorporated back into the photo-object itself, through the reproduction of canonical genres, through inscription, framing devices, and through other material processes and practices such as exchange, reprinting, and conservation.³

In this essay, we hope to extend this understanding within an expanded interdisciplinary field, exploring some of the assumptions about the photo-object that emerge within the field of fine art conservation. We do this both to explore the conceptual framework that we are working within, but also with a view to influencing photographic conservation practice in the future using the tools of anthropology. Conservation practice is often perceived as being exclusively materials focused, understanding objects as composites of materials. However, contemporary art conservation also links materials science—an understanding of how materials respond to, and change, in their environment over time—to the disciplinary thinking drawn together in the contemporary art museum (and marketplace). This brings a number of philosophical and conceptual concerns to this focus on materials—for instance, very particular questions about authorship, artistic creativity, and authenticity.⁴ Within the modernist epistemologies that still dominate contemporary art museums, it is usually the artist who is granted the authority to articulate the form and meaning of their work and the association between materials and intention within contemporary art conservation. This may be done in relation to a positioning of the artist within an established form of practice which prioritizes the idea of artist's intention, as is prominently the case with conceptual art or instruction works, for example.

Anthropologists have conventionally been less interested in decoding or discovering the intentions of specific photographers, and have rather focused on understanding photographs in broader social and cultural contexts, tracing how these contexts compose value, and allow for the circulation of images in specific ways. Anthropological epistemologies of the photo object focus more on the ways in which objects move in the world, and have also tended to look more at how materiality (the social experience, or understanding, of material culture), rather than materials, play an important role in the social production of meaning. Several methods have been developed to facilitate this perspective – from fine-grained ethnographic exploration, through to the tracking of process using the method of *Chaine Operatoire* (or operational sequence).⁵

Anthropology and conservation as they have been constituted within the material turn can thus be understood to embody alternatively focused epistemologies of photography as an object in the world. We gloss them here as “material culture without materials” and “objects without producers” to highlight some of the blind spots that have been traditionally in-built into these disciplinary perspectives. Here, through a focus on a single case study—a contemporary photographic artwork and the questions it has generated for the artist, their production networks, and conservators working at Tate—we work to build a bridge between these different epistemological positions. In particular, we had hoped that an anthropological perspective could help open up the materials focus of conservation which often concentrates on singular images or collections, to understand how they are located within a specific cultural system. We also started out with an expectation that conservation, with its traditional

³ See, for example, Edwards 2001; Edwards and Hart 2004.

⁴ See, for example, Wharton 2015; Fiske 2009; Buskirk 2003; Laurenson 2006.

⁵ See, for example, Coupaye 2009.

focus on the object as a material practice and process that needs to be maintained and stabilized, could help anthropologists understand the role of specific materials, the processes that produce them, and the knowledge required to understand how materials construct meaning and value. However, what we both discovered is something of a blind spot in both of our disciplines regarding the process of craft, or making, in commercial or industrial processes that are all too often perceived as automatic, or are blackboxed as both material and knowledge domains.⁶ What we explore here is the complicity of different making practices and knowledge fields on defining, and recognizing, the contemporary art photograph as an object.

Material culture without materials

The material turn of the social sciences and humanities in recent decades has pushed objects, artefacts, things, material culture, to take center stage in our understanding and interpretation of the production of social relations and culture (Geismar 2006; Henare, Holbraad, and Wastell 2007; Hicks 2010). This renewed attention to objects across the social sciences and humanities may be seen as part of a broader turn towards interests in interpretation but was also, in part, a reaction to the domination of language as the primary interpretive frame. The material turn asks how objects can produce meaning or knowledge, not just as symbols or signs of meaning held elsewhere, but in their own right: not simply as representations of ideas, but as part of them. Moving beyond semiotics and structuralism, and using paradigms such as a renewed Materialism and Actor-Network Theory, seminal volumes such as Miller's *Material Culture and Mass Consumption* (1986), Appadurai's *Social Life of Things* (1986), Brown's "Thing Theory" (2001), Gell's *Art and Agency* (1998), and Henare et al's *Thinking Through Things* (2007) have all sought to develop an analytic language with which to describe the significance of things, without recourse to theories of signification drawn from language alone.

Much of this literature is interested in the capacity of material culture to act in the world, whether theorized in terms of agency (Gell 1998), actants (Latour 1996), or vibrant matter (Bennett 2010). However, within this renewed attention to material culture lies a lacuna—a frequent failure to focus on the actual materials and processes from which things are made. If the material turn insisted on the role of objects in producing meaning, it may also generally be seen to promote a shift from production to consumption. Within many paradigmatic studies of "material culture" objects are somehow a priori—as if their life begins after their making.⁷

Rather than a return to a focus on "modes of production," recent critiques and extensions of material culture studies have advocated a return to the intersections of materials and making as a way of understanding the resonance, and affectivity, of things. Ingold (2007) argues that much of material culture studies effaces materials in favor of an ideational and abstract social understanding of objects and suggests we return to a preoccupation with the stuff from which things are made. His solution to this, however, is not to turn to materials science but to phenomenology and to ideas about skill and making that draw human knowledge and the material world through generative acts of creation (2013). In a recent volume,

⁶ This is not traditionally the case for the conservation of objects produced by artisan photographic processes.

⁷ The effect might act as a critique of the recent widespread adoption of the notion of biography for understanding an artwork within conservation as developed in Vall et al. 2011.

The Social Life of Materials (2015), Drazin and Kuchler argue for a perspective on materials, not as “the raw stuff from which people would be able to shape cultural and social life” but as a social element, embedded within culture as much as within nature (Drazin 2015a, xvii). Thus, “an anthropology of materials explores moments of manifest transformation between form and substance and their sociocultural implications” (Drazin 2015b, 27).

The anthropology and phenomenology of materials is drawn increasingly into dialogue with theories of affect in which materiality is perceived as an embodied response, or engagement, with materials. Shapiro (2015) and Liboiron (2016), for instance, both explore the (often toxic) ways in which chemicals and plastics penetrate human bodies and use this interpenetration to re-theorize the boundaries of the social and the natural. Shapiro’s account of formaldehyde’s “chemosphere” and Liboiron’s account of plastic pollution bring phenomenology, materials science, and politics together.

Accounts that focus on the photo object as part of broader networks of both meaning and materials therefore present a view of the photo object as neither image nor object, but rather as a network linking people and practice to material form creating image worlds. Pinney’s account of the coming of photography to India (1997), Poole’s discussion of photographic practices in the Andes (1997) and Strassler’s account of Indonesian photography (2010) all explore photographic practices, and images, within specific social, cultural, and political environments, in which the photo objects themselves play vital roles. Edwards’s seminal work, *Raw Histories* (2001) encouraged a shift of perspective away from the singular image to locate photographs in archival and museum contexts. Her later book, *The Camera as Historian* (2012), expanded this perspective to understand the social and political milieu within which images were made, and then circulated.

Interpretive shifts between understanding photographs either as objects or as images, in terms of iconography or affect, have informed understandings of photography since it was first invented. The emergence of photographic technologies in the nineteenth century produced intensive discussion about the inherent reproducibility of the medium and simultaneously raised questions about the paradoxical immateriality of the photographic image. At the same time, technologies such as the daguerreotype were also understood to irrevocably inscribe singular moments into unique material artefacts (Wright 2004). However, there is only a small body of literature within anthropology that accounts for the production of the photo object in material terms, tracing the process of making the image from start to finish, and unpacking the intersections between photographic technologies and the social practices of photography. Broadly speaking, this epistemological foundation for the photo object understands value and meaning of photographic images as artefacts that become social once they have been made, rather than including the sociotechnical processes through which they came to being. In focusing on these processes, we address meaning making in photography from a completely different angle to the approaches outlined above. Rather than looking at the indexical ways in which the subject of photography enters the image and creates its meaning, here we look at how materials, and the processes they necessitate, also participate in the process of creating meaning for the photo object.

Objects without producers (but with artists)

The primary focus of conservation, and conservation training, is on the material object and preventing, slowing, or treating deterioration and damage. Yet contemporary conservation

practice also recognizes the need to broaden its focus away from the traditional subject of conservation, namely a unique singular material object fixed at a particular moment. Many forms of contemporary artistic practice do not produce artworks that conform to the traditional conservation object. For the contemporary art conservator, when constructing an account of what is important to preserve about a work, the views of the artist and the notion of artist's intent act as a touchstone.⁸

Despite intensive scrutiny and critique (e.g. Krauss 1986), a modernist definition of the artist is still central to the contemporary art museum and contemporary art conservation and the people and skills who have worked for the artist in the production of the work remain largely invisible. Conservation theory and practice play an important part in shaping both the artist as a stable subject in the museum and the works created. A greater acknowledgement of a social field underpinning these practices might serve to challenge both of these categories (namely, the artist and the artwork) and their stability.⁹ We therefore refer to "Objects without producers" to highlight how those involved in the making of a work are rendered invisible in the way in which art is presented, and conserved, traditionally in the museum, and how acknowledgement of these networks of people and skills might be at odds with common preconceptions of artistic authorship and an object's authenticity.

Photography is an interesting subject to draw out the complex ways in which the artist and the artist's intention underscore contemporary conservation practice. Within the traditions of connoisseurship for photography, which are still the standard reference points for conservation and curatorial practices in the museum, there are a number of categories that serve to confer value on any particular photographic object. For example, higher market value is given to a print that is classified as a "vintage" print—defined as a print that is made no more than five years after the in-camera image has been created. Greater value may also be assigned to a print that is made from the original negative or a print that has been overseen and approved, perhaps also signed, by the artist. Museum curators and conservators have to navigate these values when collecting and exhibiting photography. Major figures within the field of photographic conservation have noted that these traditions are under pressure and there is a diminishing value assigned to the unique original in art photography, often with reference made to shifting relationships to the material, triggered by the use of photography by conceptual artists in the 1960s and 1970s (see Kennedy, Reiss, and Sanderson 2016; Stigter 2016; Marchesi 2014). While later prints of historic works are common within the market and in the museum, it is only now, when photographs made and collected within a fine art context in the 1970s, 1980s, and 1990s, are showing signs of deterioration that is at odds with the artist's intended aesthetic, that the photographic conservation community has begun to publicly debate reprinting as a potential strategy for conserving a work in the art museum (Marchesi 2014; Ackerman et al. 2016).

In terms of materials, the values that underpin photographic conservation are largely derived from practices developed for works of art on paper. Drawing on practices originating from the conservation of works of art on paper, reprinting remains controversial as a conservation strategy; what is less controversial is the practice of acquiring a backup print

⁸ Wharton 2007; Gale et al. 2009; Laurenson 2009.

⁹ The vanguard of conservation explores the unfolding nature of many contemporary artistic practices and its impact on conservation practice. See, for example, Clark and Barger 2016.

to reduce the necessity of reprinting and providing a reference,¹⁰ supporting the view that once the work enters a collection, it is considered fixed. The significance of this transition point in the life of an artwork also reinforces the sense that these works exist a priori and serves to separate the work from the time and conditions of its making.

Underneath the modernist myth of the artwork produced by the singular vision and genius of an intent artist are complex networks of people, skills, and materials. The relevance of this observation for conservation is centered on the need to understand the viability of these networks should they need to be called upon to reprint a work. What we aim to do in our broader research project is to better understand the nature of commercial photographic processes and their capacity for replication and how this feeds into the value and meaning of contemporary art photography.¹¹ Understanding contemporary photographic processes as skilled craft rather than a depersonalised industrial process highlights the precarity of the networks on which a particular working practice might depend, and allows us to unpack the complex stakes that are built into the use of reprinting as a conservation strategy.

The recent opening up of photographic conservation to consider reprinting and replication highlights the dual imperatives to preserve both the image itself and the artist's relationship to it, tempered by tensions between the perceived temporal nature of these images as endlessly contemporary and the increased obsolescence and instability of the materials used to create them. Regardless of the outcome of debates and decisions about the ontology of a particular work and the ethics of replication, we find that for images made only twenty years ago, materials are no longer available, companies have closed, and the skills and knowledge embodied in the technology are lost or no longer valued.

The correlation between the ontological status of works of art and notions of reproducibility is not confined to the conservation of contemporary photography. A recent study of conservation decision-making related to Sol LeWitt's wall drawings *Wall Drawing #450* and *Wall Drawing #493* at the Carnegie Museum of Art in Pittsburg by Renée van de Vall (Vall 2015) has shown how theoretical assumptions about the nature of a work of art are challenged by the detailed understanding of their making, a challenge that impacts decisions related to the conservation of the work. In her paper, van de Vall cites Kirk Pillow (2003) who, through examining the accounts of those producing the drawings alongside the changing attitudes of the artist over time, argues that a LeWitt wall drawing can be understood as *both* allographic and autographic. Using Goodman's distinction, Pillow argues that a work such as Sol LeWitt's *Wall Drawing #493*, 1986 is allographic through the relationship of the work to its score and autographic in its specific instantiation "which depends on the historically specific rendering choices of their draftsman" (Goodman 1968, Pillow 2003 cited in Vall 2015, 372). In van de Vall's account, the public conservation discussion conducted via a list-serve¹² failed to consider the impact of the collaborative practice of making, on the

¹⁰ When the title to a photographic artwork is transferred to the museum, it has become standard practice in some museums to acquire, as part of the acquisition of the work, two prints that have been created at the same time, enabling one to be placed in cold storage, see Kennedy, Reiss, and Sanderson 2016.

¹¹ How success in reprinting within conservation is judged is complex, given that a contemporary art photograph may be considered for reprinting because the colors have shifted considerably, consequently problematizing traditional notions of "matching" a new print with the "original."

¹² Conducted on a list serve for the conservation community, Chantal Bernicky Cons DistList August 4, 2008, <http://cool.conservation-us.org/byform/mailling-lists/cdl/2008/0878.html>, accessed August 14, 2018 (including Mark Clarke, Berit Moller, and Jonathan Kemp).

status and nature of the wall drawing. We would suggest that this is partly due to a blind spot regarding the process of making in relation to how contemporary art is viewed.

It may be argued that a focus on the object as material and on the social object are two different epistemologies—which cannot productively be linked in a single account. When we turn to a practice such as conservation, however, it becomes evident how the social life and value of completed images, and the processes that bring them into being, are not only inextricably linked but shape how art photographs live in the museum. Our research question is whether this expanded socio-material context meshes with a perspective that focuses in more depth on the materials and practices of photography, as well as asking how to bring this expansive approach to the technical work and disciplinary perspectives of conservation.

Contemporary art photography

Within both anthropology and conservation, photography is understood to be a series of techniques and materials that come together to create particular effects and that are dependent upon complex social networks and many different kinds of embodied skills. However, the object brought into being in each of these fields is very different. We have begun to ask whether it is important for conservation practice to fully understand these networks, skills, and materials, and how such an understanding impacts possible conservation strategies. Although conservation is traditionally seen as a discipline requiring expert knowledge about how objects have been made, when we examine the industrial or commercial processes and skills involved, we find that the knowledge and understanding is often superficial. Unlike the standard process of acquiring other forms of expertise within conservation training, there are currently few opportunities for conservators to learn these commercial or industrial processes first hand.¹³

More generally, commercial photographic practices since the 1970s, including digital practices, are not well understood; they tend to be considered only in terms of their inputs and outputs. These practices are perceived as somehow mechanized or automatic, unskilled and not craft-like. While technical art history has traditionally studied materials, processes, and studio practice,¹⁴ the networks of individuals involved in the commercial processes that underpin many forms of contemporary art in general, and contemporary photography in particular, remain largely invisible.¹⁵ Although we suggest this is partly to do with a narrow view of skill in relation to art making, it is also the case that the networks of contemporary art production are often rendered invisible by the politics of the art world, which constructs very particular, and often hierarchical, divisions of labor and recognition of identities. In the context of our project, contemporary art photography also throws up a number of conceptual and methodological challenges to our desire to emphasize “making” because many

¹³ Similarly, technical art history, as the interface between conservation science and art history, and for traditional artworks an area where conservation and conservation science links materials and processes of art making and meaning, has not been developed for contemporary art practice.

¹⁴ For example, Currie and Allart 2012; Dubois 2009.

¹⁵ There are contemporary art conservation projects which do touch on making and the networks of skill that embody contemporary artistic practice. However, these do not represent in-depth studies expressly focused on understanding the networks of skilled people underpinning a particular artist’s practice but rather may be touched upon as part of a filmed interview with the artist as in the project videos for the Getty Conservation Institute’s interview with the artist Peter Alexander as part of their project LA Art, <https://www.youtube.com/watch?v=DDvV19mNXNQ>, accessed February 9, 2017.



Fig. 1: *Corridors (Chaplaincy)*, Catherine Yass, 1994, (T07065), Tate © Catherine Yass.

materials used are either obsolete or in decline, drawn as they were from the fast-moving world of commercial photographic production. In the rest of this essay we unpack how entangled processes of making, social relations of production, and the nature of materials are to constituting an epistemology of the photo-object.

Corridors

In the remainder of this essay, we describe our project which has focused to date on a single series of artworks, *Corridors*, 1994 by Catherine Yass (see Figs. 1–4, Figs. 8–11 below, and all side by side in Hyperimage (first series, second series)). This work was chosen as a pilot of a larger project to explore the networks of materials and making that underpin contemporary art photography in the collections of Tate.¹⁶ In what follows, we present some of the conceptual issues that emerged around *Corridors* from the vantage point of the engagement between Tate’s conservation team and the artist over a number of years, drawing out the implications of this for our understanding of its meaning, as well as its future in the museum.

¹⁶ The Tate holds the national collection of British art from 1500 to the present day, and international modern and contemporary art within the UK. It comprises four galleries: Tate Modern and Tate Britain in London, Tate St. Ives, and Tate Liverpool.



Fig. 2: *Corridors (Kitchen)*, Catherine Yass, 1994, (T07066), Tate © Catherine Yass.

In 1994, Catherine Yass was commissioned by the Public Art Development Trust to make a series of images for a psychiatric hospital in South West London that had been built in the nineteenth century. Responding to the use of photography in research into mental illness in the nineteenth century, the photographs used in *Corridors* were originally intended as backgrounds to portraits of people who either currently worked or were being treated in the hospital (Adams and Hilty 2000). However, Yass became uncomfortable with photographing those who had little or no choice regarding their presence within the hospital and became increasingly interested in the images of these empty spaces and how they swallowed up the identity of those within them. Yass also began to engage with how the architecture of the hospital was depicted in archival photographs, with an emphasis on the central human gaze, mirrored in the lighting of the architecture running down the center of the ceilings of the corridors suggesting ideas of salvation. She therefore decided to focus on creating the images of the corridors and these in-between spaces.

In preparation for a presentation at a conference in 2016 on the conservation of industrial materials in art, we came to understand *Corridors* in terms of its technical production—a perspective few people would have from viewing the artwork on display.¹⁷ This series of works by Yass were created using her own distinctive process. Yass used a four- by five-

¹⁷ <https://graycenter.uchicago.edu/events/symposium-conserving-industrial-materials-and-processes-in-art>, accessed May 27, 2017.



Fig. 3: *Corridors (Daffodil 1)*, Catherine Yass, 1994, (T07067), Tate © Catherine Yass.

inch plate camera loaded with a double-sided dark slide.¹⁸ On one side of the dark slide is a sheet of Velvia color reversal film “correctly” loaded, with the emulsion side facing the lens, and on the other side of the dark slide is a sheet of Velvia color reversal film loaded “incorrectly,” namely, with the emulsion side facing away from the lens.¹⁹ From this Yass created two exposures, as closely identical as possible. Taking these two images, she processed the correctly loaded film using the E6²⁰ process to obtain a positive and processed the incorrectly loaded film using the C41,²¹ which is designed for processing negatives. This provides the distinctive visual effects we see in the *Corridors* series.

Yass created the final image by sandwiching these two layers of color transparency, producing the unusual coloring and halo effects (see Fig. 5). Using an enlarger, and working in the dark, this was then projected onto the Cibachrome²² color transparency material that had been carefully taped to the wall. The enlarger used at CPL (Colour Processing Labora-

¹⁸ A double dark slide is a film holder that holds a sheet of film at each side. To expose the light sensitive emulsion, you literally slide the dark cover away.

¹⁹ FujiChrome Velvia RVP four- x five- inch color reversal film was available from 1990–2005. There was a change in composition and it was bought back into production on a new base in 2009 as Velvia 50 (RVP50), see Wikipedia entry on Velvia: <https://en.wikipedia.org/wiki/Velvia>, accessed May 27, 2017. Yass considered the properties of the original Velvia RVP so important to her work that she bought up the UK supplies when it went out of production (Personal communication with P. Laurenson via email on May 29, 2017).

²⁰ The E6 process is a chromogenic photographic process for developing color reversal or positive film.

²¹ C41 is a chromogenic photographic process for color negative film.

²² Renamed as Ilfrachrome in 1992 but colloquially still known by its previous name of Cibachrome.



Fig. 4: *Corridors (Daffodil 2)*, Catherine Yass, 1994, (T07068), Tate © Catherine Yass.

tories, Edenbridge) where Yass printed the *Corridors* series not only had autofocus but also had computer control of the color of the light, making it possible to adjust the colors in the image by very small increments. The transparent Cibachrome material, CC.F7, considered an expensive photographic material, was only produced between 1992 and 2012 (Pénichon 2013) with the end of its production signaling the point when the network and infrastructure underpinning the making of these works rapidly fell apart.²³ In a message to customers posted on a message board in 2011, the manufacturer of Cibachrome, Ilford, announced the end of production for this material, citing the cost of silver as one of the major causes.²⁴ The material has a polyester base and is made up of multiple layers of light sensitive silver salts and azo dye (Pénichon 2013). The eight works in the *Corridors* series are presented as individual light boxes, made up of white painted wooden boxes in which fluorescent lamps are used to light the transparency from the back. The transparency is placed on a piece of opal Perspex and held in place by a standard white painted wooden molding that creates a frame. The surfaces of the transparencies are unprotected and extremely fragile, marking and scratching easily.

When *Corridors* was acquired, the acquisition process initiated a series of conversations between the artist and conservators about how the works were made and whether the images could be reprinted, what the museum should hold to ensure the series could be dis-

²³ Personal communication with the print manager at CPL, Brian Burt.

²⁴ Message from Ilfrachrome to customers in 2011.



Fig. 5: The sandwich of two layers of transparency used in the production of *Daffodil 2*, photograph taken in Catherine Yass's studio © Tate.

played in the future, and how the works might be displayed. At the time of acquisition, time-based media conservation was the responsible conservation section for color display transparency light boxes, in part due to the perception that the skills for dealing with artworks that had to be “plugged in” lay in time-based media conservation rather than paper conservation, the traditional domain of photographs. This meant that initial conversations about this form of conservation were influenced by current time-based media conservation practice: namely, the idea that the future reproducibility of a work might be facilitated by the collection of a “master” image from which the work could be reprinted, should the need arise. Therefore, coincidentally, discussions about reproduction begun with Yass earlier than would have been common in the photograph or paper conservation studios within museums.

Within time-based media conservation at that time, in the 1990s, conservators had been working hard to establish conservation strategies for video artworks for which it was accepted that there was no single or original object and that the artwork depended, at any given time, on technologies that were by their nature going to change rapidly, and become obsolete. Conservation workflows were explicitly devised to manage obsolescence and changes in technologies. Another factor in understanding the conservation context in which these color display transparency light boxes were received is the standard procedures that were in place for film and slide-based artworks where the technologies require new film prints

or sets of slides to be produced each time a work is shown due to their degradation during the process of exhibiting them. The engagement of time-based media conservation with the making of these works should therefore be understood against a backdrop where, in many cases, understanding these processes and networks is driven by a pragmatic need to engage with the community that the museum depends on for the continued display of a group of works in its collections. The desire to develop an in-depth understanding of industrial and commercial processes has developed over time with the realization that a greater understanding of the networks, skills, materials, and processes involved in making these works impacts how conservation views these photo objects and the judgements and decisions made about their conservation. Here we may be able to learn a great deal from the traditions of technical art history. This also raises questions about the relationship of conservation and the museum to the fragile networks of skills that are critical to these artistic practices.

Drawing on this context, in 1996 discussions with Yass about the conservation of *Corridors* focused on the possibility of creating a digital master so that the museum could potentially hold something that could be used to reprint the work at a later date, should that prove necessary and desirable, and a number of tests were carried out with this agenda in mind.²⁵ In fact, because *Corridors* was printed from intricately constructed “sandwiches” of two transparencies that were used by the artist as a master to create the editions of work, the original plan to produce a scan which might act as a master was problematic due to the technical challenges associated with attempting to capture the properties of the delicate multilayered object. Explorations of the potential to create a digital master were at the time complicated by questions as to whether a scan of the “sandwich” could possibly capture the effects and successfully replicate the work if it was printed from directly. This dilemma cuts to the heart of how *Corridors* is understood as a photo object: is it a product of a complex process that is engaged with different kinds of processing technologies, or is it a visual effect that can be achieved in a number of interchangeable ways? Is it a unique physical object or a reproducible image?

In retrospect, this idea that a digital file could easily provide the potential to reprint the work at a later date seems naive. It was, however, driven by a desire to develop a strategy in the face of insufficient information about how the works might age over time. There was concern about both the color stability of the work and also the vulnerability of the surfaces.²⁶ Although the materials and processes which produced these works have subsequently become obsolete, there was an enduring belief that they would be replaced by something aesthetically equivalent. Today Yass uses Duratrans instead of Cibachrome and there is an unresolved question central to art conservation practice as to the aesthetic impact of the shift in materials and processes in the construction of her light boxes.

²⁵ *Corridors* is an editioned work. The full set of eight images was sold as an edition of two, (Yass also created an edition of four which only included four of the corridor images) and so it would not have been appropriate for her to provide the “sandwich” as part of the acquisition of the work to Tate.

²⁶ Tests were carried out to scan the “positive and negative sandwich.” However, nothing conclusive was determined about either the light sensitivity of the work or the feasibility of creating a digital scan and successfully printing a replica. Also in 2003, work was carried out on the color monitoring of *Corridors* in an attempt to understand more about their light stability. In 2011, Kate Jennings (now Kate Lewis) carried out additional research to look at the light boxes in more detail in collaboration with the photographic conservator Sylvie Pénichon (Jennings and Pénichon 2011).



Fig. 6: A Kodak camera advertisement published in the first issue of *The Photographic Herald and Amateur Sportsman*, November 1889, Wikimedia Commons.

Obsolescence, precarity, making, and materials

Yass’s interest in exploring different ways to reprint *Corridors* was also indicative of an artist who was experimenting with how her technique might develop once the analogue technologies she had been using were no longer available. At that point in time, the experiments and questions of conservation aligned with those of the artists, both driven by the emerging needs of their different practices.

With a work like *Corridors*, the process and skill involved in its making are largely invisible, both to the museum visitor and to those more intimately engaged with its care and conservation. Popular experiences, since Kodak “did the rest” (see Fig. 6), have distanced many people from knowledge of processing techniques. In terms of meaning making, interpretive work on photographs has tended to concentrate on the final image as an index of a decisive moment or idea. *Corridors* has many layers of technical processing that are difficult to disentangle, even for photographic conservators (see Fig. 7).²⁷

Since *Corridors* was acquired, the processes underpinning the image have become obsolete and although Yass continues to make color display transparency light boxes, she now depends more on digital processing undertaken in the lab than on the handwork that she used to carry out in her studio. Today she relies on different networks of skilled practitioners and materials. The alignment of the positive and negative images is achieved digitally and is

²⁷ Whereas for conservators who are dealing with film- or slide-based works it is necessary to understand and be able to activate a network that can replicate slides or prints, there has not traditionally been any need within the standard display of photographic works to engage on this level. For instance, Joel Snyder has recounted how his exercise in reprinting from the original negatives of the photographer Eugène Atget, using recreated traditional techniques of Albumen printing, was greeted with ambivalence by some within the world of photography connoisseurship, even as his prints (presented as original Atgets) were collected by museums such as the MoMA and the V&A, <http://collections.vam.ac.uk/name/joel-snyder-chicago-albumen-works/A38251/>, accessed August 14, 2018, see also http://www.albumenworks.com/traditional_printing/, accessed January 7, 2018. The comment about ambivalence comes from a personal communication with Joel Snyder, dated November 19, 2016, in which he spoke anecdotally about how much he was criticized for this project.



Fig. 7: Tate Photographic Conservator Laurence Martin and Haidy Geismar discuss *Chaplaincy*, part of the *Corridors* series at Tate's Collection Centre © Tate.

now undertaken at different companies including one in East London that describes itself as a “high-end retouching house” with a website that references fashion studios.

When we visited Catherine in 2015, we discussed the process involved in creating the “sandwiches”:

I think I spent so long dusting between the things because, if you blow them up, you, obviously, just get massive dust in between. Once you've got the dust out and you've laid them down, you're trying to overlay them really carefully, so I used to sit, at that light table, and it would take maybe three hours, and then I'd hold it down, by the tape, come back at it, probably have another three hours at it. I think my eyes had really gone; I used to just spend hours just looking through a magnifying glass. Then you'd find that you had lined it up, and the dust had got in, and you'd have to take it all apart. It was really difficult, but I kind of masochistically enjoyed it, in some way, but I think it's because it demanded such concentration. If you just let slip, for a second, you've lost all of those hours of work, because it's just relying on very fine positioning. I had to cut down—I had to cut the tape into really thin slithers, and had lots of little tabs of it along the table, and then you'd have to lay them down, in such a way that they didn't go into the image. (Catherine Yass, interview with Geismar and Laurenson, May 12, 2015)

In 2015, it became clear that producing the “sandwiches” relied on an extremely intensive process that had been developed by the artist over many years, and also on collaboration with printers who understood both the process and the effects that Yass was trying to achieve:

There was a very amazing man, called Bob Keech. You had to get on the train, go to the countryside, with your negs in your bag. You’d go there for a really intense day of tests, and you had to get it done. (Catherine Yass, interview with Geismar and Laurenson, May 12, 2015)

The degree to which these networks are dependent on industrial processes, despite having a significant artisan quality, mean that it is difficult, if not impossible, to replicate the skills and knowledge embodied in a technique that is no longer ubiquitous. Often the subtle, or not so subtle, differences in properties such as the size and texture of the paper and the dye structure and the opacity of the backing and photochemical sensitivity become important considerations to many artists when considering the future of their artworks as they imagine the life of their work after it has been collected. Interviewing Catherine Yass, specifically about the stages of the process, changed how Laurenson viewed the light boxes, reinforcing their uniqueness as material objects mirrored in the way in which Catherine Yass had created them in one focused moment of making:

I never liked to come back and do reprints, because it was never the same, and I couldn’t afford to do a lot. If I was working in a series, I would just make two editions, one as a series and one set of individuals, so I’d just make two prints then and there. (Catherine Yass, interview with Geismar and Laurenson, May 12, 2015)

This sense of the moment in which the work was finalized supports the foregrounding of these works as unique objects.²⁸ In viewing the works again, examining their very vulnerable matt surfaces which are not covered by glass or perspex when they are displayed, and seeing the areas of scratches and abrasion and viewing the small areas of dust or the eyelash left in the “sandwich” and caught in the printing process also served to reinforce the singularity and uniqueness of these objects.

Those involved in the production of *Corridors* have expressed a strong feeling that as the materials they work with have become obsolete, so too have the associated skills. For example, in a recent interview for this project the ex-print manager from the now closed company which printed *Corridors*, CPL in Edenbridge, remarked: “those skills don’t count for anything now.” The obsolescence of materials is sharply imprinted in people’s understanding of their own practice and knowledge base as also becoming redundant.

Concluding remarks

The ongoing discussions over the conservation of *Corridors* draws our attention to how the understanding of the photo object continually oscillates between the photo as a singular artefact, the photograph as a performative event that manifests itself at a particular moment on

²⁸ As we have seen in the case of Sol Le Witt’s Wall drawings, even with “instruction pieces” where the value of the specific material instantiation is reduced, its value does not evaporate within the biography of the work. As Kirk Pillow and Renée van de Vall have shown, it is possible for a work to share ontological characteristics between the autographic and allographic where different simultaneous or successive executions each provide a unique instantiation of a work (Pillow 2003 and Vall 2015).

a particular media, and the photograph as a realization of the artist's intent. How can we reconcile the questions around the social meaning of an image with the social issues raised by the materials and processes used to construct it? How are these connected? Conservation translates these conversations into a technical challenge—how to protect, preserve, possibly reproduce, and present this photo-object in order to meet the requirements and obligations of the museum. However, in this paper, we argue that this technical challenge is also epistemological—the work of conserving and preserving requires a definition of the object that includes knowledge and expertise about the technical and other processes of making but also understands this in relation to the wider context of the museum and the artist's practice. Our focus on materials and making has expanded our understanding of the technical processes of photography in terms of both knowledge and skill and their entanglement with the broader processes of obsolescence and social change. This potentially extends the remit of conservation into much broader networks and social worlds.

All of this highlights that photographic processing should not be seen as a mere technical issue, not necessarily completely separate from art historical and anthropological understandings of photography. As quoted on the Tate's website, Yass provides the following explanation of the *Corridors* series: "The negative image makes bright areas blue, so bright or transparent areas get blocked by the blue. The final picture is produced by overlaying the positive and blue negative images and printing from that. I think of the space between positive and negative images as a gap." (Quoted in Manchester 2002 from Yass et al. 2000, 81) Yass has described this gap as "an empty space left for the viewer to fall into [resulting in] no limit to prevent the viewer from being pulled right in and being pushed out again" (Quoted in Manchester 2002 from Yass et al. 2000, 84). This empty space is more than just a visual or surface image, it is an effect produced by the technical work of layering and printing from layers of transparency, or as Yass describes it "if the subject or the camera moved between the two exposures, there will be a little gap where both positive and negative failed to register, so it is a temporal gap between the exposures. For me it is where something escaped the all-seeing camera."²⁹ It is this sense of emptiness, and this picture of empty space that creates the meaning of the image—the empty gaps within institutional spaces (here corridors) that serve as a backdrop for the people who inhabit these spaces, and directly contribute to the production of meaning and context for the image. There is an uncanny alignment between the site and the process that work together to produce meaning and resonance in this image.

Understanding *Corridors* in technical, material and social terms requires an expanded practice of conservation that recognizes that photographic processes are linked to particular moments in time and are embedded within particular networks of skill and expertise. This view unravels our conventional definition of the photo object. The moment of creation was recounted as a moment at the intersection of viability (understood as the technical and commercial constraints in which those producing the work were operating) and the ambition or persistence of the vision of the artist.³⁰ From the artist's retelling of the making of *Corridors*, it became clear that it is now impossible to technically reproduce the event of

²⁹ Yass, personal communication dated May 29, 2017. Yass also recounts how she was told that another reason for the gap is that the negative C41 process temperature is marginally higher than the positive E6 process. This very slightly shrinks the film.

³⁰ We would like to acknowledge the input of Professor Harro van Lente of Maastricht University in the development of this point.



Figure 8: *Corridors (Ash)*, Catherine Yass, 1994, (T07069), Tate © Catherine Yass.



Figure 9: *Corridors (Modern Team Base)*, Catherine Yass, 1994, (T07070), Tate © Catherine Yass.

printing *Corridors*. At the same time, utilizing other techniques, such as scanning and digital processing, we may still be able to recreate the image. There is however more than one kind of politics to this—in prioritizing the image as an index of the artist’s intention, digital scanning and printing can efface the labor and expertise that went before it in the form of earlier processing techniques. If we do not unpack the studio work and labor that goes into digital processing, we run the risk of conservation practice deliberately maintaining a separation between the work and the conditions of its production—and we believe that there are implications for how images then go on to be interpreted and understood when they are put on display. We argue here that this context, in the case of this image, is important in coproducing the meaning of the photograph. There are two kinds of indexicality at play here in making this image—the indexicality of the hospital, and its infrastructure of care, and the indexicality of the materials and the care and skills that these require.

Understanding how *Corridors* was originally produced from the vantage point of conservation can lead us to an ethical epistemology as well as to the capacity for re-creation. This ethics need not unravel the value system in the museum; it is the labor associated with the creation of the “sandwiches,” and the printing of the work that substantiates the work as a performative event, and reinforces the singularity of the authentic artwork, made at this moment and at this time.

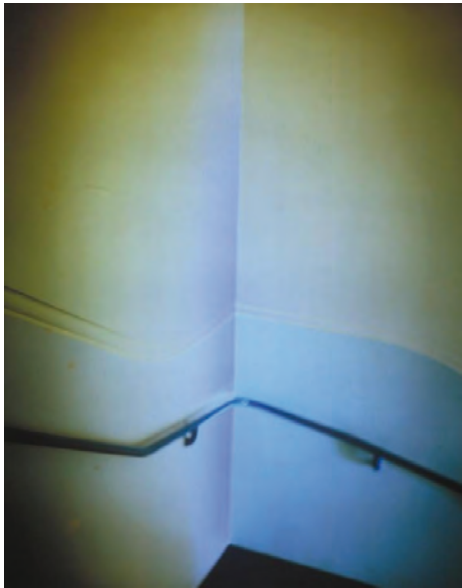


Figure 10: *Corridors (Personnel)*, Catherine Yass, 1994, (T07071), Tate © Catherine Yass.

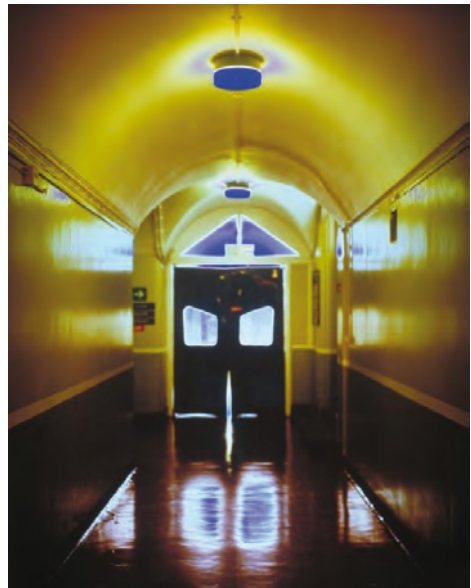


Figure 11: *Corridors (Jubilee)*, Catherine Yass, 1994, (T07072), Tate © Catherine Yass.

List of Figures

- Fig. 1: Corridors (Chaplaincy)*, Catherine Yass, 1994, Cibachrome transparency on a light box, 890 x 725 x 140 mm, Tate, T07065 © Catherine Yass.
- Fig. 2: Corridors (Kitchen)*, Catherine Yass, 1994, Cibachrome transparency on a light box, 890 x 725 x 140 mm, Tate, T07066 © Catherine Yass.
- Fig. 3: Corridors (Daffodil 1)*, Catherine Yass, 1994, Cibachrome transparency on a light box, 890 x 725 x 140 mm, Tate, T07067 © Catherine Yass.
- Fig. 4: Corridors (Daffodil 2)*, Catherine Yass, 1994, Cibachrome transparency on a light box, 890 x 725 x 140 mm, Tate, T07068 © Catherine Yass.
- Fig. 5:* The “sandwich” of two layers of transparency used in the production of *Daffodil 2*, photograph taken in Catherine Yass’s studio, Pip Laurenson, April 25, 2017, digital image, Tate © Tate.
- Fig. 6:* A Kodak camera advertisement published in the first issue of *The Photographic Herald and Amateur Sportsman*, November 1889, unknown artist. Wikimedia Commons.
- Fig. 7:* Tate Photographic Conservator Laurence Martin and Haidy Geismar discuss Chaplaincy, part of the *Corridors* series at Tate’s Collection Centre, Pip Laurenson, November 8, 2016, digital image, Tate © Tate.

Fig. 8: Corridors (Ash), Catherine Yass, 1994, Cibachrome transparency on a light box, 890 x 725 x 140 mm, Tate, T07069 © Catherine Yass.

Fig. 9: Corridors (Modern Team Base), Catherine Yass, 1994, Cibachrome transparency on a light box, 890 x 725 x 140 mm, Tate, T07070 © Catherine Yass.

Fig. 10: Corridors (Personnel), Catherine Yass, 1994, Cibachrome transparency on a light box, 890 x 725 x 140 mm, Tate, T07071 © Catherine Yass.

Fig. 11: Corridors (Jubilee), Catherine Yass, 1994, Cibachrome transparency on a light box, 890 x 725 x 140 mm, Tate, T07072 © Catherine Yass.

References

- Ackerman, J. Luca, Peter Mustardo, Hanako Murata, and Tatiana Cole (2016). Cindy Sherman: A Play of Selves. A Collaborative Approach to Conservation. *Studies in Conservation* 61(sup2):1–6.
- Adams, Parveen and Greg Hilty (2000). *Catherine Yass: Works, 1994–2000*. London: Asprey Jacques.
- Appadurai, Arjun, ed. (1986). *The Social Life of Things: Commodities in Cultural Perspective*. Cambridge, UK: Cambridge University Press.
- Bennett, Jane (2010). *Vibrant Matter: A Political Ecology of Things*. Durham: Duke University Press.
- Brown, Bill (2001). Thing Theory. *Critical Inquiry* 28(1):1–22.
- Buskirk, Martha (2003). *The Contingent Object of Contemporary Art*. Cambridge, MA: MIT Press.
- Clark, Robin and Michelle Barger (2016). The Artist Initiative at San Francisco Museum of Modern Art. *Studies in Conservation* 61(sup2):24–28.
- Coupaye (December 2009). Ways of Enchanting: Chaînes Opératoires and Yam Cultivation in Nyamikum Village, Maprik, Papua New Guinea. *Journal of Material Culture* 14(4):433–58.
- Currie, Christina and Dominique Allart (2012). Pieter Brueghel as a Copyist After Pieter Bruegel. In: *European Paintings 15th–18th Century: Copying, Replicating and Emulating: CATS Proceedings 1, 2012*. Ed. by Erma Hermens. London: Archetype Publications Ltd., 1–11.
- Drazin, Adam (2015a). Preface: Materials Transformations. In: *The Social Life of Materials: Studies in Materials and Society*. Ed. by Adam Drazin and Susanne Küchler. London: Bloomsbury Publishing.
- (2015b). To Live in a Materials World. In: *The Social Life of Materials: Studies in Materials and Society*. Ed. by Adam Drazin and Susanne Küchler. London: Bloomsbury Publishing.
- Drazin, Adam and Susanne Küchler, eds. (2015). *The Social Life of Materials: Studies in Materials and Society*. London: Bloomsbury Publishing.
- Dubois, Hélène (2009). The Master's Own Hand? Contribution to the Study of Rubens' Retouching of Monumental Formats. In: *Sources and Serendipity: Testimonies of Artists' Practice: Proceedings of the Third Symposium of the Art Technological Source Research Working Group*. Ed. by Erma Hermens and Joyce H. Townsend. London: Archetype Publications Ltd.
- Edwards, Elizabeth (2001). *Raw Histories: Photographs, Anthropology and Museums*. Oxford and New York: Berg.
- (2012). *The Camera as Historian: Amateur Photographers and Historical Imagination, 1885–1918 (Objects/Histories)*. Durham, NC: Duke University Press.
- Edwards, Elizabeth and Janice Hart, eds. (2004). *Photographs Objects Histories: On the Materiality of Images*. London: Routledge.
- Fiske, T. L. (2009). White Walls: Installations, Iteration and Difference. In: *Conservation: Principles, Dilemmas and Uncomfortable Truths*. Ed. by Alison Richmond, Alison Lee Bracker, and Victoria & Albert Museum. 1st Edition. Amsterdam / Boston / London: Elsevier/ Butterworth-Heinemann in association with the Victoria & Albert Museum, 229–240.
- Gale, Matthew, Susan Lake, Tom Learner, Jeffrey Levin, and Jill Sterrett (2009). Competing Commitments: A Discussion about Ethical Dilemmas in the Conservation of Modern and Contemporary Art. *Conservation Perspectives, The GCI Newsletter*.
- Geismar, Haidy (2006). Malakula: A Photographic Collection. *Comparative Studies in Society and History* 48(3): 520–563.

- (2015). The Art of Anthropology: Questioning Contemporary Art in Ethnographic Display. In: *The International Handbooks of Museum Studies: Museum Theory*. Ed. by Sharon Macdonald, Helen Rees Leahy, Kylie Message, and Andrea Witcomb. DOI: 10.1002/9781118829059.wbihms110. Oxford: John Wiley & Sons, Ltd, 183–210. URL: <https://doi.wiley.com/10.1002/9781118829059.wbihms110>, accessed July 5, 2017.
- Gell, Alfred (1998). *Art and Agency. An Anthropological Theory*. Oxford: Clarendon Press.
- Goodman, Nelson (1968). *Languages of Art: An Approach to a Theory of Symbols*. Indianapolis: Bobbs-Merrill.
- Henare, Amiria J. M., Martin Holbraad, and Sari Wastell, eds. (2007). *Thinking Through Things: Theorising Artefacts Ethnographically*. London: Routledge/Taylor & Francis Group.
- Hicks, Dan (2010). The Material-Cultural Turn: Event and Effect. In: *The Oxford Handbook of Material Culture Studies*. Ed. by Dan Hicks and Mary C. Beaudry. Oxford: Oxford University Press, 25–98.
- Ingold, Tim (2007). Materials against Materiality. *Archaeological Dialogues* 14:1–16.
- (2013). *Making: Anthropology, Archaeology, Art and Architecture*. New York: Routledge.
- Jennings, Kate and Sylvie Pénichon (2011). Preliminary Investigation into the Preservation of Backlit Works of Art. *Topics in Photographic Preservation*. URL: http://resources.conservation-us.org/pmgtopics/2011-volume-fourteen/14-23_Jennings&Penichon.html, accessed August 17, 2019.
- Kennedy, Nora W, Meredith Reiss, and Katherine Sanderson (2016). The Future is Not What it Used to Be: Changing Views on Contemporary Color Photography. *Studies in Conservation* 61(sup2):91–97.
- Krauss, Rosalind E. (1986). *The Originality of the Avant-Garde and Other Modernist Myths*. Cambridge, MA: MIT Press.
- Latour, Bruno (1996). On Actor-Network Theory: A Few Clarifications. *Soziale Welt* 47:369–381. URL: <http://www.bruno-latour.fr/sites/default/files/P-67%20ACTOR-NETWORK.pdf>, accessed March 17, 2017.
- Laurenson, Pip (2006). Authenticity, Change and Loss in the Conservation of Time-Based Media Installations. *Tate Papers* 6 (Autumn 2006). URL: <http://www.tate.org.uk/download/file/fid/7401>, accessed March 17, 2017.
- (2009). Vulnerabilities and Contingencies in the Conservation of Time-based Media Works of Art. In: *Film and Video Art*. Ed. by Stuart Comer. London: Tate, 35–42.
- Liboiron, M. (2016). Redefining Pollution and Action: The Matter of Plastics. *Journal of Material Culture* 21(1): 87–110. ISSN: 1359-1835, 1460-3586. DOI: 10.1177/1359183515622966. URL: <https://doi.org/10.1177/1359183515622966>, accessed July 5, 2017.
- Manchester, Elizabeth (2002). Summary Text for Catherine Yass, Corridors, 1994. *Tate Online*. URL: <https://www.tate.org.uk/art/artworks/yass-corridors-t07069>, accessed August 17, 2019.
- Marchesi, Monica (2014). Conservation of Photographic Artwork by John Baldessari: Two Strategies—Reproduction and Framing. In: *ICOM - CC 17th Triennial Conference Preprints*. Ed. by J. Brigland. Paris International Council of Museum.
- Miller, Daniel (1986). *Material Culture and Mass Consumption*. Oxford: Blackwell Publishing.
- Pénichon, Sylvie (2013). *Twentieth-Century Color Photographs: Identification and Care*. Los Angeles, CA: Getty Conservation Institute.
- Pillow, Kirk (2003). Did Goodman’s Distinction Survive LeWitt? *The Journal of Aesthetics and Art Criticism* 61(4): 365–380. URL: <https://www.jstor.org/stable/1559071>, accessed March 17, 2017.
- Pinney, Christopher (1997). *Camera Indica: The Social Life of Indian Photographs*. London: Reaktion Books.
- Poole, Deborah (1997). *Vision, Race and Modernity: A Visual Economy of the Andean Image World*. Princeton, NJ: Princeton University Press.
- Shapiro, Nicholas (2015). Attuning to the Chemosphere: Domestic Formaldehyde, Bodily Reasoning, and the Chemical Sublime. *Cultural Anthropology* 30(3):368–393. ISSN: 08867356, 15481360. DOI: 10.14506/ca30.3.02. URL: <https://www.culanth.org/articles/781-attuning-to-the-chemosphere-domestic>, accessed July 5, 2017.
- Stigter, Sanneke (2016). Through the Conservator’s Lens: From Analogue Photowork to Digital Printout. In: *Authenticity in Transition: Changing Practices in Contemporary Art Making and Conservation: Proceedings of the International Conference Held at the University of Glasgow, 1–2 December 2014*. Ed. by Erma Hermens and Frances Robertson. London: Archetype Publications.
- Strassler, Karen (2010). *Refracted Visions: Popular Photography and National Modernity in Java*. Objects/Histories: Critical Perspectives on Art, Material Culture, and Representation. Durham: Duke University Press.
- Vall, Renée van de (2015). The Devil and the Details: The Ontology of Contemporary Art in Conservation Theory and Practice. *British Journal of Aesthetics* 55(3):285–302.

- Vall, Renée van de, Hanna Hölling, Tatja Scholte, and Sanneke Stigter (2011). Reflections on a Biographical Approach to Contemporary Art Conservation. In: *ICOM-CC 16th Triennial Conference, Lisbon*. Ed. by J. Bridgland. Critério. URL: <https://hdl.handle.net/11245/1.344546>, accessed August 17, 2019.
- Wharton, Glenn (2007). The Conservation of Contemporary Art. In: *Collecting the New: Museums and Contemporary Art*. Ed. by Bruce Altshuler. Princeton: Princeton University Press, 164–178.
- (2015). Artist Intention and the Conservation of Contemporary Art. *Objects Specialty Group Postprints* 22:1–12.
- Wright, Christopher (2004). Material and Memory: Photography in the Western Solomon Islands. *Journal of Material Culture* 9(1):73–85.
- Yass, Catherine, Parveen Adams, Greg Hilty, and Asprey Jacques (2000). *Catherine Yass: Works, 1994–2000*. London: Asprey Jacques.

Chapter 11

Digital Cows: Flesh and Code

Christopher Pinney

Grounded and airborne materialities

I recently encountered a highly material photograph in Mumbai's Chor Bazaar, also known as the "thieves' bazaar," India's main flea market. It was a New Year's greeting card from the photographic company of Bourne and Shepherd dating from 1973, a reproduction of an image taken by the English photographer and co-founder of the firm, Samuel Bourne, in Calcutta in the 1860s (see Fig. 1). The edges of the card are burnt, the index I assume of the catastrophic fire on February 6, 1991 that destroyed Bourne and Shepherd's Calcutta premises in Chowringhee. It perfectly embodies the complexity of what Roland Barthes termed "the anterior future" (Barthes 1982, 96)¹ and the complex layering of time and events. The 1860s are reproduced in 1973 and then further indexically seared by the events of 1991, which have left such a powerful trace.



Fig. 1: New Year's greeting image by Bourne and Shepherd. Dated 1973, it reproduces an image taken by Samuel Bourne in the 1860s and bears signs of the fire that destroyed the studio in 1991, collection: Christopher Pinney.

¹ Barthes makes this comment in the context of his discussion of Alexander Gardner's photograph of the assassin Lewis Payne taken shortly before his execution. Barthes memorably captions this "He is dead and he is going to die..." (Barthes 1982, 95).

William Dalrymple has recently provided what may be a fanciful account describing how on the morning of the fire

the people of Calcutta awoke to find their streets carpeted with singed Victorian prints: Maharajas with bird's-nest beards were lying in the gutters... Viceroy's in white ties fluttered across the Maidan... and were washed down into the Bay of Bengal. (Dalrymple 2014, 9)

I do not know what the precise trajectory of this image was, or whether it fluttered over Calcutta. I suspect it was preserved because it was in the middle of a wad of similar images, bundled away and forgotten and that, consequently, the flames of the fire were only able to lick at the external surfaces of this brick of images. In any event, this survivor dramatizes two different materialities: a conventional spatial one, a “strange confined space” that draws attention to the effects of fire at the edges of the photographic “frame” (to pervert Bazin) and a quite different material trajectory (a space of flow) in which the image commences a journey across the city borne by the heat of the conflagration. Two narratives are on offer: one stressing the earth-bound fate of the image, the other stressing its weightlessness. Both are equally material.



Fig. 2: A mother displays photographs of her deceased son and husband for rephotography, Central India, 2017, photo: Christopher Pinney.

Central India, 19 January 2017: as frequently happens, villagers proffer images of past events or deceased relatives for rephotography. A Bagdi widow offers photos of her husband and son, both deceased and preserved only in the weightless form of passport photos (see Fig. 2). She wants something much bigger: laminated and highly colored. Govardhanlal Babulal (whose father I was very close to) produces an image of himself and his wife seated before the main Chamunda Ma image at a shrine by the River Chambal in Nagda. It is perhaps twenty years old and is framed in a rusted tin frame with a glass front (see Fig. 3). In shape, size, and weight, it is remarkably like a tablet—for instance, a larger Samsung of the kind that is popular with richer townspeople—and Govardhanlal holds it up to my camera clasped in the same way that the day before Pratik Punjabi, the son of a leading local photographer, had held a tablet for me to view an opulent “pre-wedding shoot” made at an upscale resort on the banks of the River Narmada.



Fig. 3: Govardhanlal displays an image of himself and his wife at a local Chamunda goddess shrine. The photograph is preserved under glass in a rusted tin frame. It has the uncanny appearance of a digital tablet, photo: Christopher Pinney.

Twenty-first century cow protection

Being forewarned of the heightened emotions around the current cow protection agitation, on recent India trips, I was eager to find out how this war of images was being represented. Cow protection has been an intermittent part of the Indian political landscape since the 1890s when it was mobilized by higher-caste Hindus against Muslims and also lower-caste, beef-eating Hindus (Pinney 2004, 105–144). When I arrived in central India in mid-October 2015, I asked Bheru, a railway station coolie, whether he had seen any new cow protection imagery. He told me he had just received a WhatsApp video that purported to show two cows being slaughtered outside a mosque in Pakistan. We went to my lodging house and I photographed the video as Behru held his phone up for me (see Fig. 4).

I had just read about the consequences of the circulation of imagery like this. In late September 2015, in the village of Bisahra, not far from Delhi, a furious mob of 1,000 high-caste Hindus surged down a tiny alleyway towards the home of Mohammad Akhlaq. They believed that he had slaughtered and eaten a cow, so they killed him as a punishment. His body was dumped next to the cow's entrails (*India Today*, 9 October, 2015).

This killing was one symptom of a resurgence of anti-cow slaughter sentiment surrounding the Indian government's determination of the illegality of beef consumption (a judgement that has recently been defeated in the Supreme Court). The "ideal" of abstention and cow protection becomes the defense for participating in violence against beefeaters, and



Fig. 4: Bheru Parmar displays a video distributed on WhatsApp. It purports to show a cow being slaughtered outside a mosque in Pakistan, photo: Christopher Pinney.

the “protection” of the Cow Mother (*gai mata* or *gau mata*) becomes the rationale for the destruction of those who refuse to participate in this ideological project.

Later, a Jain friend would share an image circulated on WhatsApp of a three-headed calf (see Fig. 5), evidence of divine resistance. I also made a point of collecting cow-related commercially produced images and sensed a ratcheting up of what might be termed “cow erotics,” including images in which milk appears as a kind of semen. This theme in commercial chromolithography, presenting two-dimensional images, builds upon folk practices in which the generative potential of *khir* (a milk-based rice dish) is mixed into cow dung during the annual Gowardhan Puja in highly sensory and material practices.

Political economy of beef

Some knowledge about the local political economy and the material infrastructure of beef cattle farming is required to understand the bovine focus of a paper on the materiality of photographic objects. This will help open up the central paradox at the heart of my discussion: how airborne images energize and ideologically mystify ideas about an ineluctably corporeal and material presence. What Indians think about cows has at some point to confront the facts about cow flesh and bodies.

In the central Indian village that I am familiar with, there are about 150 cows but only 15 to 20 bulls. The number of bulls has rapidly declined with the increased use of tractors and harvesters. There are many more buffaloes, probably in the region of 1,000. Buffaloes produce considerably greater yields of milk, which is much prized for its richness, flavor, and higher monetary value.

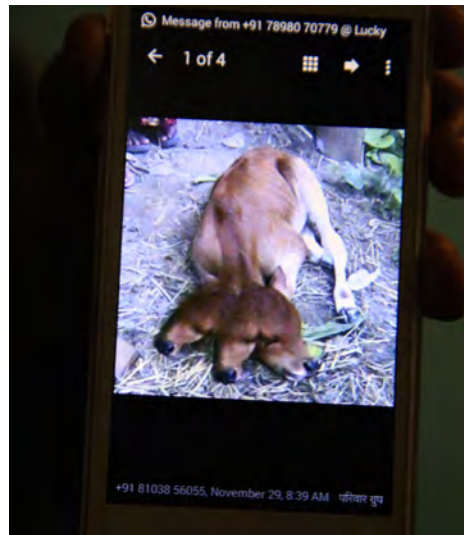


Fig. 5: An image of a three-headed calf distributed on a WhatsApp family group. “Sacred” images like this complement the “profane” images of cow slaughter such as that in Fig. 4.

Bulls are castrated to increase their strength and make them easier to control. However, most villages keep one sacred bull (a *sant*) that is not castrated and is allowed to roam freely in the jungle, returning to the village for food as it pleases. These *bellrajas* (king bulls) are frequently intimidating presences, revered and feared in equal measure. Many villages also maintain an even more sacred *surya gai* (sun cow) which, as we shall see later, has a surprising connection with photography.

Female cattle are obviously prized as providers of milk. Male cattle immediately pose a problem, particularly now that they are rarely required as draught animals. Most villagers used to sell them on to traders and part of the public secret was not enquiring about their ultimate fate. Orthodox religious villagers may well convince themselves that they will all end up in *gaushalas* or cow sanctuaries. Often different accounts of the world inhabit surprisingly intimate spaces. My notebooks record a conversation with a villager, a Jain friend of mine, and his son in which the father describes how he will shortly dispatch an uncastrated bull to roam the streets of the nearby town. The son then tells me that most of them end up in the butcher’s shop. Hearing this, the father disagrees, claiming that they either live happily in the town, or are given shelter in a *gaushala*. This conversation prompted a visit to the nearest *gaushala*, one housing 200 cows in the neighboring village of Bhilsuda. The parlous state of many of the animals revealed the difficulties of maintaining such a large herd on the charity of a few.

The public secret is illuminated by three vignettes collected over the course of two days in late November 2016. First, Jagdish Sharma, the priest of the Krishna temple, who did not really want to speak about the issue but when I pressed him about what happened to all those old cows and male calves that are sold in the bazaar (as opposed to those that are ritually married, which he preferred to dwell on), point-blank refused to contemplate that



Fig. 6: A *bel raja* or “bull king”: uncastrated bulls like this are given a utopian freedom from human constraint, and are both revered and feared when they visit the village, Central India, 2016, photo: Christopher Pinney.

any cattle sold locally (or within India as a whole) could be sold to a butcher’s shop because that is *rakshash kam* (devilish work) and not something Indians do. That only happens in other countries. Second, there was an educated friend, trained in medicine, who finds himself surrounded by practices he struggles not to label as “irrational.” He was keen to direct attention to the 85 percent of the male cattle that, in his opinion, were tacitly sent to be butchered: this was the “public secret” that the “king bull” occluded, almost as though his massive form could throw—at the very moment it was worshipped—a massive shadow over all the other less fortunate male cattle (see Fig. 6). Finally, there was my friend in the town who supported the Bharatiya Janata Party (BJP) and expressed surprise at the information I bombarded him with. But what do *kisan* (working peasants) imagine, he asked, when they sell their old cow or young male calf and are offered 3,000 rupees (40 euros). Where do they think they are going?

Deshi (local) female cattle normally live 20 to 22 years. They can get pregnant after their third year and, consequently, can provide milk (usually for eight to 12 months) from their fourth year. Post-reproductive cows cease to produce milk (generally from age 15 onwards) and then have to be maintained at a cost or released. Banjaras, a powerful Scheduled Tribe community within the village, perform regular biannual marriages between old cows and male calves. They circumambulate the *phera* (the marriage fire at the heart of the rite) outside the Ram temple before being set free to roam the jungle or (more likely) the nearby town. Although there is still one member of the Chamar caste (a caste whose traditional work was leather tanning) in the village who will remove dead cattle, take them to the jungle, and skin them for 500 rupees, Banjaras bury their dead cows and bulls after processing their corpses around the village. They worship these graves several times a year.

Cow tails and photography

It is married cows, those wed in front of the Ram temple, who ultimately become *surya gai*, the liberated sun cows whose tails are the preferred material used to make whisks known as *chanvar*. These first caught my attention when reading M. N. Srinivas' classic *Remembered Village* (about South India) in which he records that he, an enthusiastic photographer, was called Chamara man by the villagers. *Chamara* is the Kannada term for these whisks.

Chamara whisks (called *chanvar* in Hindi and *pichhi* in Malwi) feature in printed images of deities (for instance, of the renouncer king Ramdevji's devotees) and serve not only as devices for conferring value and signaling devotion but, when deployed in pairs, are often a means of establishing frontality and symmetry, which are key elements in local photographic aesthetics. Jains dance with whisks in temple festivals, temples often display them by the deity's throne, and village shamans use peacock whisks to confer protective and curative blessings. The cameraman as *chamaraman* directs our attention to the expectation in rural India that photography, contrary to the view of Walter Benjamin, is usually seen as a mechanism for preserving and consolidating aura, rather than destroying it.

Photography as conceptualized by these villagers involves something very different from the contingency that Benjamin theorized, the exorbitant flow of information that made the optical unconscious possible. Benjamin's approach to photography valorizes practitioners such as Rodchenko and Blossfeldt. He celebrates photography's "optical unconscious," its Bazin screen—its disruptive cut-offness, its surrealistic potential to create new revolutionary alignments, and film's ability to slow things down and speed things up so as to destabilize the familiar reality to which ordinary human vision binds us. These are all aspects of the threat that the Benjaminian camera poses to traditional "cultic" and "auratic" hierarchy.

In village practice, frontality, formality, and re-framing, through which respect is shown to the image, are dominant aspects of local photographic practice. The camera is grasped as something with the potential to present divine and political power in their most potent and perfected form (sanctified, auratic, symmetrical, and, if possible, devoid of contingency).

In central India, I observed the visit of a Jain guru, Lokendra, to the village where I was staying. I found myself photographing Guru Lokendra's *chanvar*—his silver handled whisks, which should ideally, in this part of India, be made with hair from the tail of a *surya gai*, that is, a "sun cow" or free cow that lives in the forest (see Fig. 7). While not exactly "cameras," *chanvar* are devices for looking and beholding. They might be seen as constituent elements of that very re-auraticizing "frame" that Bazin had argued was destroyed by photography's "screen." From the perspective of Bazin or Benjamin, they might be best viewed as "anti-cameras," technologies of representation caught up in an antagonistic relationship to photography.

Cows and photography

As I have indicated, cattle are materially very complex, both in life and death. They also have an intimate relationship to the camera. Throughout my association with the village, from the early 1980s onward, I have frequently been asked to photograph villagers with bulls, well-loved cows, and to document various rituals involving cattle such as at Akhatej and Gowardhan Puja, occasions when the material dependency on cattle is wonderfully



Fig. 7: A Jain renouncer's *chanvar* or whisks. Made from the tails of ritually liberated cattle, they are best thought of as a “framing device,” a means of bestowing value and symmetry, photo: Christopher Pinney.

performatively evoked. In Gowardhan Puja, after Diwali, animals are decorated and worshipped before trampling through elaborate opulent cow dung images of Radha and Krishna which female villagers sculpt with noticeably sensuous care.

This local materiality is mirrored by a large amount of regional and national cow archiving. Pinjrapoles—earlier *gaushalas*—often issued beautiful receipts as material proof of donations, and the various cow protection agitations produced highly significant images that continue to resonate in India's visual culture. These donations have more merit, the more they are secret and immaterial: the existence of such elaborate receipts points to the intimacy of the material and immaterial with which I am concerned.

Cows were also always the subject of local photographic activity: one framed image (also perhaps significantly owned by a Banjara) records a magical bull from Aslod, c. 1980, who refused to be taken to slaughter, speaking out to his owner (Pinney 1997, 164–166). In 2014, a cow called Ganga, owned by a Chamar family, produced twins. At least in this part of India, it was almost unheard of for a cow to give birth to more than one calf at once, until, that is, Ganga managed this. (Inexplicably, it has since happened once again in the same village, causing something of a sensation.) Word spread quickly in the village and numerous villagers came with their mobiles to photograph this *aschary* event. Mobiles clicked away at this true wonder and stored the evidence so that they could confound any future visitor who, for perfectly good reasons, might doubt the truth of such an unlikely story (see Fig. 8).

Ganga's wondrous production provided a stage for the fusion of the empirical event with digital image platforms, perhaps helping establish a local space in which other miraculous, and also outrageous, images could convincingly circulate. Both miraculous and outrageous images quickly followed: multi-headed calves on Facebook and endless videos of cow slaughter, usually implicating Muslims, via WhatsApp and Youtube. Frequently, these take



Fig. 8: A villager displays an image, captured on a mobile phone, of Ganga's miraculous twins, born in 2014, photo: Christopher Pinney.

promotional videos from Halal abattoirs and overlay them with religious songs or sermons on the necessity of cow protection.

We might invoke the two materialities and spatialities of the burnt Bourne and Shepherd image mentioned earlier to start to conceptualize the practices described above. The first of these is constrained by the “strange, confined space” of the photograph, to appropriate Mary Price’s slogan (Price 1997). The second opens up an image trajectory characterized by amplification and plenitude. Both these approaches might benefit from Gomez Cruz and Meyer’s suggestion that we “understand photography not as representation, technology or object, but as the agency that takes place when a set of technologies, meanings, uses, and practices align” (Cruz and Meyer 2012, 204).

I began a book called *Coming of Photography in India* with a recreation of a photographic event in which a petty Raja’s henchmen’s swords threaten damage to the cramped confines of a traveling studio. The cabinet card’s material presence replicated the space of the studio and allowed the earlier *mise-en-scène* to be reactivated (Pinney 2008, 1). But what are the “sword effects” of Facebook and WhatsApp in the post-Newtonian space of new media? How does the rapidly multiplying epidemic imagery of new media make itself felt in the world?

Cows upside-down

Gomez Cruz and Meyer note that “giving away a photograph is no longer a subtractive process but an additive one” (Cruz and Meyer 2012, 213). “Sharing” as “flow” hence entails amplification: WhatsApp and Youtube serve as broadcast channels whose “width” contrasts with that of the “strange, confined space” of the analogue photograph. Is this another version of Benjamin’s transition from the cultic to the exhibitional, or is there more at stake?

The additive (rather than subtractive) dimension of social networking has been theorized by Rubenstein and Sluis as a sensual plenitude that they term “pornographic”:

Proliferation and abundance create a pornographic effect whether in the context of the App Store, Facebook timeline or Twitter stream. For that reason it becomes misleading to talk about the photographic “frame” or the singular image for the image is everywhere at once, accessible from any point in the network establishing a regime of intoxication and plenitude through its rapid multiplication and profusion. (Rubenstein and Sluis 2013, 30)

Not a “frame” or a “confined space” but a rolling frontier of superabundance.

Gau suraksha (cow protection) has “representational” effects in the non-virtual world (as Mohammad Akhlaq and many others have learned to their cost) just as conventional critical theory would lead us to believe; but, in this case, (as with Liebig, see below) there is a prismatic ideological inversion (i.e., an inversion through which the apparent weightlessness of information distorts the tonnage of the real). As Marx and Engels wrote in *The German Ideology*:

If in all ideology men and their circumstances appear upside-down as in a *camera obscura* [...this is an organic process in class society which ...] arises just as much from...historical life-process as the inversion of objects on the retina does from...physical life-process. (Marx and Engels 1977, 164)

What Descartes observed of the retinal image, and what Marx and Engels observed of ideology, and Levi-Strauss of myth, I am suggesting is true of digital cows in distress. Digital weightlessness permits the implementation of what in the (inverted) material world is a highly damaging course of action.

Indeed, the costs of digital cows are rather like the price of the digital itself: no longer calculated as a cost per image as in the days of film reels but *phantasmatically* free, the actual costs offshored in server energy consumption and the consequences for the environment.

The weightlessness of information is commonly taken as affirmation of (as Doane characterizes it) the digital conceptualized as “the endpoint of dematerialization” (cited in Seppänen 2017, 115). But as Seppänen puts it, in what I think is a significant and important argument, “in terms of materiality” digitization is, to say the least, “an ambiguous process” (Seppänen 2017, 115). In the case of the NASA images transmitted from Mars, discussed by Seppänen, they possess “no sensible qualities like size, colour, weight, or spatiality. Therefore, the materiality of the photograph could be reduced to questions about the materiality of electromagnetic radiation” (Seppänen 2017, 115).

The digital, Seppänen observes, involves a break from the continuous signal of the analogue to the binary discontinuous code of the digital but, nevertheless, both signals are physical phenomena, inviting no clear distinction between materiality and immateriality (Seppänen 2017, 115). The digital, Seppänen rightly argues, is “material to the core” (Seppänen 2017, 117).

While working on this paper, I also completed a short discussion of the global Orientalist iconography used to advertise Liebig’s flesh extract from the 1860s onward (Pinney 2017). I had no idea these might describe perfectly (doubly) inverse trajectories. Liebig’s aesthetic (produced to market industrially rendered flesh) is seared by the archaic, the colorful, and the mysterious. Everything in the Liebig imagination is intense, excessive, and

heightened. All of this serves to locate the images promulgated by the company as situated, or embedded, in very particular times and places. This embeddedness perfectly suited the needs of a transnational company trading in meat. The company's product was a paste made from cattle, a dematerialized transformation of living meat into a molasses-like spread sold in clinical white glass bottles produced by a company spanning half the world. This "extract," the product of enormously extended supply chains, was the very model of deterritorialized fluidity and dematerialized convertibility, something curiously akin to the rolling digital frontier of WhatsApp. Liebig's aesthetic made possible an embedding through exoticization. It anchored a global commodity (placeless and formless) in a world of hyper-place and hyper-time, positioning it in a non-fluid—essentially static—world of ultra-traditional and heavily material identities.

Liebig's upside-down ideology transformed beef extract into hyper-materialized Arcadian landscapes. The upside-down ideology of contemporary digital cow protection turns the material costs of aging non-productive cattle into a seemingly weightless moral choice. This weightless superabundance feeds an impossibly non-material vision of the moral benefits of cow protection, one that violently feeds into and disturbs the complicated and pragmatic ground where actual cattle live.

Acknowledgment

The research for this paper was supported by the ERC Advanced Grant 695283, "Photodemos: Citizens of Photography/ The Camera and the Political Imagination."

List of Figures

Fig. 1: New Year's greeting image by Bourne and Shepherd, dated 1973, collection: Christopher Pinney.

Fig. 2: A mother displays photographs of her deceased son and husband for rephotography, Central India, 2017, photo: Christopher Pinney.

Fig. 3: Govardhanlal displays an image of himself and his wife at a local Chamunda goddess shrine, photo: Christopher Pinney.

Fig. 4: Bheru Parmar displays a video distributed on WhatsApp, photo: Christopher Pinney.

Fig. 5: An image of a three-headed calf distributed on a WhatsApp family group.

Fig. 6: A *bel raja* or "bull king." Central India, 2016, photo: Christopher Pinney.

Fig. 7: A Jain renouncer's *chanvar* or whisks, photo: Christopher Pinney.

Fig. 8: A villager displays an image of Ganga's miraculous twins, born in 2014, photo: Christopher Pinney.

References

- Barthes, Roland (1982). *Camera Lucida: Reflections on Photography*. Trans. by Richard Howard. New York: Hill and Wang.
- Cruz, Edgar Gómez and Eric T. Meyer (2012). Creation and Control in the Photographic Process: iPhones and the Emerging Fifth Moment of Photography. *Photographies* 5(2):203–221.
- Dalrymple, William (2014). Preface. In: *Karen Knorr: India Song*. Ed. by Rosa Maria Falvo. Milan: Skira, 9–14.
- Marx, Karl and Friedrich Engels (1977). The German Ideology. In: *Karl Marx: Selected Writings*. Ed. by David McLellan. Oxford: Oxford University Press, 159–191.
- Pinney, Christopher (1997). *Camera Indica: The Social Life of Indian Photographs*. London: Reaktion Books.
- (2004). *'Photos of the Gods': The Printed Image and Political Struggle in India*. London: Reaktion.
- (2008). *The Coming of Photography in India*. London: British Library.
- (2017). Exotic India in Global Circulation: The Case of the Liebig Trade Cards. *Marg: A Magazine of the Arts* 86(3).
- Price, Mary (1997). *The Photograph: A Strange, Confined Space*. Stanford: Stanford University Press.
- Rubenstein, Daniel and Katrina Sluis (2013). The Digital Image in Photographic Culture: Algorithmic photogrpay and the crisis of representation. In: *The Photographic Image in Digital Culture*. Ed. by Martin Lister. London: Routledge (2nd edition).
- Seppänen, Janne (2017). Unruly Representation: Materiality, indexicality and agency of the photographic trace. *Photographies* 10(1):113–128.

Systems of Value

Chapter 12

Images for Sale: Cards and Colors at the Photothèque du Musée de l'Homme

Anaïs Mauuarin

By examining the case of the Photothèque of the Musée de l'Homme, created in 1938,¹ and its original material conception, this paper intends to question the values attached to photographs and the means by which the photographs acquire these values. The study of the materiality of photographic objects, which has been promoted by the works of Elizabeth Edwards in particular, undoubtedly provides a good entry point into these issues.² Studies conducted along this line have highlighted a number of mechanisms that bring scientific and historical values to images. However, they have too often overlooked another aspect: the commercial value of images. Only the analyses focusing on structures with an explicit commercial orientation (photo agencies, image banks, etc.) have directly addressed this question.³ These organizations, mainly emerging after the 1920s, deserve specific attention. But does this mean that they led to a division of labor and prerogatives between those in charge of selling and distributing images on the one hand and, on the other, institutions such as scientific museums that were more concerned with accumulating documentary photographs and constituting scientific collections?⁴ Although there was an indisputable specialization process affecting photographic institutions at the time, the case of the Photothèque of the Musée de l'Homme suggests that such a dichotomy should be put into perspective.

The museum's photographs, which had the quality of documentary and scientific objects in line with the status assigned to them since the end of the nineteenth century by anthropology (Edwards 1992) and the sciences in general (Daston and Galison 2007; Mitman

¹ This new photo library was created when the Musée de l'Homme opened in Paris. The museum was officially inaugurated on June 20, 1938 as a substitute for the Musée d'Ethnographie du Trocadéro. On the history of the new museum, see L'Estoile 2007; Laurière 2008; Blanckaert 2015. On the Musée du Trocadéro in its early days, see Dias 1991, and for the transition period, with the arrival of Paul Rivet and Georges Henri Rivière as its directors (1928–1935), see Delpuech, Laurière, and Peltier-Caroff 2017.

² Since the 1990s, this new approach has found its way into the history of photography, as demonstrated by the introduction to the first volume of the new academic journal *Transbordeur*, in which Estelle Sohier, Olivier Lugon, and Anne Lacoste insist that “materiality affects the meaning, the value and the uses attributed to photographs and their performativity” (Lacoste, Lugon, and Estelle Sohier, eds. 2017, 10).

³ See, for instance, the works of Paul Frosh (2003) and, with a more historical perspective, those of Marie-Eve Bouillon (2012) and, more importantly, Estelle Blaschke (2009; 2011; 2016). On photo agencies and image banks, see a recent volume of *Fotogeschichte*, “Business mit Bildern. Geschichte und Gegenwart der Fotoagenturen” (2016).

⁴ The above-mentioned volume of *Transbordeur* indeed suggests that such a division existed in 1885–1905. While the first few lines of the introduction rightly point out that “at the end of the nineteenth century [...] new means of photomechanical reproduction led to a growing number of cheap illustrations in increasingly numerous printed material,” the volume does not tackle the issue of the commercial circulation of images but instead independently treats the question of the deep changes affecting image collections in “heritage institutions, museums, archives and libraries” (Lacoste, Lugon, and Estelle Sohier, eds. 2017, 9).

and Wilder 2016), took on an added commercial value promoted by the museum. Under the initiative of the museum's director, Paul Rivet, the various actors involved in the Photothèque created a "commercial department" (*service commercial*) with the aim to make photographs available to clients and to reproduce and sell them to illustrated journals, publishers, or private individuals. It was also designed to expand by storing all the collections of prints provided to the museums by its collaborators.⁵ The creation of this department involved a specific reorganization of all images and the individual treatment of photographs, which were arranged in a completely new fashion. Therefore, economic aspects had an impact on the materiality of the museum's vast photographic collections, as much as on their scientific uses, as mentioned above (Barthe 2000). The accumulation and creation of documentary collections on the one hand and the commercial distribution of images on the other hand were considered to be two sides of the same coin: the Photothèque was designed as a tool to promote the numerous photographs collected and preserved by the museum.

One of these promotional means was the presentational form of images, which were individually pasted onto standardized color-coded card mounts. This system was the result of numerous experiments and innovations which took place at the museum during a relatively short time frame around 1938. As suggested by Elizabeth Edwards, building on the works of Christine Barthe, such a "regularity of the physical arrangement" of images created "an equivalence between them" (Edwards 2002, 71). According to these two authors, who have borrowed Johannes Fabian's critical approach (Fabian 1983), these material aspects, along with other organizational elements such as division into geographical areas and ethnic groups, helped to construct and develop anthropological narratives behind which the discipline concealed the historicity of its objects of study. Thanks to the recent rediscovery of the Photothèque's archives at the Musée du quai Branly-Jacques Chirac,⁶ these narratives, which have stressed the epistemological effects resulting from how the photographs were classified, deserve further investigation: one must take into account the underlying economic objectives behind the arrangement of these collections, so as to have a finer and more comprehensive understanding of what was at stake in the constitution of these photographic collections. We need to develop a more precise vision of these processes of accumulation and arrangement of images, which are not systematically deprived of any commercial motives.

The organizational plans of the Photothèque, resulting from the efforts of a man named Odet de Montault,⁷ reveal shifting ideas on the manufacturing and format of the cards holding the photographs. The solution chosen at the time was used until the 2000s when the

⁵ This phenomenon was by no means specific to photography but was in fact a common imperative for all object collections in the museum, completely in line with the importance attached at the time to the ethnological study of material culture. On this aspect, see L'Estoile 2007. On the notion of "collaborator," which I shall later turn to, see L'Estoile 2005.

⁶ These archives consist of three boxes containing various types of material with no clear order. Among them are plans for the organization of the photo library, on which this paper relies in particular, as well as Activity Reports covering at least the period 1938–1960. Here, we refer to the original number of the boxes. However, because this fund is currently being reorganized, call numbers are likely to change soon.

⁷ Son of the marquis de Montault, Odet de Montault was 29 years old in 1938 when he joined the museum staff. Jacques Soustelle immediately put him in charge of the constitution of the commercial department. But he did not stay at the museum long: he was mobilized during the war and then resigned in October 1945. He nevertheless left a deep impression on the department and his collaborators, as evidenced by some very warm letters, for instance those from André Leroy-Gourhan (Bibliothèque Centrale du Muséum/Archives of the Musée de l'Homme (further cited as: BCM/Archives MH)/2 AM 1K 67c).

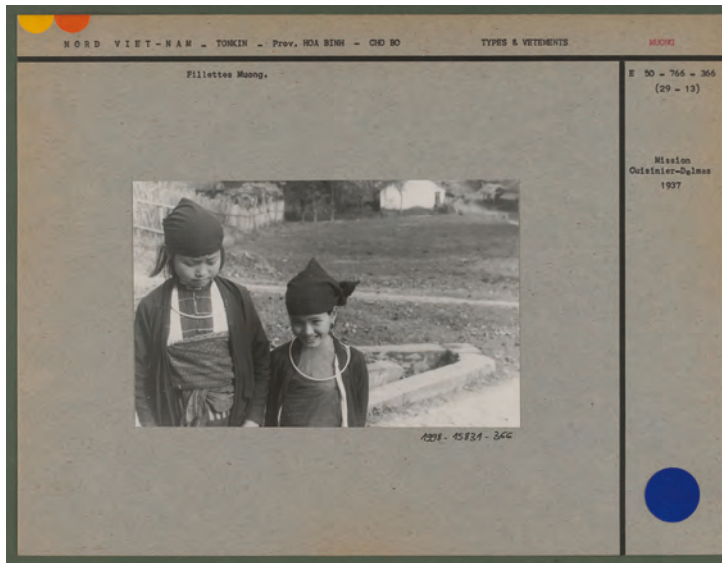


Fig. 1: *Fillette Muong* (Young Muong girls), Vietnam, mission Cuisinier-Delmas, Lucienne Delmas or Jeanne Cuisinier, 1937, baryte print, 10.3 x 16 cm (photo), 22.5 x 29.3 cm (cardboard), Musée du quai Branly-Jacques Chirac, inv. no. PP0005858.

Photothèque was closed down and the photographs transferred to the Musée du quai Branly-Jacques Chirac.⁸ After reviewing the hesitations and the different options considered for the cards—those that were abandoned as much as those that were finally adopted—, I will examine what these choices materialize. They reflect a pioneering attention on the part of the Photothèque, which was then embracing the model of a modern photo agency, to photographers who were given a legal status based on the recognition of their right to their own images. On the other hand, the materiality at work also contributed to making these images available for sale and distribution by explicitly insisting on their status as commodities.

Materialized values: the origin of a codification

On the card mounts that composed the photo library until it closed, the image is placed at the center and surrounded by various colored labels (see Fig. 1). In the top left-hand corner of the photograph entitled “Young Muong girls” (*Fillettes Muong*), for instance, which was taken during a field trip to Indochina that Lucienne Delmas participated in before she became responsible for the museum’s photographic fund,⁹ the yellow geographic label denoting Asia

⁸ This transfer has produced a large body of literature. On photographs, see Carine Peltier’s note (Peltier 2007).

⁹ Collaborating with the Asian Department at the Musée du Trocadéro, Lucienne Delmas made this field trip in 1937–1938 with Jeanne Cuisinier; they brought back numerous photographs (BCM/Archives MH/2 AM 1M1d). Lucienne Delmas became officially in charge of the Photothèque of the Musée de l’Homme in 1938 (BCM/Archives MH/2 AM 1D2) and progressively became its most prominent figure until the 1950s.



Fig. 2: *Salle de travail de la Photothèque* (Working room in photo library), Musée de l'Homme, Diloutremer, c. 1950, baryte print, 22.5 x 29.5 cm (cardboard), Musée du quai Branly-Jacques Chirac, inv. no. PP0090871.

is juxtaposed with the label indicating the disciplinary field to which the image belongs,¹⁰ that is, in this case, ethnology. Both stickers overlap the edge of the cardboard, meaning the colors are visible—and thus the information they refer to—without having to pull the card out from the filing cabinet (see Fig. 2). Christine Barthe has already studied these labels and has underlined in particular the fact that the importance attached to geography in the general arrangement of photographs, as represented by the first sticker, reinforced the division of ethnology into various areas at the expense of a historicized approach to its objects of study (Barthe 2000). The colors chosen reflected a caricatured and racial vision (see Fig. 3) inherited from Linnaeus.¹¹

¹⁰ The final arrangement of the Photothèque originally included four main categories: ethnology, (physical) anthropology, palaeontology, and archaeology. In reality, photographs belonging to the “ethnology” category were by far the most numerous, thus echoing the museum’s priority which, even though it was a “museum of man” and not only a museum of ethnology, gave preeminence to the discipline (Laurière 2015).

¹¹ In the final version adopted by the museum, there was a black tab for Africa, yellow for Asia, red for South America, pink for North America, etc. This color code finds its origin in the racial classification presented by Carl von Linnaeus around 1758 in the second edition of his *Systema Naturae*. In 1938, however, the plan designed by Odet de Montault was somewhat different: white Africa was green, America grey, Asia orange, Oceania red, while black was already referring to black Africa.

Code de signalisation visuelle des documents

<i>Divisions géographiques (toujours à gauche)</i>		<i>Divisions des sujets (deuxième position à gauche)</i>	
Noir	Afrique	Orange	Ethnographie
Rose	Amérique du Nord	Mauve	Archéologie
Rouge - Rose	Mexique	Violet	Paléontologie
Rouge - Noir	Antilles	Bleu clair	Préhistoire
Rouge	Amérique du Sud	Marron	Anthropologie
Blanc	Madagascar	Jaune à gauche	Muséographie (pour vitrines)
Jaune Rose	Arctiques	Jaune à droite	Collections du Musée de l'Homme
Jaune	Asie	Rouge	Interdit
Jaune - Bleu foncé	Indonésie	Bleu	Don total
Bleu foncé	Océanie	Blanc	Exploitation 50% contrat Régie
Vert	Europe		

Fig. 3: *Code de signalisation visuelle des documents* (Color code for documents), Lucienne Delmas, c. 1950, 2 pages, Musée du quai Branly-Jacques Chirac, Photo Library Archives.

A third label was added to the two mentioned above. Located in the bottom right-hand corner, it has been paid little attention although it is even bigger than the other two.¹² Its presence there and its color answer another question, one which is quite unusual in the context of a scientific museum: terms and conditions for the commercial use of photographs. The color blue meant that the image was owned by the museum. As its owner—whether the author was the museum’s photographic department or a private individual who had surrendered his or her rights—the museum could have disposed of the image, sold reproductions, and reaped all the benefits. The other possible colors were white or red, according to legal terms of use. These colors represent the three different legal or commercial statutes of images in the Photothèque, with no relation to any geographic or disciplinary category. This classification was implemented by Odet de Montault around 1939, and yet it was quite vague: neither the code nor the meaning that the code finally came to refer to had been originally fixed.

In one of his first drafts, Montault had only planned to distinguish between two kinds of images: photographs “of objects belonging to the museum taken outside their original environment [and those] of the museum display” on one hand and, on the other, “photographs taken outside the museum.”¹³ Such a distinction was based on the observation that different uses corresponded to different images, some being much more important visual tools than

¹² These tabs are of the Flambo brand; tabs at the top are “N°5/No. 5” and tabs at the bottom are “N°10/No. 10.”

¹³ Musée du quai Branly-Jacques Chirac (MQB)/Archives Photothèque/Box 5.

others and playing a decisive role in the internal organization of the museum¹⁴ and in the promotion of its activities, particularly through the printed media. This fundamental difference, which was at the essence of the photographs, had to be visible in the material itself, that is, the color of the cards holding the photographs. Even though Montault did not challenge the use of cards measuring 22.5 by 29.5 centimeters already used at the museum,¹⁵ he suggested that images related to the museum's life should be "pasted on a brown card," while those coming from outside should be "pasted on a grey card."

This distinction, which was based on the content and origin of images, was soon to be replaced by another, as evidenced by Montault's more detailed plans of October 1938. It was driven by the commercial goals of the Photothèque. According to Montault, "the commercial use of the new photo library compels us to improve the material aspects of the classification originally adopted by the Museum,"¹⁶ thus implying that "before any arrangement on a methodological or geographical basis should be made, [...] the photographic prints held by the photo library [had to be] classified" according to three categories:

1. Photographs that are exclusively owned by the museum: Fund(s) of the museum and of the Museum of Natural History
2. Photographs that are loaned to the museum: Copies cannot be made or sold by the commercial department outside of the museum
3. Prints made by the museum's photo department (Service Photo-Musée): Copies can be made for free when used within the museum, while a specific contract will be made for their sale; the use of these photographs will be a source of revenue for the museum (expected profits: 50/50)

These three categories summarize the various modes of reproduction and diffusion modalities of the images in the museum's fund. Photographs that were owned by the institution (1) coexisted alongside others that were only temporarily loaned to it and could not be distributed outside the institution (2). There was even a third and more complex category: some authors put their photographs under a *contrat régie*: this "specific contract for sale," which was being drafted at the time—a point to which we shall return—, stipulated that the museum managed the prints but had to give half of the royalties to the owner of the copies sold (3).

Following Montault's first project, these three categories would have been embodied materially in the mounts on which they were fixed. Montault wrote that "in order to distinguish these prints [with distinct commercial statutes], they need to be pasted on cards of different colors." In a manuscript version, he suggested that for "prints exclusively owned by the museum" (1) a "grey card" should be used, (2) for those "loaned to the museum" a

¹⁴ Photographs of objects were sometimes used to illustrate labels or catalogs. Field trip photographs were inserted in display cases during exhibitions in order to explain how objects were used. They were all made following a very precise model (in terms of size, caption, typography, position, etc.) (BCM/Archives MH/2 AM 1 12). On this question, which was already at stake at the time of the Musée du Trocadéro (1928–1935), see Mauuarin 2017. More generally, on the various uses of photographs in museums, see Edwards and Lien 2014.

¹⁵ Cards of this size were used in the early 1930s at the photo library that was initiated within the Musée d'Ethnographie du Trocadéro, replaced in 1938 by the Musée de l'Homme. On the photo library of the Musée d'Ethnographie du Trocadéro, see Mauuarin 2017.

¹⁶ Odet de Montault wrote at least four drafts of plans for the new organization of the future Photothèque. In this part of my paper, I mainly focus on two of them: a manuscript draft, which seems to be the first, and a typescript one, which appears to have been written later and is the only one to be dated, October 15, 1938 (MQB/Archives Photothèque/Box 5).

“brown card,” and finally, (3) for those under *contrat régie* a “pink card.” He developed his plan in a typescript version dated October 15, 1938 by giving the precise references from the manufacturer’s color chart (see Fig. 4):



Fig. 4: Sample of shades of vellum, Vélin Dechamps & Prévost, Musée du quai Branly-Jacques Chirac, Photo Library Archives.

Preliminary steps before classification

The distinction between prints mounted on vellum cards: [...] the three main categories of photographs in the new photo library’s fund shall be indicated by vellum cards of different colors

Photos owned by the museum (vellum already in use at the museum)

Photos loaned to the museum (vellum no. 4)

Photos under “*contrat régie*” (vellum no. 8)

According to this proposal, the various commercial and legal terms for the use of images would seem to be embodied in their materiality itself, that is, the cards on which they were mounted. Before they even saw the image mounted on the card that they would pull out vertically from the filing cabinet, visitors or clients would immediately know, from the color of the card, the reproduction conditions of the image, that is, its exchange value. These different cards alone would have constituted a code that literally incorporated images, making their legal or commercial statute visually prominent, so much so that it could not be ignored.

As early as December 1938, this card system was nevertheless replaced by the blue, white, and red labels, as evidenced by an invoice dated December 7 of that year. The reasons for this were mainly practical. In addition to the material difficulties the Musée de l'Homme faced in buying enough cards, there was an interest in distinguishing between the two steps of recording the collections and then classifying them. Stickers were preferable to cards because they made it possible to dissociate the fixing of photographs and their precise classification; at the same time, they made it possible to include retroactively all the collections already mounted on cards during the early period of the Musée d'Ethnographie du Trocadéro (Mauuarin 2017). More importantly, these labels made it easier to handle when an image moved from one category to another: the museum was more than pleased when photographs originally under *contrat régie* (white sticker) were finally transferred to and owned by the institution (blue sticker).¹⁷ This materiality would eventually be adopted at the museum for over 50 years, thus validating Montault's pioneering category of the *contrat régie*: it was a key element of the museum's organization, which undoubtedly contributed to the Photothèque's success and its collaborative dimension.

The Photothèque as an agency

With the three-color code first inscribed in the cards and later in the stickers, the museum gave photographers recognition of their authorship in a very material and concrete way. The former Musée d'Ethnographie du Trocadéro had already paid specific attention to photographers, whether amateur or professional, whose work had been displayed in a temporary exhibition between 1933 and 1935 (Mauuarin 2015). Several members of the photo agency Alliance Photo, such as Pierre Verger, René Zuber, and Pierre Boucher, collaborated closely with the museum and with Georges Henri Rivière and must have helped draw attention to the issue of copyright, photographers still then largely being denied their rights by press agencies (Denoyelle 1997, 58–63).¹⁸ Estelle Blaschke even speaks of a “culture of disregard” at the time: publishers and image sellers systematically showed contempt for the emerging rights of those who took pictures (Blaschke 2011, 45). In France, only the Berne Convention for the Protection of Literary and Artistic Works¹⁹ stressed the importance of granting photographers copyright ownership, with no binding effect, however.²⁰

Therefore, members of the Photothèque can be seen as pioneers when they put in place a *contrat régie* in 1938 (see Fig. 5). Not only did it turn the photographer—designated as the “owner of commercial rights”—into a contracting party, but it also, and more importantly, compelled the museum to pay him or her royalties “resulting from the commercial use of [his or her] photographs” (point 8). The Photothèque thus took on an intermediary role similar to that of a photo agency: photographers entrusted it with managing their photographs, from

¹⁷ The history of the Photothèque reveals that at other times—around 1964 particularly—a number of collections originally under *contrat régie* were included in the museum's funds when it appeared impossible to contact authors and update their wishes.

¹⁸ The 1920s and 1930s, however, witnessed a growing recognition of the work of photographers, particularly on the part of some French magazines such as *Vu*, which began crediting star authors (Frizot and Veigy 2009).

¹⁹ The Berne Convention was signed during the first conference on September 9, 1886, and then was regularly revised up until the 1970s. Photography was first mentioned in 1896 at the Paris Conference in the form of an additional act.

²⁰ Until the 1957 law which, for the first time, included photographs among “works of the mind,” conditions to ensure the protection of photographs were decided by courts when necessary.

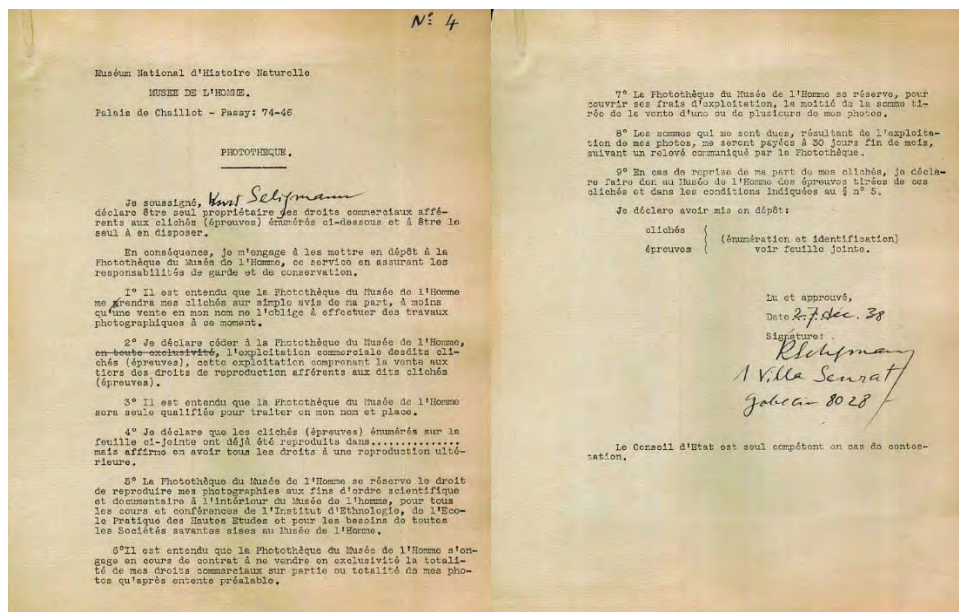


Fig. 5: *Contrat-régie* (specific contract for sale), between the Musée de l'Homme and Kurt Seligman, December 27, 1938, two pages, Musée du quai Branly-Jacques Chirac, Photo Library Archives.

their preservation to their distribution and sale. The Photothèque set up a system of collection by author: a series number was attributed to “each contributor or individual under a *contrat régie*” and “did not change regardless of the year of entry of prints or plates.”²¹ Collection no. 21, for example, is that of Pierre Verger, no. 33 of Henry de Monfreid, no. 41 of Marcel Griaule, etc., with the numbers more or less following the inventory order.²² The collection number was then included in the identification number inscribed on each photograph,²³ thus making it easy to trace them and to ensure due payment of copyright fees.

The *contrat régie*, which was very favorable to photographers, and the collection system then put in place, were a way to satisfy Paul Rivet’s wish to “engage the museum’s

²¹ Odet de Montault, “Photothèque,” October 15, 1938 (MQB/Archives Photothèque/Box 5). Documents of the same period prepared by Lucienne Delmas contain lists of these first collections (MQB/Archives Photothèque/B4).

²² Numbers below 300 do not necessarily follow the chronological order in which collections were acquired by the Photothèque. After 300, they more or less reflect this order, but it remains approximate because several collections could have been deposited simultaneously, while others were put on hold for months or even years due to the lack of staff, or simply because some of them were so numerically important that they required specific means to be inventoried.

²³ This collection number is added a posteriori to the identification number of the collections that were deposited and inventoried at the time of the Musée d’Ethnographie du Trocadéro, then comprising only the year followed by the collection number in the year (e.g., 33-2345). From 1938 onwards, a third digit identifying the “collection” was added: in order to avoid a complete reinventory of all the collections, this was placed after the first two and not in-between.

collaborators”²⁴ so that they would give their photographs to the Photothèque. This institution would promote images by ensuring their material protection and control,²⁵ and by selling them, while authors could expect benefits in return. Such incentives, which were not unattractive, worked as a lever to expand the museum’s photographic collections: they were always geographically incomplete in the eyes of the Photothèque staff, who favored comprehensiveness. Two complementary logics were at work here, one scientific and the other commercial, both founded on the need to possess as many images as possible. The Photothèque wanted to have it both ways and to this end created the *contrat régie*, which gave its staff some leverage to negotiate with photographers: it allowed the Photothèque to attract beyond the circle of its most “willing” collaborators (*bonnes volontés*) who were already convinced of its scientific mission (Institut français d’Afrique noire 1953; Blanckaert 2001; L’Estoile 2005).

While this contract and the collections put photographers’ authorship at the heart of the Photothèque’s organization, the general arrangement of the prints remains paradoxically obscure. Collections were in fact classified in the filing cabinets according to geographic and ethnic categories that took no consideration of the place or the date these pictures were taken (Barthe 2000). The cards themselves rarely provided the photographer’s name. On the vast majority of these pictures, only the collection number made the link with the author and was a very indirect way for visitors and clients to have access to this information.²⁶ Despite the attention that the Photothèque paid to authors and the museum’s interest in photographers, the materiality of images tended to obliterate their names, to hide them from the view of visitors and clients. It suggests that a name was not yet a sales argument; cards instead emphasized the availability of images.

Making images available

Alongside its activities as an agency, the Photothèque of the Musée de l’Homme wanted to make its images available: its objective to expand its collections went hand in hand with an ambition to distribute photographs beyond the research community and specialists in the field. In this regard, the department went a step further than the project of the Musée du Trocadéro in 1932, where the “photographic documentation room” was mainly designed for the museum’s staff and specialists and, in some cases and “upon justification, for a restricted audience.”²⁷ In contrast, the 1936 project of the Musée de l’Homme included a “large reading room [...] accessible to the public.”²⁸ Archives related to its operations do not mention any registration book; reports, though not exhaustive, refer to a number of “visits”: visitors seemed to have been able to come and go as they pleased. In addition to specialists and

²⁴ Jacques Soustelle, Note sur l’activité du service commercial de la Photothèque, n.d. (1939) (BCM/Archives MH/AM 112c).

²⁵ For how the material organization of photographs may add to their value, see Estelle Blaschke’s conclusions based on Oliver Wendel Holmes’s writings (c. 1857) (Blaschke 2011, 11).

²⁶ There is no trace of a free-access database that would have allowed visitors and clients to find the author corresponding to each number. Such a database would have made it easier to obtain the information, while still keeping the photographer in the background.

²⁷ Georges Henri Rivière, Principes de muséographie ethnographique, February 24, 1932 (BCM/Archives MH/ 2 AM 1 G2e).

²⁸ Anonymous, Rapport annexe aux plans des nouvelles installations du Trocadéro, January 27, 1936 (BCM/Archives MH/2 AM 1G3d).

researchers with appointments, a whole range of other people representing potential clients would also have had access to the collections.²⁹

The white, blue, and red code was essentially intended for an external audience; its function was to provide information on the terms of reproduction of images in printed publications or other commercial media.³⁰ Odet de Montault added other details about the material conception of the cards, which increased the availability of images: viewers could think of ways of mounting photographs on other supports accompanying or illustrating other discourses. Montault came up with two ideas which underline the standardization of images and keep their contextual singularity at a distance.

First, according to Montault's more sophisticated project, the caption was no longer to be included beneath the image but "written on the back of the vellum," that is, on the reverse of the card (see Fig. 6). It became impossible to view both the image and its caption at the same time: it was now necessary to turn over the card to move from one to the other. Although indications regarding the general geographical classification remained visible, information on what was represented was physically hidden behind the image, which, when extracted from the filing cabinet, seemed at first sight to be deprived of any caption. In addition to this process of partial decontextualization, Montault insisted that prints mounted on cards should all be of the same standard size, and he even recommended that "large existing formats should be printed in a smaller format." He designed a model card (see Fig. 7) of a landscape format and in the center of this he drew a slightly colored rectangle where the "print" was to be mounted. This rectangle of a portrait format suggests that Montault wanted all prints to be immediately "decipherable" without visitors or clients having to rotate the card, which means that some images had to be reduced to be viewed properly.

These two propositions, the first—the disappearance of the caption—being adopted only temporarily,³¹ map out the contours of a method of looking at photographs promoted by Montault that neutralizes both the original material history of photographs and their connection with the context and the specific narrative of when they were taken. A similar process of decontextualization of photographic collections had already been initiated in 1935 at the Museum of Archaeology and Anthropology at the University of Cambridge: images accumulated since 1884 had been reprinted and mounted on cards alongside an individual file compiling all the corresponding captions, which were thus also separate from the images (Boast, Guha, and Herle 2001, 3). According to Elizabeth Edwards, this "regularity of the physical arrangement of image[s]" reinforced the "taxonomic readings" of images and their "visual comparability," thus creating "a cohesive anthropological object" (Edwards 2002, 71). In his project, Montault presented a similar process of standardization and homogenization, even if it was developed from a commercial perspective before becoming a scientific project.

²⁹ During the year 1946, the department dealt with many representatives from magazines such as *Tourisme et travail*, *Sciences et voyages*, *Réalité*, or *La Marseillaise* and responded to various requests, sometimes quite unusual like that of a Mr. Paul-Marguerite who was looking for a picture of the former Trocadéro to make a *cul-de-lampe* (G. Bailloud, Rapport du 3e trimestre 1946, MQB/Archives Photothèque/Box Prudhomme 2).

³⁰ Some clients were looking for pictures, particularly of objects, to use in films. This was, for instance, the case of "young filmmakers" Zimbecca and Bédouin, who became regular visitors and clients of the Photothèque in 1951 and 1952 (MQB/Archives Photothèque/Box 5).

³¹ There are examples of this in the collections of Gaëtan Fouquet and Jacques Gruault (in particular, PP0147853 and PP0147547).

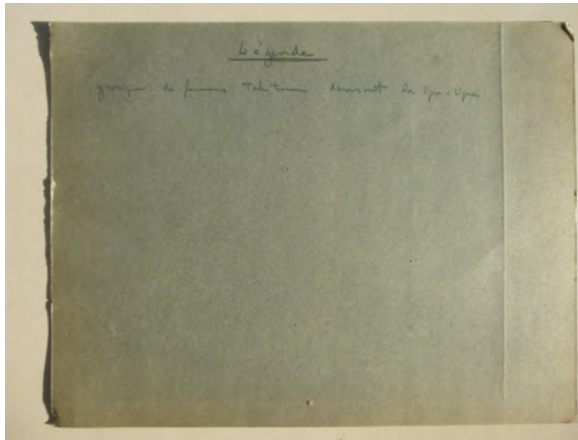


Fig. 6: Cardboard pattern, verso, Odet de Montault, October 1938, 22.5 x 29.5 cm, Musée du quai Branly-Jacques Chirac, Photo Library Archives.

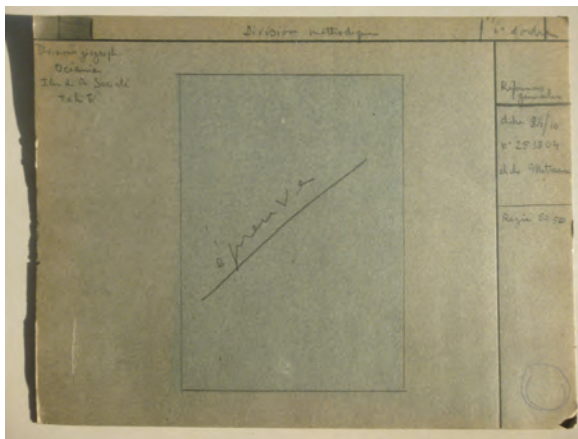


Fig. 7: Cardboard pattern, recto, Odet de Montault, October 1938, 22.5 x 29.5 cm, Musée du quai Branly-Jacques Chirac, Photo Library Archives.

The standardization of prints as well as the visual dissociation of the image and its caption, which still remains an enigma in the case of the Cambridge museum,³² aimed above all at creating optimal conditions for viewing these prints, which provided little information in a fairly simplified fashion, like images that visitors could imagine inserted in various visual

³² The works of Boast, Guha, and Herle, and Edwards provide no explanation for the physical arrangement of the cards, nor do they make clear how scholars used the captions written on separate files. It is highly improbable that an image with no caption could have been a satisfactory document for any ethnological research; suffice it to say that, as early as 1926, Marcel Mauss in his courses on descriptive ethnology insisted upon the importance of systematically recording the context in which the image was taken (Mauss 1947).

contexts, media, and discourses. Formatting and isolating images contributed to keeping at a distance what Edwards has called their “own semiotic energies” (Edwards 2002, 71) and what Walter Benjamin would have described as their “presence” (or *hic et nunc*) (Benjamin 2008). These material modalities also provoked a distancing of the actual referent (Kracauer 1995; Sekula 1981); articulated through the color code informing visitors about the exchange value of images, it reinforced the ability of images to circulate and be exchanged, thus turning them into commodities.

The meaning of collections in economic terms

The fact that images were materialized and made available through colors and cards invites us to return to our analyses of the general organization of the Photothèque. The choice of a geographical area division can indeed correspond to different goals: if those boundaries reflected the organization of French ethnology and, more specifically, that of the museum (Barthe 2000), they also appeared to meet the needs of clients who were particularly interested in what Jacques Soustelle dubbed “geographical news” (*l’actualité géographique*).³³ The choice of colors associated with each continent³⁴—black for Africa, red for South America, yellow for Asia, etc.—referred to a popular vision of races, thus easily recognizable. A later element that reinforced the availability of images is a file classifying images by subject matter (*fichier-matière*) created in the early 1940s. Visitors could then search the photographic collections by theme rather than by geographical area.

Through the case study of Montault’s project and the background of the constitution of the photographic collections of the Musée de l’Homme, it becomes impossible to favor one epistemological analysis over another in order to understand the various tools put in place to manage the photographic collections. Although these various tools all help turn photographs into visually comparable elements that could meet the potentially scientific uses of images³⁵ and consequently create an “anthropological object,” sources and uses reveal that an analysis of this type needs to be reevaluated and that special attention must be paid to the economic objectives and aspects of photographic collections. Therefore, the analysis of scientific and documentary collections must be combined with a more economic approach that is more common when dealing with photo agencies. In addition to the Musée de l’Homme, several French scientific institutions had a commercial department within their photo libraries or photographic departments: this applies to, for example, the Ecole française d’Extrême-Orient in the 1930s,³⁶ or the Institut français d’Afrique noire from the 1950s onward (Touré 2000). Does this mean that, from the 1930s onward, the objectives behind these large photographic collections were no longer strictly scientific?

³³ Soustelle, Note sur l’activité du service commercial de la Photothèque, n.d. (1939) (BCM/Archives MH/2AM 112c).

³⁴ See Footnote 12 above.

³⁵ As Elizabeth Edwards (2002) has demonstrated in the case of the Cambridge museum, the arrangement of photographs on cards encouraged a comparative approach, which had been at work in anthropology since the nineteenth century in close connection with the treatment of images. But studies are still needed to understand the actual use that scholars made of photographs in the 1930s, which was probably of an entirely different nature.

³⁶ On this photo library and the work of Jean Manikus as a photographer for the school, see the *Bulletins* and *Cahiers de l’Ecole Française d’Extrême-Orient* (1931–1942).

If the Musée de l'Homme had indeed earned its place among major scientific institutions,³⁷ the commercial department of the Photothèque had also become prominent in the landscape of photo agencies. The Photothèque's staff in fact clearly referred to it as a photo agency and compared it to others in existence at the time.³⁸ Consequently, we need to redefine the logic of image accumulation, which remained an explicit goal of both the Photothèque and other institutions mentioned above. Whereas at the end of the nineteenth century, as shown by François Brunet and Elizabeth Edwards, scientific and anthropological institutions collected and arranged photographic collections to enhance their scientific authority (Brunet 1993; Edwards 2001), similar practices took on a very different meaning in the 1930s: for institutions such as the Musée de l'Homme, they represented opportunities to establish themselves as authorities and economic powers. The challenge was now to make a difference in the market of images.

Translated from the French by Camille Joseph

List of Figures

Fig. 1: Fillette Muong (Young Muong girls), Vietnam, mission Cuisinier-Delmas, Lucienne Delmas or Jeanne Cuisinier, 1937, baryte print, 10.3 x 16 cm (photo), 22.5 x 29.3 cm (cardboard), Musée du quai Branly-Jacques Chirac, inv. no. PP0005858.

Fig. 2: Salle de travail de la Photothèque (Working room in photo library), Musée de l'Homme, Diloutremer, c. 1950, baryte print, 22.5 x 29.5 cm (cardboard), Musée du quai Branly-Jacques Chirac, inv. no. PP0090871.

Fig. 3: Code de signalisation visuelle des documents (Color code for documents), Lucienne Delmas, c. 1950, 2 pages, Musée du quai Branly-Jacques Chirac, Photo Library Archives.

Fig. 4: Sample of shades of vellum, Vélín Dechamps & Prévost, Musée du quai Branly-Jacques Chirac, Photo Library Archives.

Fig. 5: Contrat-régie (Specific contract for sale), between the Musée de l'Homme and Kurt Seligman, December 27, 1938, two pages, Musée du quai Branly-Jacques Chirac, Photo Library Archives.

Fig. 6: Cardboard pattern, verso, Odet de Montault, October 1938, 22.5 x 29.5 cm, Musée du quai Branly-Jacques Chirac, Photo Library Archives.

Fig. 7: Cardboard pattern, recto, Odet de Montault, October 1938, 22.5 x 29.5 cm, Musée du quai Branly-Jacques Chirac, Photo Library Archives.

³⁷ It is worth recalling here that the museum had been under the tutelage of the Muséum national d'histoire naturelle in Paris since 1928.

³⁸ The report for the fourth quarter of 1952 is explicit when Lucienne Delmas notes that the prices of the Photothèque are "slightly cheaper than those of other agencies" (MQB/Archives Photothèque/Box 5).

References

- Barthe, Christine (2000). De l'échantillon au corpus, du type à la personne. *Journal des Anthropologues* 80–81. (Question d'optique):71–90.
- Benjamin, Walter (2008). *The Work of Art in the Age of its Technological Reproducibility and other writings on media*. Ed. by Michael W. Jennings, Brigid Doherty, and Thomas Y. Levin. Cambridge (Mass.) and London: The Belknap Press of Harvard University Press.
- Blanckaert, Claude, ed. (2001). *Les politiques de l'anthropologie : discours et pratiques en France, 1860–1940*. Paris: l'Harmattan.
- ed. (2015). *Le Musée de l'Homme : histoire d'un musée laboratoire*. Muséum national d'histoire naturelle/Éditions Artlys.
- Blaschke, Estelle (2009). From the Picture Archive to the Image Bank. *Études photographiques* 24:150–181. URL: <https://journals.openedition.org/etudesphotographiques/3435>, accessed April 12, 2017.
- (2011). *Photography and the Commodification of Images: From the Bettmann Archive to Corbis (1924–2010)*. PhD thesis. Paris: EHESS.
- (2016). *Banking on Images: The Bettmann Archive and Corbis*. Leipzig: Spector Books.
- Boast, Robin, Sudeshna Guha, and Anita Herle (2001). *Collected Sights: Photographic Collections of the Museum of Archaeology and Anthropology, 1860s–1930s*. Cambridge: Museum of Archaeology & Anthropology.
- Bouillon, Marie-Ève (2012). Le marché de l'image touristique. *Études photographiques* 30. URL: <https://journals.openedition.org/etudesphotographiques/3334>, accessed April 12, 2017.
- Brunet, François (1993). *La Collecte des vues: explorateurs et photographes en mission dans l'Ouest américain*. PhD thesis. Paris: EHESS.
- Business mit Bildern: Geschichte und Gegenwart der Fotoagenturen (2016). *Fotogeschichte* 36(142).
- Daston, Lorraine and Peter Galison (2007). *Objectivity*. New York: Zone Books.
- Delpuech, André, Christine Laurière, and Carine Peltier-Caroff, eds. (2017). *Les Années folles de l'ethnographie: Trocadéro 28–37*. Paris: Publications scientifiques du Muséum national d'Histoire naturelle.
- Denoyelle, Françoise (1997). *La lumière de Paris. Tome 1: Les usages de la photographie*. Paris: L'Harmattan.
- Dias, Nélia (1991). *Le Musée d'ethnographie du Trocadéro (1878–1908)*. Paris: CNRS.
- Edwards, Elizabeth, ed. (1992). *Anthropology and Photography, 1860–1920*. New Haven, CT: Yale University Press.
- (2001). *Raw Histories: Photographs, Anthropology and Museums*. Oxford and New York: Berg.
- (2002). Material Beings: Objecthood and Ethnographic Photographs. *Visual Studies* 17(1):67–75.
- Edwards, Elizabeth and Sigrid Lien, eds. (2014). *Uncertain Images: Museums and the Work of Photographs*. Farnham: Ashgate.
- Fabian, Johannes (1983). *Time and the Other: How Anthropology Makes its Object*. New York: Columbia University Press.
- Frizot, Michel and Cédric de Veigy (2009). *Vu : le magazine photographique, 1928–1940*. Paris: Ed. de La Martinière.
- Frosh, Paul (2003). *The Image Factory: Consumer Culture, Photography and the Visual Content Industry*. London / New York: Berg.
- Institut français d'Afrique noire (1953). *Institut français d'Afrique noire: Instructions sommaires*. Dakar: IFAN.
- Kracauer, Siegfried (1995). On Photography. In: *The Mass Ornament: Weimar Essays*. Ed. by Thomas Y. Levin. Cambridge (Mass.) and London: Harvard University press.
- L'Estoile, Benoît de (June 2005). Une petite armée de travailleurs auxiliaires. *Les Cahiers du Centre de Recherches Historiques. Archives* 36. URL: <https://journals.openedition.org/ccrh/3037>, accessed April 12, 2017.
- (2007). *Le Goût des autres: de l'Exposition coloniale aux arts premiers*. Paris: Flammarion.
- Lacoste, Anne, Olivier Lugon, and Estelle Sohier, eds. (2017). *Musées de Photographies Documentaires: Introduction. Transbordeur* 1:8–17.
- Laurière, Christine (2008). *Paul Rivet: le savant et le politique*. Paris: Publications scientifiques du Muséum national d'Histoire naturelle.
- (2015). 1938–949: Un musée sous tension. In: *Le Musée de l'Homme: Histoire d'un musée laboratoire*. Ed. by Claude Blanckaert. Paris: Muséum national d'histoire naturelle/Éditions Artlys, 46–77.
- Mauss, Marcel (1947). *Le manuel d'ethnographie*. Paris: Payot.
- Mauuarin, Anaïs (2015). De « beaux documents » pour l'ethnologie. *Études photographiques* 33:21–41. URL: <https://journals.openedition.org/etudesphotographiques/3559>, accessed April 12, 2017.
- (2017). La Photographie multiple: Collections et circulation des images au Trocadéro. In: *Les Années folles de l'ethnographie: Trocadéro 28–37*. Ed. by André Delpuech, Christine Laurière, and Carine Peltier-Caroff. Paris: Publications scientifiques du Muséum national d'Histoire naturelle.

- Mitman, Gregg and Kelley Wilder, eds. (2016). *Documenting the World: Film, Photography, and the Scientific Record*. Chicago, IL: The University of Chicago Press.
- Peltier, Carine (2007). L'iconothèque du musée du quai Branly. *Bulletin des bibliothèques de France* 4:10–11.
- Sekula, Allan (1981). The Traffic in Photographs. *Art Journal* 41(1):15–25.
- Touré, Khady Kane (September 2000). Pour valoriser les fonds de la photothèque de l'IFAN. *Documentaliste, Sciences de l'information* 37(3–4):174–181.

Chapter 13

Reflections on the Archive: Reconsidering the *Evidence* Project (1977–2017)

Lena Holbein

Between 1975 and 1977, Mike Mandel and Larry Sultan viewed a large amount of photographic material in over 100 image archives of US American government agencies, research laboratories, and corporate offices. As a result, they made a selection of 243 photographs, 59 of which were presented in a photo book entitled *Evidence*, published in 1977 (see Fig. 1).¹ In the same year, 89 of their selected photographs were on display for the first time in the San Francisco Museum of Modern Art.

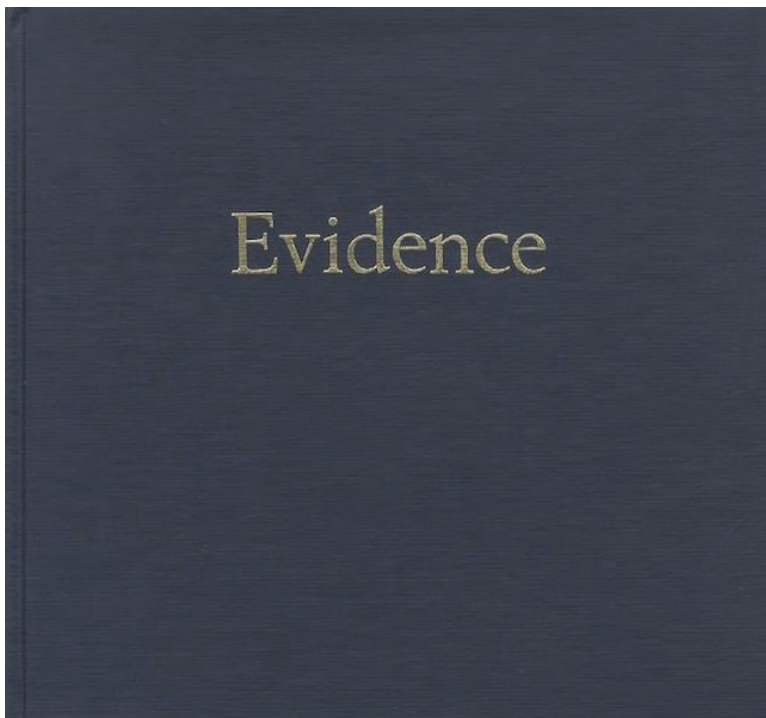


Fig. 1: Cover of *Evidence*, a photo book by Mike Mandel and Larry Sultan.

¹ After it was first published in 1977, the photo book was republished in 2003. The second edition includes a facsimile of the first edition as well as an essay by Sandra S. Phillips. In contrast to the original edition of 1977, the later book presents 61 photographs. In spring 2017, the edition was reprinted.

Now, 40 years after its first publication, I would like to shed new light on the *Evidence* project by discussing its visual representations with regard to the archive.² By doing so, I aim to challenge the predominant interpretation of *Evidence* by rereading the photo book against the backdrop of archival practices. In arranging and presenting the images, I argue, *Evidence* turns away from conventional procedures associated with the archive, and thus encourages us to focus on the imagery of the photographs and rethink the archive. At the same time, however, archival practices became effective when the *Evidence* photographs were on display in the gallery space. I would like to examine to what extent a curatorial gesture and archival modes affect and transform the artistic work.

I also plan to state the potential of an elaborate analysis for extensive research on the *Evidence* project by focusing on how the photographs are dealt with within photographic collections. After being selected by Mandel and Sultan, the photographs became part of other photo archives or collections. Assuming that the way the photographs are dealt with within the collections (registration, classification, categorization, presentation, and storage) has a strong impact on their reception and the presentation of the photographs as aesthetic objects, I would like to outline the practices of two institutions whose collections became home for the *Evidence* photographs.³

Finally, I will conclude my paper with a critical comment on the practice of registering photographs within photo collections and on exhibiting them within art contexts. Taking into account my previous observations, I am prompted to question the adequacy of the relevant practice of cataloging with regard to the shifting contexts the *Evidence* photographs are set in. The question arises how an archive can be true to and represent the different contexts of photographs.

***Evidence*—a brief introduction**

Containing a corpus of 59 images with no captions, the *Evidence* photo book presents page after page of black-and-white photographs from various archives in both landscape and portrait format.⁴ The photo book comprises a list of all the archives visited in alphabetical order. It is only this list preceding the pages of photographs that provides information on the origin of these photographs in different settings, showing, for instance, experimental arrangements in laboratories, crime scenes, and outside explosions (see Figs. 2–4).

A few weeks after Mandel and Sultan had self-published the photo book in spring 1977, a small show opened in the San Francisco Museum of Modern Art presenting the photographs in the book and several more besides.⁵ From then on, the photographs themselves which had served as material for the photo book were exhibited in the gallery space. In the

² I propose to regard *Evidence* as an artistic project that cannot be reduced to its visible representations but is instead characterized by a range of ongoing practices carried out not only by the artists but also by curators and registrars.

³ This paper was revised and modified after the conference held in February 2017 because of detailed research on the photographs in the Center for Creative Photography, University of Arizona, and the San Francisco Museum of Modern Art conducted during a research stay in April 2017.

⁴ Among the image archives Mandel and Sultan consulted were those of NASA's Jet Propulsion Laboratory, Los Angeles Fire Department, California Institute of Technology, for example. Access to the archives was facilitated by an official letter Mandel and Sultan had received in connection with the project funding in the course of the grant for National Endowment for the Arts (Phillips 2003).

⁵ When first exhibited, the photographs were presented behind glass and unframed, hung next to each other (Phillips 2003).



Fig. 2: Double-page spread from *Evidence*.

course of their further presentation, several exhibition displays evolved that vary in terms of presentation and arrangement as well as the number of photographs exhibited. These photographs, simply placed behind glass, are set in grids, arranged according to the layout of the photo book or presented as individual photographs framed with passe-partout (see Figs. 5, 6).

Reflections on the archive

Several archives serving as a rich source of images are at the root of the artistic work. The archive as a model of order and presentation, as a place where knowledge and meaning are produced, is an elementary point of reference for the artistic treatment of the photographic material discovered. I would like to examine to what extent *Evidence* questions the concept of archives by presenting and arranging the photographs in ways that are opposed to conventional archival practices. By introducing a reading of *Evidence* as a reflection on the archive, I would like to add a new perspective to the existing readings.

Focusing on the practice of appropriating imagery found and introducing it into art contexts, *Evidence* has been mainly aligned with the tradition of the readymade. Specifically, the artwork has been read as an artistic approach to the significance of context for the meaning of a photograph. In its radical omission of any sort of explanatory context (such as captions or authors), *Evidence* states how the meaning of the photograph depends on its contextual embedding.⁶ Most of the settings depicted are difficult to identify. Consequently, the photographs can no longer be used as testimonies of a documentary practice; the promise of an evidential character in the title is not kept. The photograph's function, intention, and meaning are no longer recognizable, as Peter Geimer remarks. The meaning of the photograph is restricted to its indexical nature. Following Rosalind Krauss, Peter Geimer argues

⁶ See, inter alia, Moniot 1979; Hugunin 1977.



Fig. 3: Double-page spread from *Evidence*.

that the photographs lost their code while being decontextualized and are thus shown in their *meaningless meaning* (Geimer 2015, 199–201). In “Notes on the Index: Part I,” Rosalind Krauss notes: “A meaninglessness surrounds it [the photograph] which can only be filled in by the addition of text” (Krauss 1977, 77). Several studies on context and photography demonstrate that writing has a significant effect on the meaning of a photograph, as do captions, for example.⁷ An equivalent meaning is assigned to writing within the photo archive, where inscription practices are performed to such a high degree, Tiziana Serena argues, that there can be no photo archive without inscriptions. As Serena points out, in the archive, a range of different inscription practices (description, categorization, etc.) become effective and thus transform the photograph into a document. Furthermore, writing establishes the archival order “structuring its physicality, affect[ing] its functioning and communication” (Serena 2011, 68). Hence, during the process of appropriation, the *Evidence* photographs are separated from their original settings, in particular, their various forms of archival writing and their established orders. The photographs are set free from their original status as photographic documents and given the opportunity to appear as mere images. The initial purposes and original settings of the photographs are disguised. Hence, *Evidence* meets the requirements assigned to the archive in Allan Sekula’s essay “Reading an Archive”:

In an archive, the possibility of meaning is ‘liberated’ from the actual contingencies of use. But this liberation is also a loss, an abstraction from the complexity and richness of use, a loss of context. Thus the specificity of ‘original’ uses and meanings can be avoided and even made invisible, when photographs are selected from an archive and reproduced in a book. (Sekula 2003, 444f.)

⁷ Studies on the significance of context for the meaning of photographs examine the relationship between caption and image as part of the presentational context (see Ruchatz 2012).



Fig. 4: Double-page spread from *Evidence*.

Within the archive, described as a “‘clearing house’ of meaning” (Sekula 2003, 444f.), the photograph is released from its earlier interpretation and becomes open to new attributions of meaning. Nevertheless, far from being a neutral space, the photo archive contributes to the meaning of the photograph while establishing schemes of order and categorization. If it is part of a photo archive, the single photograph loses its specific connotations while being subject to a greater order. When these photographs are removed and presented in a photo book, these schemes are often unwittingly reproduced, Allan Sekula warns (Sekula 2003, 446). As far as the *Evidence* photo book is concerned, it is only through the decontextualization of the photographs from their archival context that the photographs lose their original meaning. Nevertheless, the decontextualization causes a recontextualization that evokes a new meaning. While decontextualizing the photographs, Mandel and Sultan release the photographs from their previous archival order and generate new orders by arranging the images in their own ways.

In contrast to an archival order that is linked to objectives of power and knowledge and thus claims objectivity, the *Evidence* book demonstrates a loose but associative arrangement which is highly subjective. The photographs appear to be organized in a visual arrangement resembling the modes of order presented by Aby Warburg’s *Atlas* plates. Similarities in content and form can be seen among these photographs that typify a common practice of documentary photography. When we look at the photo book, several classification criteria of form or content are evident that sum up two or more successive photographs: destruction sites, backdrops, body fragmentation, image structure, etc. (see Figs. 2–4). However, the emerging order is not strictly adhered to but rather interrupted by individual “non-classified” photographs. The beholder’s will to recognize a distinct structure in the arrangement of the photographs is maintained but never fully satisfied since the arrangement appears loose albeit fixed, oscillating between playful associations and logical order.



Fig. 5: Installation shot showing the exhibition display at Kunstmuseum Bonn, Larry Sultan retrospective, 2015.

The photo book also invites beholders to concatenate the images themselves, which can be described as an archival mode of reception, as a “reflexive mental operation – obsessively searching for links and relationships” according to Sven Spieker (Spieker 2008, 139f.). Thus, in *Evidence*, archival practices are unfolded in their categorical subjective character. A false objectivity associated with the archive also comes to the fore with regard to the design and layout of the photo book. Its unassuming appearance and the archive references suggest a false sense of scientific character. However, it is not possible to assign the individual photographs to their respective archives of origin, nor does this list provide reliable information about where the photographs depicted come from, as there are even more archives listed than photographs presented in the book. Consequently, *Evidence* questions another principle in effect in archives, the principle of provenance. While referring to archival practices and principles yet deforming them in a way that reveals the subjective dimension of those practices, Mandel and Sultan critically reflect on the archive, its practices, and the archival role of photography.

Archival modes—presenting the *Evidence* photographs

The archival practice of classifying was performed more directly and in an affirming manner when 79 photographs were on display in the traveling exhibition organized by the Center



Fig. 6: Installation shot showing the exhibition display of the *Evidence* photographs at Fotomuseum Winterthur, 2010.

for Creative Photography (CCP) in 2004.⁸ Assembled into groupings of up to four photographs which were presented behind one frame, the images were organized according to different kinds of criteria. Whereas one frame presents photographs clearly identified as police photographs (showing evidence and arrests), another groups four photographs whose common ground is a circular form (see Fig. 7). Beside these groupings, there are also some photographs that do not seem to fit in the established order and so are presented as individual images, such as the only color photograph here. This specific spatial presentation allows an overview where the photographs can be compared, as opposed to in the photo book with its double-page spreads.

The spatial arrangement of the photographs was also characterized by the concept of grouping during the first traveling exhibition, initiated by the Center for Creative Photography in 1977. A letter giving instructions for the installation clearly prescribed how the photographs were to be arranged:

The 79 photographs are carefully sequenced into five groupings, each with its own particular mood and logic that best presents the work as a whole.

The system to be followed is coded on each frame: the letter denotes the group and the number denotes the photograph's position in the group. For example,

⁸ Among other venues, the exhibition *Evidence Revisited: Mike Mandel and Larry Sultan* was on display at the Photographer's Gallery, London, and the Frances Lehman Loeb Art Center at Vassar College in Poughkeepsie, New York.



Fig. 7: Installation shot showing the exhibition *Evidence Revisited* at the Photographer's Gallery, London, 2005.

A1 is the first photograph of the first group. It is important that group A is the first group presented and that the exhibit ends with E.⁹

The letter shows that the arrangement was prescribed very precisely to ensure that the work was presented at its best. The photographs were grouped in the same manner as in 2004, but without any further subgroups created by assembling several photographs in one frame.¹⁰ For this purpose, it was not just the frame that was marked but also the reverse of the photographs: each photograph is labeled with a combination of a capital letter and a number. As there are no captions, this labeling practice appears to be a useful method to deal with the numerous photographs. Moreover, the order of presentation determined by curatorial gestures reflects an order that is closely linked to the practices in the photographic collection. After the Center for Creative Photography purchased the *Evidence* photographs in 1977, they became part of the photographic collection and were registered. The arrangement of the photographs in the collection file is according to the presentation in 1977, which means that the photographs presented in spatial proximity to each other are listed sequentially in the file. In other words, the classifying order presented in the spatial arrangement represents archival practices and vice versa.

My previous observations on *Evidence* have clearly demonstrated that the archive is a central point of reference for the artistic treatment of the photographs found. By dismissing

⁹ "Instruction for the installation of the traveling exhibition, Evidence," file "Evidence – traveling exhibition," AG 1:2:3:3, Center for Creative Photography.

¹⁰ Concerning the spatial arrangement, it says: "When preparing the lay-out of the exhibit, please allow ample space between each group as to clearly set one group off from another. If space permits, please exhibit the photographs in a linear presentation without stacking." (Instruction letter, Note 9)

conventional archival practices, the *Evidence* photo book stimulates a rethinking of arranging and presenting which attempts to overcome the documentary weight of the photographs by highlighting the imagery. Creating an arrangement that, albeit fixed, is characterized by an associative approach is in stark contrast to the often one-dimensional ordering of photographs practiced in traditional archives. Further, archival practices such as classifying and arranging are evident when the photographs are on display in the gallery space as the exhibitions organized by the Center for Creative Photography show. Whereas the sequencing of the photo book disrupts any sense of traditional narrative progression, the arrangements carried out by the CCP establish a strong choreography according to classifying modes. The exhibition display is opposed to the open character of the photo book, while simultaneously highlighting its practices as an archiving and collecting institution following the idea of a strong narrative.¹¹ It is not least this mode of presentation that has caused a decisive shift in the artistic work and the meaning of the photographs. Used as photographic material for creating the book, the photographs have been ascribed an aesthetic value themselves. At the same time, by focusing on the photographs as aesthetic objects in the gallery space, the photo book has lost its original character; the book is sometimes presented in a display case or even missed in the exhibition space.¹² In the course of such exhibition practices, the photo book may disappear behind the photographs and lose its role as actual artwork in some displays.

In the 2004 show, another curatorial strategy that affects the reception of the artwork was used when archival material was exhibited in addition to the photographs. Letters of correspondence documenting the artistic process and contemporary reviews were presented in display cases. Through the exhibitors presenting other archival material, the photographs have completely lost their character as documents. Once more, the emphasis was on the meaning of the *Evidence* photographs as images with an intrinsic value.

Cataloging the *Evidence* photographs—production of meaning in the photographic collection

After discussing the *Evidence* project against the background of archival practices as artistic and curatorial strategies, I would now like to focus on a subject that is outside the realms of visible representations as the *Evidence* project manifests itself in particular in the cataloging practices within two photographic collections. Provided that the practices applied of registering, categorizing, and presenting the photograph influence its meaning, I would like to point out how the treatment affects the perception of the *Evidence* photographs.¹³

My analysis focuses on two institutions that possess photographs which are part of the *Evidence* project: the Center for Creative Photography at the University of Arizona (CCP) and the San Francisco Museum of Modern Art (SFMOMA). As mentioned above,

¹¹ As Elizabeth Edwards pointed out, the archive is not a neutral space but is highly mediated, “constituting the process of archiving as a form of narrativising in itself” (Edwards 2011, 52).

¹² Although the photo book is present in the gallery space, its presentation often disregards the book’s central function for the *Evidence* project, like, for example, in the *Larry Sultan Retrospective* that was on display in the San Francisco Museum of Modern Art in spring 2017. Beside other publications and catalogs, the *Evidence* book was made available in the last gallery.

¹³ Outlining her concept of “diplomats,” Joan M. Schwartz refers to “the mediating influence of patrons, writers, editors, designers, publishers, and a host of others who determine the photographic documents we see, the meaning they communicate, and the contexts in which we confront them.” Thus, even the registrar has to be considered in his or her influential role on the meaning of the photographs (Schwartz 2012, 13).

in 1977, the CCP purchased a total of 243 photographs Mandel and Sultan had gathered for the purposes of creating the photo book, intended as a preselection. Most of these are prints taken directly from the archive (showing inscriptions and stamps), partly reproductions made for Mandel and Sultan, and a few prints made from the original negatives by the artists themselves.¹⁴ The SFMOMA collection includes 44 prints the museum purchased in 1993. Similar to the photographs in the CCP collection, the markings on the reverse of the prints vary; some show stamps and handwritten notes while others do not have any inscriptions except for the inventory number.

The CCP and SFMOMA collections include several photographs of the same motif beside this photograph depicting the imprint of a hand on sandy soil. The SFMOMA collection file depicts the hand similarly to the photo book, whereas in the CCP file the photograph is reversed, the hand is facing upward (see Figs. 9–11). This is not a slight change but one with a tremendous effect that makes us aware how human vision is predetermined: when rotated 180 degrees (see Fig. 8 in *Hyperimage*), the imprint becomes a relief. While the CCP's image showing the hand as an imprint pays attention to the original use of the photograph to secure evidence,¹⁵ that of SFMOMA refers to the usage of the photograph within art contexts. Equally, a different approach to the photographs becomes obvious in the authorship's registration. Distinguishing between the authorship of the photograph and the artwork, the CCP mentions both the photographer (*anonymous*) and the artists Mandel and Sultan, whereas the authorship of the photograph is assigned to the artists only in the SFMOMA collection. Moreover, the photographs are designated as "commercial prints" and thus considered to be photographic documents by the CCP. While the photographs are clearly ascribed an artistic status in the SFMOMA collection, the cataloging practice of the CCP also indicated the original provenance of the prints. This brief comparison shows that the *Evidence* photographs are considered and thus registered differently in the two museums.

As discussed earlier, the different cataloging of the photographs reflects distinct approaches to photography. Furthermore, the differently nuanced treatment of the photographs reflects an uncertainty which has arisen as a result of the introduction of non-art photographs into art contexts. The tendency of exhibiting photographs produced for the purposes of documenting and reporting increased in the 1970s and evoked a discussion about the appropriate manner of presenting these photographs within museum contexts.¹⁶ In 1977, Hilton Kramer deplored the associated risk of aestheticization of these photographs in an essay published in *The New York Times* (Kramer 1977). *Evidence* also became a focus of the critique at the time: the presentation of the photographs was discussed when Davis Pratt, curator of the Fogg Art Museum, Harvard University, received a box with framed prints. In 1978, the *Evidence* prints were sent to Pratt for an upcoming exhibition. Davis Pratt criticized the presentation of the photographs on the grounds that it dissolved the photographs' original contexts.¹⁷

¹⁴ Upon request, the two artists were provided with original photographs, reproductions, or original negatives by each institution. This information was given by Mike Mandel during an e-mail correspondence in spring 2016.

¹⁵ The reverse of the photograph bears the handwritten inscription "Oakland Police."

¹⁶ Among others, Douglas Crimp and Rosalind Krauss reflected on what happened to non-artistic photographs once they became part of art contexts (see Crimp 1989; Krauss 1998, 43).

¹⁷ As Sandra S. Phillips outlined, the presentation of the photographs had changed since 1977. The traveling exhibition organized subsequently by the CCP presented the photographs in frames (Phillips 2003).

SF MO
MA

93.43.21

Mike Mandel and Larry Sultan

Untitled, from the installation Evidence

1977

gelatin silver print

8 in. x 10 in. (20.32 cm x 25.4 cm)

Purchase through a gift of Mary and Thomas Field, the Accessions Committee Fund and the Foto Forum Fund



93.43.22

Mike Mandel and Larry Sultan

Untitled, from the installation Evidence

1977

gelatin silver print

10 in. x 8 in. (25.4 cm x 20.32 cm)

Purchase through a gift of Mary and Thomas Field, the Accessions Committee Fund and the Foto Forum Fund



Fig. 9: Extract from the Object Summary, Photographic Collection of the San Francisco Museum of Modern Art.




Fig. 10: Double-page spread from *Evidence*.

Center for Creative Photography, University of Arizona


Object Summary

1. **Maker:** Photographer unknown
 untitled, n.d.
Print Category: commercial print
 Gelatin silver print
 Overall, Primary Support: 8 1/16 x 10 in. (20.5 x 25.4 cm)
 Image: 7 5/8 x 9 1/2 in. (19.4 x 24.2 cm)
 Purchase
 77.72.1



Signed:
Inscription:
Edition:

2. **Maker:** Photographer unknown
Printer: Oakland Police
 Photograph
 untitled, before 1977
Print Category: commercial print
 Gelatin silver print
 Overall, Primary Support: 9 15/16 x 8 3/16 in. (25.3 x 20.8 cm)
 Image: 8 1/8 x 6 1/2 in. (20.7 x 16.5 cm)
 Purchase
 77.72.2



Signed:
Inscription: print recto--"91%", "#2", arrow (indent only) (Anon)
 print verso--"Oakland Police", "AZ" (twice) (Anon)
Edition:

Fig. 11: Extract from the Object Summary, Center for Creative Photography, University of Arizona.

In a paradigmatic way, Pratt's criticism shows how differently the photographs have been perceived: while Pratt wanted to visualize the photographs' former status as documents, the CCP presented the photographs as fine art objects. This different approach is also reflected in sometimes contrasting receptions of the visual representations of *Evidence*. When published in 1977, the book was partly mistaken for a publication documenting the exhibition, and not considered to be an art or photo book.¹⁸ In fact, *Evidence* was regarded as a curatorial work, given expression by Robert Heineken who raised the ironic question whether *Evidence* was a simple curatorial work or an artistic act (Heineken 1977).

The fact that the *Evidence* prints were presented as art photographs in exhibition contexts is not only a curatorial decision but is determined by the cataloging practices the prints have undergone by becoming part of photographic collections. Although the CCP's registration takes account of the diverse contexts of the photographs, their former original status and their meaning within the artistic process are neglected by a range of practices. The photographs have lost their status as archival material in an artistic process after entering the photographic collection. The prints are part of the fine art photography collection, stored in boxes, each put in a plastic cover, and treated with special care. Classified, categorized, and subsequently presented as art photographs, the *Evidence* photographs are considered as such. Finally, in the course of such practices, the artwork has been shifted in such a way that the meaning of the photographs superimposes the photo book.

¹⁸ Among others, Lew Thomas recognized the specific character of the book as an art or photo book (see Thomas 1977, 45).

Conclusion

The act of cataloging in a photo collection is shaped by individual decisions made by the registrar on the basis of institutional claims. Consequently, the cataloging practice has to be reflected adequately and adjusted to meet the requirements of each photograph. The previous study demonstrates that the *Evidence* prints are cataloged, treated, and thus presented first and foremost as aesthetic objects whereas their histories or subsequent stages are barely visible anymore. But as Joan M. Schwartz stated, “archivists can engage the photographic document more fully, focusing not on its content but rather on the functional context of its creation and action(s) in which it participated” (Schwartz 2012, 15). The contexts and actions that affect the meaning of the photographs have to be presented in order to be true to their histories. As the *Evidence* photographs can no longer be considered to be either aesthetic objects or historical documents but are both at the same time, the photographs have to be experienced in their diverse lives within the archive. On the one hand, this means revealing the diverse contexts the photographs are embedded in and, on the other hand, it means distinguishing between the multiple prints with regard to their diverse materiality and purpose.¹⁹

This also applies to the presentation of the *Evidence* photographs in exhibition contexts. In order to avoid a potential aesthetic status, the position of the photographs within the artistic process should be transparent and mediated, and their various histories should be presented. Since the way the photographs are cataloged, categorized by keywords and genre, has a strong impact on how the photographs are viewed and presented, the presentation of these photographs has to be reflected in order to avoid a one-dimensional narration that fails to take account of their specific characters. As far as the *Evidence* photographs are concerned, this means bearing in mind the different contexts the photographs have appeared in as well as revealing their status within the artistic process. Further, to reflect these contexts requires presenting the diverse materiality of the photographs, their different treatment, and, finally, their various forms of visual representation.

List of Figures

Fig. 1: Book cover of *Evidence*, ed. by Mike Mandel and Larry Sultan, 2. Edition, New York: D.A.P., 2003. Hardcover, 92 pages, 61 black/white photographs, 23.5 x 25.5 cm.

Fig. 2: Double-page spread from *Evidence*, ed. by Mike Mandel and Larry Sultan, 2. Edition, New York: D.A.P., 2003. Hardcover, 92 pages, 61 black/white photographs, 23.5 x 25.5 cm © Mike Mandel and Larry Sultan.

Fig. 3: Double-page spread from *Evidence*, ed. by Mike Mandel and Larry Sultan, 2. Edition, New York: D.A.P., 2003. Hardcover, 92 pages, 61 black/white photographs, 23.5 x 25.5 cm © Mike Mandel and Larry Sultan.

¹⁹ As mentioned above, the prints vary in their materiality also because of their different production processes and provenance. Further, beside *original* prints—those that were provided by the archives or printed by the artists in 1977—there are exhibition prints, for example.

Fig. 4: Double-page spread from *Evidence*, ed. by Mike Mandel and Larry Sultan, 2. Edition, New York: D.A.P., 2003. Hardcover, 92 pages, 61 black/white photographs, 23.5 x 25.5 cm © Mike Mandel and Larry Sultan.

Fig. 5: The *Evidence* photographs on display at the *Larry Sultan retrospective*, Kunstmuseum Bonn © Kunstmuseum Bonn, 2015, photo: David Ertl, Cologne.

Fig. 6: The *Evidence* photographs on display at the Larry Sultan and Mike Mandel exhibition, Fotomuseum Winterthur © Fotomuseum Winterthur, exhibition by Larry Sultan & Mike Mandel, 2010.

Fig. 7: Sultan, Larry & Mandel, Mike. *Larry Sultan and Mike Mandel: Evidence Revisited*. Organized by the Center for Creative Photography, University of Arizona. Installation View. The Photographers' Gallery, 5 & 8 Great Newport Street, WC2H 7JA. (October 7, 2005 –November 2, 2005) Courtesy of The Photographers' Gallery, photo Jason Welling.

Fig. 8 (in Hyperimage only): *Untitled*, from the installation *Evidence*, 1977, gelatin silver print, 20.32 x 25.4 cm © Mike Mandel and Larry Sultan.

Fig. 9: Extract from the Object Summary, Photographic Collection of San Francisco Museum of Modern Art, provided in 2016.

Fig. 10: Double-page spread from *Evidence*, ed. by Mike Mandel and Larry Sultan, 2. Edition, New York: D.A.P., 2003. Hardcover, 92 pages, 61 black/white photographs, 23.5 x 25.5 cm © Mike Mandel and Larry Sultan.

Fig. 11: Extract from the Object Summary, Center for Creative Photography, University of Arizona, provided in 2016.

References

- Crimp, Douglas (1989). The Museum's Old/ The Library's New Subjects. In: *The Contest of Meaning: Critical Histories of Photography*. Ed. by R. Bolton. Cambridge, MA: MIT Press, 3–14.
- Edwards, Elizabeth (2011). Photographs: Material Form and the Dynamic Archive. In: *Photo Archives and the Photographic Memory of Art History*. Ed. by Costanza Caraffa. Berlin and Munich: Deutscher Kunstverlag, 47–56.
- Geimer, Peter (2015). Vom Schein, der übrig bleibt. Bild-Evidenz und ihre Kritik. In: *Auf die Wirklichkeit zeigen. Zum Problem der Evidenz in den Kulturwissenschaften. Ein Reader*. Ed. by Helmut Lethen, Ludwig Jäger, and Albrecht Koschorke. Frankfurt a.M. and New York: Campus Verlag, 181–218.
- Heinecken, Robert (May 1977). Open and Shut Case. *Afterimage*:6.
- Huginin, James (1977). Evidence. *The Dumb Ox* 5.
- Kramer, Hilton (November 1977). The Paradoxical Museumization of Photography. *The New York Times*:35.
- Krauss, Rosalind (1977). Notes on the Index: Seventies Art in America. *October* 3:68–81.
- (1998). Die diskursiven Räume der Photographie. In: *Das Photographische*. München: Fink.
- Moniot, Drew (1979). *Untitled* Review on Evidence. *Studies in the Anthropology of Visual Communication*:73–76.
- Phillips, Sandra S. (2003). A History of Evidence. In: *Evidence*. New York: Art Publ.
- Ruchatz, Jens (2012). Kontexte der Präsentation. Zur Materialität und Medialität des fotografischen Bildes. *Fotogeschichte* 124:19–28.
- Schwartz, Joan M. (2012). 'To Speak Again With a Full Distinct Voice': Diplomats, Archives, and Photographs. In: *Archivi fotografici: spazi del sapere, luoghi della ricerca*. Ed. by Costanza Caraffa and Tiziana Serena. Rome: Carocci Editore, 7–24.

- Sekula, Allan (2003). Reading an Archive: Photography Between Labour and Capital. In: *The Photography Reader*. Ed. by Liz Wells. London u.a.: Routledge, 443–452.
- Serena, Tiziana (2011). The Words of the Photo Archive. In: *Photo Archives and the Photographic Memory of Art History*. Ed. by Constanza Caraffa. Berlin und München: Deutscher Kunstbuchverlag, 57–71.
- Spieker, Sven (2008). *The Big Archive: Art from Bureaucracy*. Cambridge und London: MIT Press.
- Thomas, Lew (1977). Photography & Ideology: Theory, Review and Correspondence. *Art Contemporary* 8:44–45.

Chapter 14

The Unbearable (and Irresistible) Charm of “Duplicates”

Petra Trnková

Introduction

One of the least appreciated yet most amazing categories within the photographic discourse are “duplicates” or doubles. Duplicates are not identical, as is often thought, but they are almost identical copies. This understanding of the term is more prevalent today, as we have been becoming more captivated by a material point of view categorizing each photographic copy as an original autonomous object, a unique record of its own history, instead of as a plain bearer of photogenic information. Joan M. Schwartz defines duplicates aptly as “multiple original photographic documents, based on the same image, but made at various times, for diverse purposes and different audiences” (Schwartz 1995, 46). Nonetheless, while bearing in mind the complexity and relativity of the term “duplicate,” I believe that it serves our present purposes quite well.¹

The potential of duplicates can be very well explored in eight photographs by Andreas Groll (1812–1872) from the collection of the Institute of Art History (IAH) of the Czech Academy of Sciences in Prague. This paper aims to demonstrate that duplicates can be a valuable and irreplaceable source of knowledge, able to rewrite an established narrative order. I argue that they can serve as a perfect means to learn about production, distribution, as well as past and present reception and application of photographs in both specific and general contexts. Also, I argue that one should always ask “whether” to discard the doubles, rather than “how” or “when” as can sometimes be heard even from promoters of the “photo-object” approach that stresses the importance of material uniqueness of each photograph (Caraffa 2011, 23).

In the first part, I will introduce the origins and the image content of the pictures in question. Then I will look at some of the material aspects and specific qualities of the eight photographs as individual objects. In the third and the fourth sections, I elucidate two periods of time when our “doubles” came together for the first time ever and actually turned into a series, and as such became a subject of research. I will conclude with reflections about the need and the consequences of our knowledge of duplicate photographs with regard to a specific case on the one hand, and to the common history of photography on the other.

The image: the town hall in Prague’s Old Town

The eight photographs in question (see Fig. 1), which were created by Groll in the 1850s–1860s, depict one of the best known and most recorded edifices in Prague—the town hall

¹ With the growing interest in “duplicates” that was observed at the Photo-Objects conference in Florence in 2017, we can expect detailed discussion about terminology, too.



Fig. 1: The series of eight photographs of the town hall in Prague’s Old Town by Andreas Groll, 1856, Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. nos. 572–579, photo: Petra Trnková.

in the Old Town with its famous astronomical clock. If we look at guide books and prints of the period, we will see that the popularity of this eminent building and its picturesque surroundings among tourists dates back at least to the early nineteenth century. Tourists were not the only ones enchanted, however. Since the building served as authentic evidence of the famous past of the Bohemian capital, it also attracted attention from ciceroni as well as scientists—archaeologists and historians of architecture—throughout the whole nineteenth century.

Judging by the image content, the eight photographs could certainly be perceived as a precious souvenir of a trip to Bohemia from around 1860, whether from a tourist’s or an expert’s point of view; this becomes obvious particularly if we focus on the nicest of the eight copies (see Fig. 2). However, in the other “almost identical” cases of the series, particularly inv. no. 579 (see Fig. 3), this interpretation would be hardly satisfactory.

There is no direct evidence of the photograph’s original purpose, such as bills, letters, or other documents which would lead directly to its initiator or commissioner. However, drawing on our present knowledge of Groll’s work, it is possible to presume that it was commissioned by the Austrian state office for the monument preservation called the Central Commission for Research and Preservation of Monuments (*Zentralkommission zur Erforschung und Erhaltung der Baudenkmale*, see Trnková 2015, 237–245). The office, established in Vienna in 1850, aimed first and foremost to identify, record, and bring attention to monuments which were—according to its criteria—worth studying and preserving (Frodl



Fig. 2: The town hall in Prague's Old Town, Andreas Groll, 1856, albumen print, 27 × 23 cm (photo), 42 × 32.3 cm (cardboard), Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. no. 572, photo: Vlado Bohdan / Institute of Art History, Czech Academy of Sciences.

1988). The city of Prague with its splendid late Gothic architecture was one of the places, along with Vienna and Kutná Hora (Central Bohemia), that received special attention.

Directed by the prominent figure of the Vienna School of Art History Rudolf Eitelberger von Edelberg (1817–1885),² the Commission very soon engaged photographers (both laymen and professionals) to help document selected monuments. They were particularly engaged in recording the state of buildings prior to renovation. Groll, who from the very beginning of his career specialized quite systematically in architectural photography rather than portraiture, was among the very first photographers involved in the mission (Faber 2015a, 30–32, 53–57).

Judging by his own signature and the dates (see Fig. 4) inscribed in pencil on some of his works, Groll came to Prague for the first time to photograph the local medieval architecture no later than in 1856. As well as being a touristic attraction, the town hall was then also a subject of a long-lasting controversy between the Central Commission and the city administration, with each asserting an opposite conception of monument conservation and the building's "architectural" future, particularly when it came to the southern frontage.³

In the early 1850s, the south wing (see the left-hand side of Fig. 2) was regarded as the most authentic part of the whole building complex, perfectly reflecting the Bohemian king-

² Schlosser 1934, 155–159; Brückler and Nimeth 2001, 58–59; Lachnit 2005. Eitelberger was one of the front promoters of applying photography in art-historical, archaeological and museological practice, see Eitelberger 1863, 123–126.

³ Groll's involvement in the discussions is highly unlikely, considering his social status and his field of knowledge.



Fig. 3: The town hall in Prague's Old Town, Andreas Groll, 1856, albumen print, 27 × 21.3 cm (photo), 27.8 × 22 cm (cardboard), Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. no. 579, photo: Vlado Bohdan / Institute of Art History, Czech Academy of Sciences.

dom's greatest eras of the fourteenth to sixteenth centuries. Consequently, the south wing became the central theme of discussions surrounding the building's appropriate appearance. The municipality was pushing ahead the plan to adapt the building by emphasizing putatively “Bohemian”—and from a certain point in time also “Czech”—character. On the other hand, the state—in this case represented by the vicegerency, the Central Commission and its deputy Johann Erasmus Wocel—favored conservation of the building complex in its current state over reconstruction or the supposedly ideal adaptation.

Groll photographed this complex several times, from different angles and for more than one reason. On his visit in 1856, rather than on the most discussed and controversial south part of the building, he focused on the east wing and on the south-east corner, specifically the oriel window of the chapel (see Fig. 2) situated on the upper floor. The fact that Groll did not just take another picture of a popular tourist attraction is evident from the photographer's stock catalog from 1864, which lists the photograph as the “Town hall chapel” (see Groll 1865). In the 1850s, oriel windows, usually the most authentic parts of Gothic buildings, attracted the particular attention of many archaeologists (historians and art historians), including conservators from the Viennese Central Commission for Research and Preservation of Monuments, and photography, next to more prevalent drawing and measuring, proved to be an excellent means to record such ornate and rather extensive architectural details. For similar reasons, the photographs were valued also by architects, particularly the proponents of historicism, for whom such an aide-mémoire never expired. This explains why there



Fig. 4: “Photo A. Groll 1856.” The town hall in Prague’s Old Town, Andreas Groll, 1856, albumenized salted paper print, 28.4 × 23.2 cm (photo), 37.6 × 30.5 cm (cardboard), Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. no. 576, photo: Vlado Bohdan / Institute of Art History, Czech Academy of Sciences.

have been so many copies of Groll’s photographs preserved in local collections, especially in museums and institutions involved in monument care, as well as architects’ estates.

Eight photographs as individual objects

Without trying to impugn the importance of other aspects of Groll’s production, or to deconstruct the only recently revised narrative (Faber 2015b), I believe we need to look as closely as possible at the material issues connected to his doubles; just as we do when studying old masters’ paintings. I would like to draw attention to a few selected features that emerge when we examine the eight photographs as individual objects. They are capable of shifting ideas not only about Groll and photographic production in his era but also about the current photo collection management and our understanding of the history of photography in a much broader context. The following findings and comments are based primarily on careful and recurring observations of the photographs’ material qualities.⁴

The first thing we should look into is the negative. Yet, here, we have to do so by means of the positives because the negative itself is missing, as is often the case. Analyzing the details in all images carefully, we realize that two photographs (see Figs. 5 and 6) in our series were, in fact, printed from a different negative to the rest. This is very clearly evident from

⁴ Unfortunately, I have not had the opportunity to apply more sophisticated methods, such as XRF or FTIR analyses.



Fig. 5: The town hall in Prague’s Old Town, Andreas Groll, 1856, salted paper print, 27.8 × 22.5 cm (photo), 38 × 32 cm (cardboard), Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. no. 573, photo: Vlado Bohdan / Institute of Art History, Czech Academy of Sciences.

the shadows and even more so from the fuzzy, ghost-like figure of a guard standing in front of the town hall; incidentally, these “ghosts” (compare Fig. 2 and 5 in Hyperimage) first sparked my interest in the series. Knowing for certain that Groll exposed—quite expectedly—more than one negative here, we become less prone to believe to the rather common idea of a photographic genius traveling a long way to Prague and climbing up to the top floor of a building with all his heavy photographic equipment to produce just one perfect shot of the town hall.

Another point concerning one of the two negatives—let’s label it “A”—is the complete fuzziness of photograph no. 575 (see Fig. 6). Without being able to see its clearly sharper “twin” image (see Fig. 5) printed from the very same negative, we would tend to see it as the rare calotype rather than a salted paper print from a glass plate negative, which was much more common in Central Europe. The only explanation I can offer here is careless handling of the light sensitive material while printing the positive. Thus, neither is a calotype; one of them was just printed in a slapdash manner.

Other items capable of breaking the “linearity” and traceable in the negative through positives are grit-like stains (see Fig. 4) clearly visible in the bottom right-hand corner of each of the six prints made from the negative “B”. These are most apparent in photograph number 576. This could suggest that the prints, although authentic and signed by the author, might have been produced from a copy negative and not from the original glass plate that Groll exposed in his camera from across the street. In the era of the collodion wet plate



Fig. 6: The town hall in Prague's Old Town, Andreas Groll, 1856, salted paper print, 28.3 × 24 cm (photo), 35 × 28.7 cm (cardboard), Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. no. 575, photo: Vlado Bohdan / Institute of Art History, Czech Academy of Sciences.

process, in particular travelling photographers like Groll were struggling to reduce their costs and alleviate physical hardship by creating a series of “master positives” right on the spot and then “recycling” the expensive glass plate for another shot.

What is perhaps more striking than the details, however, are the differences in the overall appearance of each photograph that may reflect the quality of printing and “postproduction,” and also how the material was treated throughout the next 15 or 16 decades. At first sight, the photographs vary in technology: there are two salted paper prints (see Figs. 5 and 6) of two very distinct colors, three albumenized salted paper prints (compare Fig. 4 with Figs. 7 and 8 in Hyperimage), and three albumen prints (compare Figs. 2, 3 and Fig. 9 in Hyperimage). This implies very clearly a rather long interval between the production of the earliest and of the latest print that could be 15 years or even more: in the first few years of his career, Groll used salted paper; albumenized salted papers were applied for a short period of time in the late 1850s (around 1857–1859); and albumen prints were commonly produced from around 1860 up until the end of the photographer's career in the late 1960s.

The mounting provides a great deal of information. We can learn a lot from its format, material, color, state of preservation, as well as inscriptions, whether these are made by the author or subsequently by an owner. From this perspective, one photograph inv. no. 572 (see Fig. 2) is particularly noteworthy. Today, it is filed within the series of Groll's Prague views, specifically in the section regarding the town hall. However, the design of the title, which is inscribed on the front of the cardboard—“Prag Rathhaus Capelle,” suggests quite clearly



Fig. 10: Hotel Munsch, Vienna, Neuer Markt 5, Andreas Groll, after 1866, albumen print, 28.4 × 22.3 cm (photo), 47.3 × 32.3 cm (cardboard), Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. no. 697, photo: Jitka Walterová / Institute of Art History, Czech Academy of Sciences.

that the print once used to be part of another coherent pictorial series. Its fragments can actually be found in other parts of the IAH photographic collection, mostly among prints categorized as “Viennese views.” They all have the same layout (see Fig. 10)—the same typography, same ink, a similar quality of print, and are made of the same material, as well as the width of the supporting layer being the same.

The only significant difference is the current height of the mounting board. On closer inspection, we can see that the Prague photograph, which used to be part of the same collection as the Viennese views, was for some reason later cropped at the top (compare Fig. 2 to Fig. 10 in Hyperimage). Perhaps this was because of a new owner, or a change to the cataloging system, but definitely due to a need to place this photograph—unlike the Viennese views—in another, much smaller box. This link, detected between the Prague photograph and the Viennese *veduta*, enables us to identify their former owner (probably the very first one): some of the photographs—or, more specifically, their mount boards—carry handwritten notes and references that lead to the Czech architect Josef Schulz (Noll 1992). Very few people in this region had a better opportunity and reasons to build up their own collection of photographic samples than Schulz: not only was he wealthy enough to purchase photographs from specialized dealers and professional photographers, but from his twenties onward, he

also took photographs himself. The “fitted” typography as well as numerous breaks visible on many albumen prints from his collection suggest that Schulz, despite his financial means, favored purchasing cheaper loose prints and having them mounted afterwards over buying rather luxurious, nicely cut and mounted pieces (see Fig. 4) possibly with a photographer’s signature.⁵

All this, together with appropriate handling and high quality of the print itself, explains why the photograph inv. no. 572 has been so well preserved, unlike the last piece of the Prague series; this image has almost disappeared (see Fig. 3).⁶ (Speaking about the latter, it should be noted that the whole image—more precisely the architecture—was, for unknown reasons, additionally outlined in pencil.)

The inscriptions referring to the authorship and production are another most relevant source of information, along with image details, mounting, and inscriptions referring to the owner. Two of the eight prints in question were signed “A. Groll” in pencil (see Figs. 4 and 5 in *Hyperimage*) and thus practically authorized by Groll after being mounted on a standard mount board. Three other photographs, which were quite clearly printed later, received his signature through the negative. This makes them truly interesting, because as such they are carrying more than just a signature. In two cases the inscription reads “A. Groll 3” (see Fig. 2 and Fig. 9 in *Hyperimage*). But in the one picture, the number “3” is crossed off and replaced by a number “202” together with the word “Radhaus”⁷ (see Fig. 3). Judging by many other similar cases (including works by the same author), both numbers—“3” and “202”—should theoretically correspond to an item listed in a photographer’s stock catalog. Yet none of them coincide with the only known issue of the catalog from 1864, in which the only photograph matching such an image bears the ordinal number “54” and refers to the negative number “162.” The most likely explanation seems to be the existence of (an)other catalog(s) or reference system(s), unknown today.

A story on its own, when it comes to Groll, is the retouching of negatives and printed copies, as well as other secondary image improvements, such as masking. From a researcher’s point of view, it is precisely this field that makes Andreas Groll’s work so special—the perfect material to learn about nineteenth-century photographic production in a complex manner. Due to considerable fading of his works, all efforts to hide technical mistakes are now foiled, as the dark and almost fadeless retouching ink reveals and sometimes even emphasizes all the imperfections, including the tiniest ones or those caused by the photographer himself. There are plenty of striking examples, particularly when we look at later albumen prints, but I would like to point out just one of them—once again, the last picture in the Prague town hall series. Although accomplished quite carefully, the retouching clearly did not fulfill its purpose in the long term perspective: as a result of this, we can easily see that this print was made from a broken glass plate negative (see Fig. 3). This means that this is the latest piece depicting the town hall that is known at present, if not even the last one produced.⁸

⁵ Judging by the high standard of the mounting, he must have commissioned a professional mount maker.

⁶ The image most probably deteriorated due to poor quality of the mounting material, in particular the adhesive or the supporting layer.

⁷ Misspellings like this, notoriously occurring on Groll’s photographs, are very likely due to the author’s lack of proper education, see Faber 2015a, 32–33.

⁸ In later years, this practice was in fact nothing unusual in Andreas Groll’s enterprise.

(Re)collection #1

It has already been mentioned that the time span between production of the earliest and the latest prints could be up to twenty years. This is quite logical, considering the timeless subject—a historic building. There is no doubt that Groll was able to and perhaps even requested to reuse the negatives, which were originally commissioned (and paid for) by the Central Commission, in his next business. Quite legally, he could go on with printing and selling some of the photographs and series on his own to other clients until the end of his career (cf. Faber 2015a, 74). Photographs like those from Prague were printed in hundreds, if not in thousands, and now can be found in many public and private collections.

The eight photographs of the town hall, now in the collection of the Institute of Art History, came together only in the 1920s–1940s. The man behind it was the Czech art historian Zdeněk Wirth (1878–1961) who had a special interest in nineteenth-century photography. Wirth started his career around 1906 and very soon, as well as being an employee of the Museum of Applied Arts in Prague, he was appointed by the Viennese Central Commission as a regional conservator in Bohemia (Uhlíková 2010). After the break-up of the Austro-Hungarian Empire in 1918, he began to become a key figure in the fields of art-historical topography, monument preservation, and cultural administration in Czechoslovakia. He elevated his status even more in 1923, when he became the head of the cultural section at the Czechoslovak Ministry of Education.

Despite his extensive involvement in the state cultural administration, Wirth was able to continue with his own research, often reaching beyond mainstream areas.⁹ Sometime in the 1920s–1930s, in addition to other research subjects that were rather unorthodox at that time, he became interested in the history of photography, and even within this then marginal field, he selected rather obscure topics, including Andreas Groll. Unfortunately, we do not know what exactly triggered his interest in photography history and when. If it were in the 1930s, he might have been inspired by the work of his Viennese peer Heinrich Schwarz (born in Prague, 1894–1974)—the author of the very first monograph on David Octavius Hill (Schwarz 1931). What is very clear is that Wirth’s research into the history of photography culminated around 1939/1940: firstly, with an extensive exhibition on the photography’s sesquicentennial, and secondly, with a monograph study on Groll, which remained the only publication about this photographer right up until 2015 (Wirth 1939–1940, 361–376; 1939).

Wirth’s research into nineteenth-century photography drew greatly from a vast photographic collection which he was able to put together owing to his knowledge, contacts, and influence at the highest political level. Throughout his life, Wirth assembled over one hundred thousand negatives and positives, more than six hundred of which could be associated with Groll.¹⁰ He also identified many more photographs in other collections, both in Czechoslovakia and elsewhere.

(Re)collection #2

After Wirth’s death in 1961, a large part of the photographic collection, along with other visual and written material he gathered throughout his long career, was assigned to the IAH.

⁹ Although he was a graduate of Charles University in Prague in history and bohemistics, Wirth’s practice was more akin to the Vienna School of Art History.

¹⁰ To this day, it remains the second largest collection of photographs by Andreas Groll.

Arousing little interest, it remained intact there until 2008—uncataloged and mixed with other items such as books, manuscripts, correspondence, and diaries. It became a true sediment of visual knowledge (see Caraffa 2011, 12), a classic example of a forgotten photographic archive with all its attributes, including the cellar as a storage space and the overflow caused by a broken pipeline.

In 2007, the IAH directorate decided to establish an autonomous photographic collection by selecting all photographs from Wirth’s and other art historians’ estates held by the Institute. Up until this point, the photographs “were just there”—as Elizabeth Edwards said concisely with reference to a similar case¹¹—almost untouched for nearly five decades. In an effort to make the photographs known and eventually accessible, very courageous yet rather wild reorganization erupted. Within a short period of time, most of the photographic material was sorted out, removed from boxes, and separated from the rest of the archive.¹² The original boxes’ registration numbers, now written in pencil on the back of each photograph, are the mementos of the previous system. In accordance with traditional research interests and methodological approaches of the IAH, all photographs then began to be organized topographically.

Another survey was started only a year later, in summer 2008, now led by a photo historian and aimed to look not only at images but also at photographs as such, and in a much more complex way. For the first time, the photographs from Wirth’s and other art historians’ archives administered by the IAH began to be looked at and actually managed as an autonomous, full-fledged photographic collection (Trnková 2010). Among more than one hundred thousand prints, negatives, and transparencies, over six hundred items connected to Groll emerged. Along with original salted paper and albumen prints, later copies on gelatin paper were also identified, apparently corresponding to Wirth’s publications on the history of photography.

The “decontextualization” accomplished in 2007 completely disrupted the system, which was originally set up by Wirth. Naturally, this also affected Groll’s photographs now scattered over the whole collection, in accordance with the new topographical criteria. But it was not only in the case of Groll that photo-historical value seemed to prevail over art-historical. Rather than tools of art-historical topography, as they had been understood for many decades, the photographs were now recognized as key components of Central European history of photography and so it was decided to put all of Groll’s photographs together. It only transpired later that they were actually put back in the order in which they had been arranged while in Wirth’s possession. With this “once and future” configuration, other relations emerged which have inspired new research topics, including the “duplicates.” Their amount was striking from the very beginning and this simply could not have been ignored.

Here, I would like to mention the Viennese scholar Monika Faber, whose lifelong interest in Groll was known to most of her colleagues by then. She first came to Prague to inspect the “newly found Grolls” in 2009. Amazed at the number of duplicates, triplicates, and suchlike, she said “Why do you have so many?! Let’s swap!” Of course, it was just a hyperbole—an idea impossible to put into practice; and not just because she was a curator of the photographic collection of the Albertina in Vienna at that time. Her spontaneous reaction spoke for itself. Later on, in our joint research on Groll, the duplicates and other multiple

¹¹ See Elizabeth Edwards in this volume (Chapter 3).

¹² On the IAH archive and its other collections, see Roháček and Uhlíková 2010.

copies turned out to be in many ways an irreplaceable source of information about Groll and his work, and also a perfect means to learn about the photographic production of the 1850s and 1860s and not just with regard to Vienna or Prague.

The need for duplicates

The eight photographs by Groll show how far duplicates can broaden our knowledge of the history of photography, whether it regards one’s photographic career, photographic technology, use and treatment of photographs, conservation of photographic material, collection management, or other relevant aspects. In this case, it also tells a lot about transformations in the relationship between the history of photography and the history of art. In conclusion, I would like to touch upon a few points and ideas which seem most relevant in this specific context.

First, I would like to point out that by happy coincidence, Wirth’s archive was opened in the “era of the photographic object” and a thriving interest in materiality in photography. Had it been earlier, for example in the 1970s and 1980s when the research aimed almost exclusively at the “image,” the “supposedly same” doubles would have been unlikely to survive; particularly at the institute cherishing artistic value of unique pieces above all. In contrast, today’s interest in the history of photography is much more favorable to such “presumably neutral” objects as duplicates.

My second point bears on two crucial concepts bound with photography since its very beginning: reproducibility (or multiplication) and seriality, which are now both undergoing a form of revival within the photographic discourse. These concepts are largely discussed with reference to the omnipresent digitalization, but they are in fact essentially related to the aforementioned materiality. I do not mean to imply that digitalization is in conflict with materiality. Quite the contrary, they can work together: the materiality owes a great deal to digitalization and high resolution of images because the technology has compensated for a conventional magnifying glass, which used to be a tool needed for scanning photographs but now it is utilized routinely only by photo conservators and very little by photo-historians.

Another thing one that can be seen very easily through the duplicates today is how far the IAH collection system, which was set up in 2008–2009, has been affected by our preferences for image beauty, although the primary concepts are topography and the photograph as an object. If the duplicates had been cataloged later or known better, another permutation might have been considered. Most probably, it would have been the chronology (see Fig. 12) instead of the appeal (see Fig. 11).

These are just a few reasons why the questions “Why do you have so many?” or “When to discard the doubles?” are quite irrelevant. Nonetheless, these questions will be coming back like a boomerang, as we will always, at least subconsciously, favor the image over the object; no need to mention saturation of the store rooms, which is a common excuse for eliminating those identical pictures. All this is despite their communicative value, charm, familial relationship (Riggs 2016, 269), own history of each of them, or simply our natural fascination for “twins” or, here, for “octuplets.”



Fig. 11: The series of eight photographs of the town hall in Prague’s Old Town by Andreas Groll, 1856, Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. nos. 572–579.



Fig. 12: The series of eight photographs of the town hall in Prague’s Old Town by Andreas Groll, 1856, Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. nos. 575, 573, 576, 577, 578, 572, 574, 579.

Acknowledgements

I would like to thank Monika Faber from the Photoinstitut Bonartes in Vienna, whose research into nineteenth-century photography, particularly into the work of the Austrian photographer Andreas Groll, has been a great inspiration to me. Endless discussions with her inspired many of my thoughts and ideas presented in this essay. Also, my thanks go to Jens Gold from the Preus Museum in Horten, who, likely unwittingly, first sparked my interest in a specific series of eight photographs by Groll, which are in the limelight of this study.

List of figures

Fig. 1: The series of eight photographs of the town hall in Prague’s Old Town by Andreas Groll, 1856, Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. nos. 572–579, photo: Petra Trnková.

Fig. 2: The town hall in Prague’s Old Town, Andreas Groll, 1856, albumen print, 27 × 23 cm (photo), 42 × 32.3 cm (cardboard), Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. no. 572, photo: Vlado Bohdan / Institute of Art History, Czech Academy of Sciences.

Fig. 3: The town hall in Prague’s Old Town, Andreas Groll, 1856, albumen print, 27 × 21.3 cm (photo), 27.8 × 22 cm (cardboard), Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. no. 579, photo: Vlado Bohdan / Institute of Art History, Czech Academy of Sciences.

Fig. 4: The town hall in Prague’s Old Town, Andreas Groll, 1856, albumenized salted paper print, 28.4 × 23.2 cm (photo), 37.6 × 30.5 cm (cardboard), Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. no. 576, photo: Vlado Bohdan / Institute of Art History, Czech Academy of Sciences.

Fig. 5: The town hall in Prague’s Old Town, Andreas Groll, 1856, salted paper print, 27.8 × 22.5 cm (photo), 38 × 32 cm (cardboard), Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. no. 573, photo: Vlado Bohdan / Institute of Art History, Czech Academy of Sciences.

Fig. 6: The town hall in Prague’s Old Town, Andreas Groll, 1856, salted paper print, 28.3 × 24 cm (photo), 35 × 28.7 cm (cardboard), Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. no. 575, photo: Vlado Bohdan / Institute of Art History, Czech Academy of Sciences.

Fig. 7 (in Hyperimage only): The town hall in Prague’s Old Town, Andreas Groll, 1856, albumenized salted paper print, 28.7 × 22.9 cm (photo), 38.6 × 29 cm (cardboard), Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. no. 577, photo: Vlado Bohdan / Institute of Art History, Czech Academy of Sciences.

Fig. 8 (in Hyperimage only): The town hall in Prague’s Old Town, Andreas Groll, 1856, albumenized salted paper print, 27.8 × 22.6 cm (photo), 33.3 × 25 cm (cardboard),

Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. no. 578, photo: Vlado Bohdan / Institute of Art History, Czech Academy of Sciences.

Fig. 9 (in Hyperimage only): The town hall in Prague’s Old Town, Andreas Groll, 1856, albumen print, 29.3 × 24 cm (photo), 36 × 33 cm (cardboard), Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. no. 574, photo: Vlado Bohdan / Institute of Art History, Czech Academy of Sciences.

Fig. 10: Hotel Munsch, Vienna, Neuer Markt 5, Andreas Groll, after 1866, albumen print, 28.4 × 22.3 cm (photo), 47.3 × 32.3 cm (cardboard), Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. no. 697, photo: Jitka Walterová / Institute of Art History, Czech Academy of Sciences.

Fig. 11: The series of eight photographs of the town hall in Prague’s Old Town by Andreas Groll, 1856, Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. nos. 572–579.

Fig. 12: The series of eight photographs of the town hall in Prague’s Old Town by Andreas Groll, 1856, Institute of Art History, Czech Academy of Sciences, collection of photographs, inv. nos. 575, 573, 576, 577, 578, 572, 574, 579.

References

- Brückler, Theodor and Ulrike Nimeth (2001). *Personenlexikon: Zur Österreichischen Denkmalpflege*. Vol. 7. Horn: Berger.
- Caraffa, Costanza (2011). From Photo Libraries to Photo Archives: On the Epistemological Potential of Art-Historical Photo Collections. In: *Photo Archives and the Photographic Memory of Art History*. Ed. by Costanza Caraffa. Berlin and Munich: Deutscher Kunstverlag, 11–44.
- Eitelberger, Rudolf von (1863). Der Kupferstich und die Fotografie. *Zeitschrift für Fotografie und Stereoskopie* 7: 123–126.
- Faber, Monika (2015a). ‘... mit aller Kraft auf die Photographie verlegt ...’: Annäherungen an das Berufsbild eines frühen Fotografen. In: *Andreas Groll: Wiens erster moderner Fotograf. 1812–1872*. Ed. by Monika Faber. Salzburg: Fotohof Edition, 27–95.
- ed. (2015b). *Andreas Groll: Wiens erster moderner Fotograf. 1812–1872*. Salzburg: Fotohof Edition.
- Frodl, Walter (1988). *Idee und Verwirklichung: Das Werden der staatlichen Denkmalpflege in Österreich*. Wien, Köln, and Graz: Böhlau.
- Groll, Andreas (1865). *Verlags-Catalog von Andreas Groll, Photograph in Wien*. Vienna.
- Lachnit, Edwin (2005). *Die Wiener Schule der Kunstgeschichte und die Kunst ihrer Zeit: Zum Verhältnis von Methode und Forschungsgegenstand am Beginn der Moderne*. Vienna: Böhlau.
- Noll, Jindřich (1992). *Josef Schulz 1840–1917*. Prague: Národní galerie.
- Riggs, Christina (2016). Photography and Antiquity in the Archive, or How Howard Carter Moved the Road to the Valley of the Kings. *History of Photography* 40(3):267–282.
- Roháček, Jiří and Kristina Uhlíková, eds. (2010). *Zdeněk Wirth pohledem dnešní doby*. Prague: Artefactum.
- Schlosser, Julius von (1934). Die Wiener Schule der Kunstgeschichte: Rückblick auf ein Säkulum deutscher Gelehrtenarbeit in Österreich. *Mitteilungen des Instituts für Österreichische Geschichtsforschung* 13(2):141–228.
- Schwartz, Joan M. (1995). We Make Our Tools and Our Tools Make Us: Lessons from Photographs for the Practice, Politics, and Poetics of Diplomats. *Archivaria: The Journal of the Association of Canadian Archivists* 40:40–74.
- Schwarz, Heinrich (1931). *David Octavius Hill: Der Meister der Photographie*. Leipzig: Insel-Verlag.
- Trnková, Petra, ed. (2010). *Oudadate Pix: Revealing a Photographic Archive*. Prague: Artefactum.

- Trnková, Petra (2015). Archäologischer Frühling: Aufnahmen historischer Baudenkmäler in Böhmen. In: *Andreas Groll: Wiens erster moderner Fotograf. 1812–1872*. Salzburg: Fotohof edition, 237–245.
- Uhlíková, Kristina (2010). *Zdeněk Wirth, první dvě životní etapy (1878–1939)*. Prague: Národní památkový ústav.
- Wirth, Zdeněk (1939–1940). První fotograf Prahy. *Umění* 12:361–376.
- Wirth, Zdeněk, ed. (1939). *Sto let české fotografie 1839–1939*. Prague: Umělecko-průmyslové Museum.

Canon Formation and Transformation

Chapter 15

The Two Cultures of Word and Image: On Materiality and the Photographic Catalog

Kelley Wilder

From outsized albums to stapled contact prints on forms, the entry of photographs into cataloging has often been one of mechanical compromise as the photographic materials were incorporated into the older and venerated textual surround of the catalog. In this essay on the materiality of photographic catalogs, the physical repository of image substance and written or typed notation bears scrutiny as a carrier of important information both about the collection and about the status of the image as a bearer of important information. Catalogs of all sorts have long been a target for scholars of bureaucratic and museum studies. Geoffrey Swinney in particular has excavated registration practices in museums (Swinney 2012). This paper addresses the introduction of photography into text-based catalogs, both in museums and in the commercial world, as a significant change in the materiality of cataloging. Between the unwieldy mechanical compromises of the late nineteenth century and the apparently seamless collaboration of digital catalogues of the twenty-first century, the separate material cultures of word and image are interrogated to clarify the changing nature of knowledge hierarchies in photographic catalogs.

Analog photographic catalogs are products of the back room. In often makeshift darkrooms, under the red glow of safe lights, amidst the fixer fumes—roller processors, fed by the photographer, spat out almost unimaginable thousands of catalog photographs. These photographs made their way inexorably toward their home deep within museum protocol, where they nested in the bureaucratic framework of the museum catalog. Part of what they took with them was the trace of the embodied work of the copy photographer, or the museum photographer. In that numbingly repetitious and precisely organized workflow, exposure, development, fixing, and washing to archival standards are all part and parcel of keeping the ravages of time at bay, photographically speaking. The physicality of such photographs is undeniable because they are part of a photographer's workflow. Yes, they all look the same (but do they?) and yes, they are deeply boring (but are they?). I began to query that sentiment. How could something so redolent of the material practices of photography ever be harnessed to something as textual as a catalog? In this paper, I consider some ways in which I think it happened and what some of the consequences might be.

First, though, I should address the first part of my title, that is, the two cultures of word and image. Like art and science, words and images have long been set at odds in a type of present-day culture war. It began perhaps in the “October Moment” of the 1970s, and comes from authors like Rosalind Krauss¹ setting words and images at odds with one another at opposite ends of the spectrum—never to meet in any kind of coherent or productive work-

¹ See Holbein's paper in the present volume (Chapter 13).

ing space. Many of us publicly lament the hierarchy of historical sources that often leads to photographs becoming mere illustrations to that “main event,” the history text.² There is also another way to look at the relationship between text and image. In her article “Scientific Objectivity Without Words,” Lorraine Daston distinguished communitarian objectivity as an objectivity that “cultivated language” as different from mechanical objectivity which “rejected language,” preferring the directness of nature itself (Daston 2004, 262–263).

That is, the artifice of text is countered by the directness of nature and the natural qualities of the photograph. Not only have numerous scholars asserted the photograph’s reliance on text to clarify or anchor meaning, but photographic historians have often argued (and I count myself among them) for the thickening of historical accounts through the use of photographs, and not *just* text. The *just* implies perhaps an unhelpful dichotomy. Recently, in *Photographs, Museums, Collections*, Elizabeth Edwards and Chris Morton suggested another model by which we might consider the coming together of words and text. They claimed that texts and images in museums were “mutually generative” (Edwards and Morton 2015a, 17). This immediately resonated, as I have been deeply (perhaps obsessively) interested lately in catalogs. The digital catalog seems to epitomize such mutually generative processes of image and text working together and not in opposition to create something new.

Of all the documentation that occurs in museums, what is so special about catalogs? Catalogs are the interface of retrieval between the collection, or archive or library, and the user. They consist of documentation, but also of discoverability.³ “Catalog” is also a word, and a physical thing, that is deeply connected with sales. This connection to the outside world, and to commerce is what particularly interests me today, although I won’t deny that documentation is in itself a seductive and critical topic of conversation. For the purposes of this paper, I have focused on the time when catalogs became photo-objects, moving irretrievably from solely text-based objects to photographic objects, or, “mutually generated” objects. To be very crude about it, and to make some distinction for shortening this paper, I have decided not to deal with text-only catalogs, about which much has been written, or with digital catalogs, about which much is being written, in order to concentrate on the space in between, when photographs were first introduced *into* and *as* catalogs in often awkward material ways. I do this not to be awkward, but because I think these first attempts, of analog photographic-text catalogs provide some good material to think with when it comes to photographic catalogs.

The history of this paper began ten years ago, when the conflict between photographs and catalogs first impeded one of my own research queries. In the Science Museum, London, where I was looking for scientific photographs that had not yet been digitized, it proved impossible to find photographs. That is, it proved impossible to find the photographs I thought of as my research target because most things in the museum store had at one time been photographed and the term “photograph” appeared in the metadata of all records. At the time, it was an annoying but circumventable problem, and in some ways no more than a material incarnation of Malraux’s or, more recently, Preziosi’s remarks about whole fields of history or art history being subsumed into photography.⁴ On reflection, it raised some important questions about the nature of science photography archives, which I addressed in Florence

² I am indebted to Elizabeth Edwards for this wonderfully accurate way of describing the use of images in history.

³ This might also consist in the discoverability of connections to other items, as in the Stirn camera.

⁴ For a discussion of these sentiments, see Caraffa 2011.

Inventory No. 1885-49.		Cat. No.
Object: Examples of printing (a) with ammonia nitrate of silver (b) with bichromate of potash (c) with blue ammonia nitrate of iron (d) with nitrate of uranium.		
(No. in old Divisional Register ^{or citrate} E. 1886.		Acquired from (Presented).
Position. Press 3 d 5	J. Werge, 11 Berners St., W. per Int. Inv. Exh.	
Date of Receipt. 31. 12. 1885.		
Regd. paper No.		

Fig. 1: Form 100, John Werge, Examples of Printing, National Science and Media Museum, Bradford.

in 2009 at the Photographic Archives I conference (Wilder 2011). In that essay, I mentioned this encounter and promised that a consideration of the implications for photographs would be the topic of another paper. Slow as it was in coming, this is that further paper.

Let us consider a catalog. A catalog card (see Fig. 1), standard 3x5 inch size, inventory number 1885-49, describes the object as follows:

Examples of printing (a) with ammonia nitrate of silver (b) with bichromate of potash (c) with blue ammonia nitrate of iron (d) with nitrate (and there is a small aside in pencil here saying 'or citrate') of uranium.

It has another number, vol. 7, p. 269 of the Science Library Register. I take the E. 1886 to mean that it was exhibited in 1886.⁵ The object was acquired from J. Werge late in December of 1885. J. Werge is John Werge, a notable Scottish daguerreotypist and experimenter. It says "for the Int. Inv. Exh.," quite likely the International Exhibition of Industry, Science and Art held in Edinburgh in 1886 (about which we know almost nothing of the photographic contributions to the exhibition).

This is the Form 100 card used by the Science Museum, London for many years. When much of the photographic collection moved to Bradford to form the National Museum of Photography, Film and Television (now the National Science and Media Museum), the catalog moved with it, or part of the catalog did, the part that pertained to objects going to Bradford. As such, it constituted the first catalog of a new national museum of photography.

⁵ Werge exhibited the board, or one with the same description, before 1886. Exhibit 325 at the 25th RPS exhibition in 1880 found in *Exhibitions of the Royal Photographic Society 1875-1915*, shows us that this board may be the one depicted on the catalog card, or a sister example.



Fig. 2: Form 100, verso showing photograph of Werge, Examples of Printing, National Science and Media Museum, Bradford.

On the back of the card (see Fig. 2), there is a photograph and a further number, “misc 00292.” “Miscellaneous” is a word that photographs are filed under so frequently we really need a thorough investigation of it. The photograph on the back is a twentieth century black and white gelatin silver print, glued on, showing a board with four mounted photographs and a number, 1885-49, corresponding to the inventory number on the front. This is a really curious photograph. It’s not a copy photograph in the professional sense. That is, it is clearly not taken on a copy stand, with even lighting either side. Although these details may seem insignificant, it brings the act of photographing museum objects very much to the fore. There is no pretense of transparency in this photograph. It is so clearly photographic, in the oblique angling of the board and the cropping of the two front corners. They bring to light the edges of the photograph and the photographic process. It embodies the viewer, placing him or her in the correct place to photograph this object. It is also clear what is considered to be “important” here, namely the inventory number. The captions under the photographs are illegible. Size is not indicated. The monochromatic photograph elides any color information. The only clearly legible part of the photograph is the number. But the number is already listed on the front, begging the question, what is this photograph for? While the board and its photographs are not wildly three-dimensional, this photograph of the photographs gives them much more three-dimensionality; in short, they are photographed like an object. So here is a photo-object within (or rather pasted on) a photo-object.

We should think about the timing of copying photographs in relation to the other events in the institution’s life, as Morton and Edwards, and Joan Schwartz urge us to do.⁶ Thinking about the “why?” and “what for?” of this photograph on the back of a catalog card, we might

⁶ Edwards and Morton 2015b. Many of Joan Schwartz’s writings touch on the photograph in this way, particularly her work on diplomatics. See Schwartz 2014 and Schwartz 2012.

Inventory No. 1929-327.		81	Form 100 Sc. M.
Object: Stirn camera.		Cat. No. 50	
Negative No. ^{07/61}	Lantern Slide	Postcard No.	
Position OD 660 9+10	Acquired from Presented.		
Date of Receipt 26.3.1929.	S. Hawkings Esq, 203 Goldhawk Rd, W		
Regd. Paper No. Sc. M. 3233/1/1			
<small>(5873) 1534/1389 30m (10) 5/28 C&SLtd 185</small>			

Fig. 3: Form 100, Stirn camera, National Science and Media Museum, Bradford.

be able to draw some conclusions. The museum objects (or object) were (was) donated in 1885. The copy photograph is not made with technology from 1885, but with mid-twentieth century resin-coated paper. Resin coating was introduced to photographic papers in the 1970s, so we can safely say that the photograph entered the text-based catalog within a decade of the founding of the National Museum (Stulik and Kaplan 2013). I'm going to go out on a limb and argue that the objects were very likely photographed as a part of the impending move from one part of the Science Museum Group to another—from London to Bradford. But not all Form 100s have photographs attached to them. There seems to be no apparent strategy to the photographic “campaign” but the photographs are all a similar size and of a similar, shall we say, ad hoc, nature. Is this a “photographic statement” in Allan Sekula’s linguistic sense?⁷ I don’t think it is.

Take this one other example of a Form 100, inventory number 1929-327, a Stirn camera (see Fig. 3). In this Form 100, a slightly later version, photography has already changed the nature of the text on the front. In the middle is a printed band that asks for the negative number, lantern slide, or postcard. This information is not provided on the first Form 100. The earlier version of Form 100 has no place for photography; the photograph is on the back. The later form has a place for registering numbers of photographs. It is already acknowledging in some official way, Elizabeth Edwards’ “non-collections” that are not really acknowledged. They have been given numbers but are not acknowledged as collections. These sorts of notations can be found in many collections—sometimes as a small pencil mark next to a print, reading “negative.” The objects are virtually impossible to find, but traces remain everywhere.

⁷ “In terms borrowed from linguistics, the archive constitutes the paradigm or iconic system from which photographic ‘statements’ are constructed” (Sekula 2003, 446).



Fig. 4: Form 100, verso showing photograph of Stirn Camera and associated items, National Science and Media Museum, Bradford.

The photograph on the back of this later Form 100 card is even more curious (see Fig. 4). It is roughly the same size and shape as the previous photograph—but it was trimmed unevenly, apparently to get rid of as much of the curator’s arm as possible without cropping out the object. But here what is so curious is the number of objects and how ambiguous it is as a photograph that should match the catalog entry. The catalog number and card say “Stirn camera” and the photograph shows the Stirn camera, but much more prominently, the inventory number (later corrected) and a slightly disheveled display contact print of a Stirn camera plate, with its six round exposures. It does not show a negative, but a contact print made from a negative. It also shows a caption that was apparently meant for display.

The photograph not only reproduces the object belonging to the inventory number but it also indicates associated material in the collection. That is, it suggests connections in the collection that the inventory number might or might not reflect. There are certainly textual ways of cross-referencing such information, but they are not evident here on the form. There are ways of cross-referencing it to other photographic processes within the museum for copying that object (lantern slides, negatives, and postcards), but only of that object, not of related objects. It is true that this inventory number is in fact related to not only that contact print but the negative plate as well, which has in the past been exhibited alongside the camera. The photograph on the back of the form suggests a natural grouping of objects belonging together—a curatorial selection—a bit like a small version of a family photograph.

So this is one way that photographs come to be in a catalog, pasted on the back, where they can’t be seen at the same time as the text. That is, a viewer can either look at the front or the back but not both at the same time, making haptics of looking at catalogs a critical point of interest. That is only one way in which photographs inserted themselves



Fig. 5: Royal Photographic Society polaroid photographic catalogue, RPS Collection, Victoria and Albert Museum, London.

into the text of the catalog. They arrived and were added to the back of some convenient card in a haphazard way, adding an associative type of metadata. But this is not the only way photographs become catalogs.

There are more deliberate, organized ways of making catalogs. In 1975, the Royal Photographic Society (RPS) teamed up with Polaroid to copy its photographic collection of nearly 15,000 prints (see Fig. 5). Like many of these projects, the reasons for the outlay included three primary areas: cataloging, preservation, and commercial return. Using the famed MP4 copying system advertised by Polaroid, a single operator could (it was asserted by Polaroid) make up to 60 copies an hour. It would, at that rate, take a mere six months to copy all the prints in the RPS collection at the time, making not one, but two parallel catalogs. The insertion of photographic companies into the museum catalog in this way is not a novel one, and it was not new to the Royal Photographic Society. It was also not new as a sales tactic among the big photographic companies: Polaroid, Kodak, Agfa, and Ilford. Each had a proprietary copying system by which the company would try to guarantee reproducibility, efficiency, and cost-effectiveness. None of these campaigns are cost effective but the companies did a very good job trying to sell the notion of it. In the Bradford collection, there is also a letter from Polaroid attempting to sell the museum just such a system. It was a concerted effort by Polaroid to insert itself into this quite lucrative industry of photographic archiving and cataloging.

The two catalogs would be first, the set of MP4 negatives that would remain with the RPS, and second, the positives, which would go to the library, and be made available for reference (“Copying the Collection” 1975). The photographs were indexed using an alphanumeric system, and each number was photographed next to the photographic object it designates. The ensuing catalog of black and white polaroid prints were filed in plastic



Fig. 6: Pots in a sales catalog, National Science and Media Museum, Bradford.

sleeves with a typed heading accompanying each page. The catalog proceeded in alphabetical order by photographer, beginning with Adams, A.

This is a photo-object that consists entirely of copy photographs. Each one of them is a photo-object but the whole catalog is also a photo-object. These copy photographs, made with a professional system for copying flat documents, does decidedly try to be transparent. These small Polaroids do all the things photography does best. They shrink, unify, and homogenize objects of different size, color, and shape in order to make them subject to a certain kind of delivery in the reading room. In the case of the RPS collection, it also allowed a reorganization of the “collection” for the user. Normally, the prints were housed according to size, and the size of the mount. With this photographic catalog, researchers could encounter not just the finding aid, but (it was hoped) the photographs in alphabetical order by photographer. The collection remained housed by size. Make no mistake as well, in a 1975 article about the copying campaign, it was made clear that these Polaroids were to be consulted in place of the prints in all cases.

The prints themselves, when the copying is completed, will only have to be brought out for the occasional exhibition... (“Copying the Collection” 1975)

This is often another driver behind the photographic catalog—the wholesale replacement of the original objects for the so-called “convenience” of the researcher and the “conservation” of the object. But there is a third and, I would argue, more pressing reason for the photographic catalog. It is inherently commercial. This was not an aspect that escaped the notice of the RPS.

... copies of any size can be produced from the Polaroid negatives by a high quality commercial trade house. The new system, with negatives already in stock, will be faster for the consumer and will produce higher returns for the Society. (“Copying the Collection” 1975)

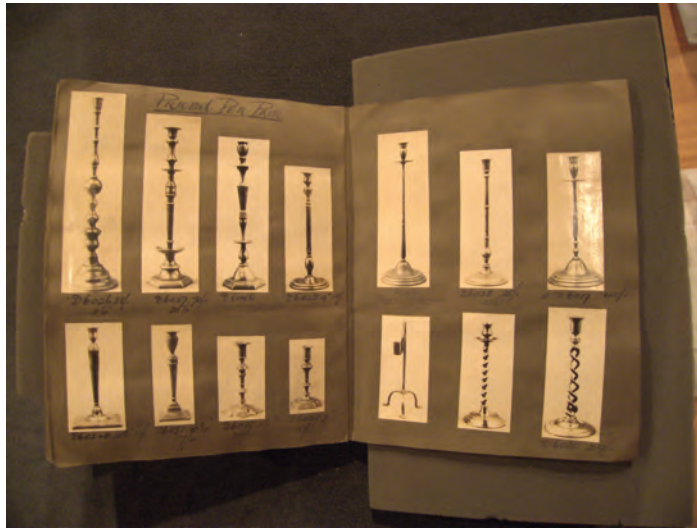


Fig. 7: Candlesticks in a sales catalog, National Science and Media Museum, Bradford.

If catalogs are interesting because they are the interface between the collection and the public, they are also interesting for the diverse use in both museum and commercial practice. The sales catalog had long become photographic by the time these two photographic catalogs were made. Fig. 6 shows a catalog from the first decades of the twentieth century presenting antique brass pots for sale. Each item here has a number, and a price, and the customer could “browse” virtually through the offerings of this company and order to suit their taste or pocketbook. The idea for photographic catalogs in the style of such a sample book is as old as 1839, when William Henry Fox Talbot tried to interest the lace manufacturers in photogenic drawings to take the place of lace samples. The notion that photography is out there to flog wares of one sort or another is an important notion for considering the interface of catalogs moving from the textual to the visual.

The sample book is a very old form of sales catalog and it was enthusiastically populated by photographs like candlesticks (see Fig. 7), and lantern slides, and tourist views.⁸ It will come to no surprise to those who work in museums to find the financial considerations close to the surface. It is, however, also true that we tend to talk about knowledge, epistemic values, and classification a lot when we discuss catalogs and this is a plea not to ignore the grubby subject of commerce in the increasingly visual nature of museum catalogs.

It has taken a relatively short time for catalogs to have merged the text and image not into an opposition but into a mutually generative set of photo-objects, where the image and text, as Elizabeth Edwards showed us on the first day of the conference with her disappearing caption, are constantly renegotiated in and around each other. They are harnessed together to

⁸ See the Samplebook of photographer Thomas Rodger on the website of St. Andrews University, <https://www.st-andrews.ac.uk/imu/imu.php?request=display&port=45175&id=062a&flag=start&offset=0&count=10&listcount=20&view=list&irn=355567&departmentfilter=Special%20Collections&ecatalogue=on>, accessed April 20, 2018.

do very specific things. The embodied work of the managers of digital catalogs (see Fig. 8), or digital assets as they are now called, has yet to be fully understood but no doubt they will come to be seen as the catalysts and agents of, in, and around these new forms of objects, which are increasingly naturalized, rather more fluid than fixed, and mutually generative in the cataloging workflow.

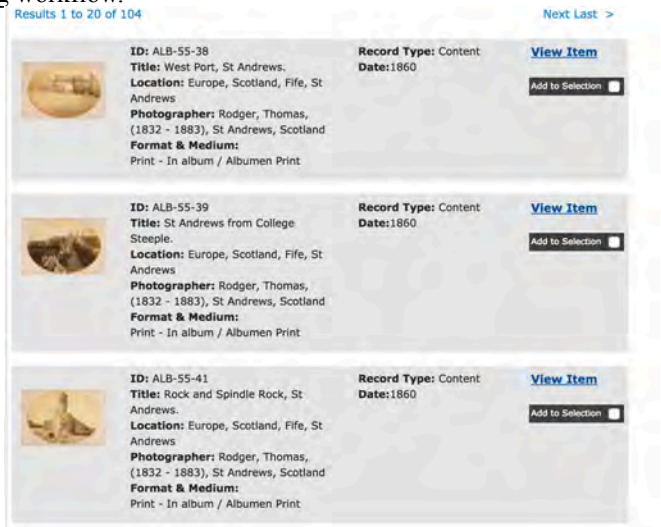


Fig. 8: Screenshot of digital Catalog, St. Andrews University Special Collections, photo: Kelley Wilder.

List of Figures

Fig. 1: Form 100, John Werge, Examples of Printing, National Science and Media Museum, Bradford.

Fig. 2: Form 100, verso showing photograph of Werge, Examples of Printing, National Science and Media Museum, Bradford.

Fig. 3: Form 100, Stirn camera, National Science and Media Museum, Bradford.

Fig. 4: Form 100, verso showing photograph of Stirn Camera and associated items, National Science and Media Museum, Bradford.

Fig. 5: Royal Photographic Society polaroid photographic catalogue, RPS Collection, Victoria and Albert Museum, London.

Fig. 6: Pots in a sales catalog, National Science and Media Museum, Bradford.

Fig. 7: Candlesticks in a sales catalog, National Science and Media Museum, Bradford.

Fig. 8: Screenshot of digital Catalog, St. Andrews University Special Collections, photo: Kelley Wilder.

References

- Caraffa, Costanza (2011). From Photo Libraries to Photo Archives: On the Epistemological Potential of Art-Historical Photo Collections. In: *Photo Archives and the Photographic Memory of Art History*. Ed. by Costanza Caraffa. Berlin and Munich: Deutscher Kunstverlag, 11–44.
- Copying the Collection (1975). *The Photographic Journal* 115(7):308–310. URL: <https://archive.rps.org/archive/volume-115/745684>, accessed August 17, 2019.
- Daston, Lorraine (2004). Scientific Objectivity with and without Words. In: *Little Tools of Knowledge. Historical Essays on Academic and Bureaucratic Practices*. Ed. by Peter Becker and William Clark. Ann Arbor: University of Michigan Press, 259–284.
- Edwards, Elizabeth and Christopher Morton (2015a). Between Art and Information: Towards a Collecting History of Photographs. In: *Photographs, Museums, Collections: Between Art and Information*. Ed. by Elizabeth Edwards and Christopher Morton. London: Bloomsbury, 3–23.
- eds. (2015b). *Photographs, Museums, Collections: Between Art and Information*. London: Bloomsbury.
- Schwartz, Joan M. (2012). ‘To Speak Again With a Full Distinct Voice’: Diplomats, Archives, and Photographs. In: *Archivi fotografici: spazi del sapere, luoghi della ricerca*. Ed. by Costanza Caraffa and Tiziana Serena. Rome: Carocci Editore, 7–24.
- (2014). Photographic Records/Archives. In: *Encyclopedia of Archival Concepts, Principles, and Practices*. Ed. by Luciana Duranti and Pat Franks. Lanham, MD: Rowman & Littlefield, 270–274.
- Sekula, Allan (2003). Reading an Archive: Photography Between Labour and Capital. In: *The Photography Reader*. Ed. by Liz Wells. London: Routledge, 443–452.
- Stulik, Dusan and Art Kaplan (2013). Silver Gelatin. In: *The Atlas of Analytic Signatures of Photographic Processes*. Los Angeles: Getty Conservation Institute.
- Swinney, Geoffrey N. (2012). What Do We Know about What We Know?: The Museum ‘Register’ as Museum Object. In: *The Thing about Museums: Objects and Experience, Representation and Contestation*. Routledge: Routledge, 31–46.
- Wilder, Kelley (2011). Locating the Photographic Archive of Science. In: *Photo Archives and the Photographic Memory of Art History*. Ed. by Costanza Caraffa. Berlin: Deutscher Kunstverlag, 369–378.

Chapter 16

Bruno Meyer and the Invention of Art Historical Slide Projection

Maria Männig

Photography in general, and slide projection in particular, are constitutive elements of art history as an academic discipline (Caraffa 2009).¹ Since Heinrich Dilly's groundbreaking article published in 1975 in which he introduced a media historical perspective into art historiography, a number of studies on slide projection have been published.² However, methodically speaking, they lack a critical and systematic study of the sources, seeing as they fail to consider the material basis of historical slides.³

The following paper aims to address this gap in the research concerning the very early days of art historical slide projection. By presenting the reader with some of the earliest examples of slides produced exclusively for art history, my primary goal will be to bridge two different methodological and disciplinary approaches, historiography of art history and media studies. First, I will examine the pioneering role of Bruno Meyer (1840–1917). Second, I will shed a light on the key players in art historical slide projection, particularly in relation to why Berlin has always been, and is still currently considered to be the epicenter of slide projection. Third, I will come back to questions of objectivity in the context of slide projection.

The beginnings of photographic slide projection

The road to the invention of the glass slide begins in 1850, when the Philadelphia-based Langenheim brothers filed a patent application for photographic glass prints, which they called *Hyalotypes* (Ruchatz 2000, 40–41; Ruchatz 2003, 70–75). The two brothers from Germany made use of the negative process invented by Claude Félix Abel Niépce de Saint-

¹ I am very grateful to Jason King, thanks to whose patience language barriers between German and English were overcome in this paper. Without the invaluable support and archival assistance provided by both Elke Leinenweber at the KIT Archives and Alexandra Axtmann in the KIT Art History Department, this paper could not have been written. Julia Bärnighausen, Ute Dercks, and Klaus T. Weber also graciously gave me access to their collections.

² Dilly (1975) provided the first academic reflection on art history's "media history," turning his focus later specifically to the role of Wölfflin with regard to double projection (1995). Later (2009), he revised his assumption that Wölfflin was the inventor of double projection. A very interesting resource on the contemporary use of 35-mm slides during the 1970s is provided by Wolfgang Beyrodt (1975). Silke Wenk's contribution (1999) introduces a feminist reading into the discussion by shedding light on the kinds of assertions of power that come into play during the slide lecture. Concerning the use of slides in American art history, the earliest contributions are by Trevor Fawcett (1983) and Howard B. Leighton (1984), with the latter focusing on the preserved slides. In particular, Donald Preziosi (1989), Robert S. Nelson (2000), and—quite recently—Jennifer F. Eisenhauer (2006) deal with the specific nature of knowledge transfer through slide lectures. A media historical approach towards art historical slide projection, which also refers to current developments such as digitization, is represented by Ingeborg Reichle (2002; 2005) and by Julica Hiller-Norouzi (2009). Dorothee Haffner (2007) focuses on the work of Franz Stödtner in connection to the Institute of Art History in Berlin.

³ One exception is an article by Howard B. Leighton (1984).



Fig. 1: Lantern slide photograph on glass in wood mount of Smithsonian Institution Building under construction, William Langenheim (1807–1874) and Frederick Langenheim (1809–1879) Philadelphia, 1850, Smithsonian Castle Collection, gift of Tom Rall, Arlington, Virginia, <https://newsdesk.si.edu/photos/langenheim-lantern-slide>, accessed August 14, 2018.

Victor⁴ three years ago, in which positive prints are produced on glass (see Fig. 1). The quote from the Langenheims' catalog reads:

The new magic-lantern pictures on glass, being produced by the action of light alone on a prepared glass plate, by means of the camera obscura, must throw the old style of magic lantern slides into the shade, and supersede them at once, on account of the greater accuracy of the smallest details which are drawn and fixed on glass from nature, by the camera obscura, with a fidelity truly astonishing. By magnifying these new slides through the magic lantern, the representation is nature itself again omitting all defects and incorrectness in the drawing which can never be in painting a picture on the small scale required for the old slides (quoted after Ruchatz 2003, 70).

It is striking that, and how, the text is struggling with its lack of a specific vocabulary for expressing the epistemological shift from the manually to the technically produced image: *picture* and *slide* are used synonymously to characterize both the painted and the photographed lantern slide. The attributes *old* and *new* are applied to differentiate the one from the other. This is one of the problems in speaking or writing on this subject, and one we face still today.

While the term *slide* refers to the painted lantern slide as well as the photographed one in English, painted pictures are normally called *Laterna-Magica-Bilder* or *Laternenbilder*

⁴ Claude Félix Abel Niépce de Saint-Victor (1805–1870) experimented with albumen on glass in order to produce negatives. He was a cousin of Nicéphore Niépce.

in German and therefore more clearly distinguished from the terms *Photographische Glasplatte*, *Glasphotogramm* or *Diapositiv*, all of which were used for the photographic slide in the nineteenth century. The English term refers to the act of manipulating the artifact during projection, while the German word describes its specific form of reproduction. Terminologically, “slide” has even survived the shift from analog to digital projection (i.e., a digital “slide” or “slideshow”). When it comes to those early slides, however, executed before reversal film existed, we have to consider that we are referring to contact prints carried out on glass.

At that time, the tremendous increase in accuracy was used as the main argument to “sell” the projectable photographic images to the public. Consequently, the photograph was differentiated from the unconvincingly mimetic painted lantern slide. After the introduction of the photographic plate during the second half of the nineteenth century, the lantern became an instrument recommended for educational purposes in particular, as Jens Ruchatz (2000; 2003, 209–243) has elaborated. Despite the medium’s technical proficiency and eloquent sales pitches like those of the Langenheims, it took decades for it to become properly established (Ruchatz 2003, 69–101, 175–307). Its introduction into the field of academic art history can be discussed as a case study of this media historical process, which is an account of steps both forward and backward.

The Bruno Meyer case

It is by introducing himself as a philologist and a teacher that Bruno Meyer begins his work, *Glasphotogramme für den kunstwissenschaftlichen Unterricht*⁵ (Meyer 1883, col IV). The style and function of the publication is most akin to that of a mail-order catalog. It offers an index of 4,000 art historical pictures (cols 1–28), accompanied by an introduction concerning the pedagogical benefit of slide projection (cols IV–XIV) and a chapter on “projection art” (*Projectionskunst*) (cols XV–XXXII) which describes the use of the optical lantern. Meyer, a professor of art history at the *Polytechnische Hochschule*⁶ in Karlsruhe from 1874 to 1884, describes in detail the history of his project, which, he claims, is nothing less than the introduction of slide projection into the field of art history.⁷

The importance of this semi-autobiographical sketch—which he titled “The Story of my Present Publication” (“Geschichte meiner vorliegenden Publication.”) (Meyer 1883, cols III–VIII)—cannot be overemphasized, as there is no other written personal legacy of Bruno Meyer that has reached us. The greatest problems Meyer faced, he tells us, were both the meagerness of the selection of art historical slides and their unaffordability. Faced with such obstacles, Meyer failed to convince the academic community of the value of his project during the First International Congress of Art History, held in Vienna during the 1873 World Exhibition. In contrast to Meyer’s report, Heinrich Dilly (1995, 40) argues that the failure in Vienna was in fact due to the specific features of the projection technique, which used dissolving views. According to Dilly’s interpretation, the images appeared too slowly on the screen and afterwards merged illegibly into one another. Meyer, however, does not

⁵ “Glass Photograms for Art Historical Education.” Translations from German to English are provided in the footnotes.

⁶ Founded as a technical school in 1825, the university is now called Karlsruhe Institute of Technology (KIT).

⁷ It was Klaus Lankheit (1966, 7) who acknowledged Meyer’s role in the history of slide projection for the first time. Notes on Meyer’s work in Karlsruhe can be found in Martin Papenbrock (2006, 180–181).

refer to the projection method he had used in 1873⁸ but describes projection as having been proficient, affordable and easy to handle, which can be confirmed by findings concerning the history of projection.⁹ According to Meyer, the poor quality of the slides was responsible for the poor reception he encountered in Vienna (Meyer 1883, col V). The inaccuracy of photographic reproductions of artworks in terms of color and contrast was often cited as insufficient during this time (cf. Heß 1999).

Meyer's poor reception in Vienna, which he blamed on the quality of the slides, led him to establish his own start-up to produce slides himself. In 1879, he was first able to present his own slides at the *Lehrmittelausstellung* (Exhibition of Teaching Materials) in Trier. Following this debut, Meyer began cooperating with Max Fritz's agency¹⁰ in Görlitz, Silesia. In the introduction, Meyer reports several technical difficulties and commercial disagreements that blighted the joint venture, and even goes as far as to defame his former business partner (Meyer 1883, col VI).

Whoever may have been at fault, Fritz's studio failed to produce negatives that could reproduce artworks with accuracy on glass plates. After 1880, when the first lecture hall suitable for projection was installed at the *Polytechnische Hochschule* in Karlsruhe, Meyer felt more pressure than ever before to produce suitable photographic slides. In a second contract, Meyer committed himself to provide the negatives to Fritz. Marooned as he was in the somewhat provincial Karlsruhe, this presented Meyer first with the challenge of finding high-quality originals suitable for reproduction. His lament, "There is almost no place where research material for my subject is more insufficient than in Karlsruhe"¹¹ (colV) addresses the poor resources at the *Polytechnikum* in Karlsruhe with regard to visual material.

The gallery of prints at the *Kunsthalle Karlsruhe* would have served well as a source, but neither the custodian nor the owner, His Royal Highness the Grand Duke of Baden, Frederick I, gave Meyer access to the collection (cols V–VI). It was Max Jordan, Director of the *Nationalgalerie* in Berlin, who came to Meyer's rescue. In the summer holidays of 1881, Meyer came to Berlin along with his workshop to photograph the collection of prints on-site at the *Nationalgalerie*. Meyer wanted to take leave during the whole winter term to continue, but his leave was only approved until January 1882.¹² During this time, Meyer met Eduard Liesegang, who—himself one of the key players in the field of photographic projection in terms of its development, marketing, and promotion—became his new business partner. It was planned that Meyer would produce not only the negatives but also the glass positives, while Liesegang's role would be that of a publisher. As Liesegang ultimately got cold feet, the contract was cancelled. After having already invested five years of work and a large amount of his own money, Meyer finally decided to establish his own publishing house in

⁸ Meyer describes the technique of dissolving views but does not elaborate on the projection technique he used in Vienna (1883, cols XXVII–XXVIII).

⁹ It is Jens Ruchatz's (2003) landmark study, which illuminates the much neglected history of slide projection after the magic lantern, to which I am indebted here.

¹⁰ The company was called *Max Fritz Optisches und Mechanisches Institut. Verlags- und Lehrmittelhandlung* (Optical and Mechanical Institute. Publishing and Teaching Material).

¹¹ "Es gibt kaum einen für mein Fach überhaupt in Frage kommenden Ort, an dem ein ungenügenderes Studienmaterial vorhanden ist, als in Karlsruhe."

¹² Meyer's statements can be confirmed by a personal letter dated September 19, 1881 which he wrote to Minister Wilhelm Nock (1832–1902), GLA 52 Nock 131 (Generallandesarchiv Karlsruhe).

1882. After this pivotal step, it took two more years to finish and to publish the first catalog of 4,000 glass slides. Meyer reports serious financial difficulties in this last phase.¹³

It is plain that the introduction to the catalog with its philanthropic undercurrent strives to reject any accusations of having only profit-making designs for his picture publishing company. Despite this, however, Meyer never attempts to untangle himself as an educator and scholar completely from his self-styling as an entrepreneur. The conflict of interests could not be avoided, and soon Meyer's company came under suspicion. According to Papenbrock (2006, 181), Meyer was accused of having profited from the public funding provided by the university and faced an inquiry into his practice.¹⁴ He was also confronted with another dilemma, however. According to the introduction of his *Glasphtogramme*, although his new lecture hall had been approved and also financed by the university, acquiring the slides had proven to be much more time-consuming than he had anticipated. Around the end of 1880, the lecture hall had been equipped with darkening curtains, a screen, and brightness regulators for the gas lights (Hotz 1965, n.p.). In a letter to the Ministry of Cultural Affairs dated June 22, 1881, he reported having used 724 slides for his art historical lectures from January on (Hotz 1965, n.p.). The acquisition of the picture material appears to have been a race against time. In his introduction, Meyer attacks many people personally, including authorities as high up as the Grand Duke of Baden. As he found himself eventually in irresolvable conflict with the university, Meyer left the *Polytechnische Hochschule* in 1884. He has since fallen into oblivion. Little is known about him nowadays in Karlsruhe. Even his glass slide archive is lost.

There are, however, six slides that are clearly attributable to Meyer, which have been preserved in the Archive of the Karlsruhe Institute of Technology (see Fig. 2–4). These originals give us an impression of what the material Meyer envisioned looked like. The glass slides measure 85 by 100 millimeters. The screen images measure 70 millimeters square. A passe-partout made from matte silver paper with a blackprint is glued on the front side. The cutout, square with round corners, recalls the shape of the old magic lantern slides. The paper mask on each carries the inscription “BRUNO MEYER KARLSRUHE,” embellished in a subtle late nineteenth-century ornament, which gives them a rather exquisite appearance. Additional labels containing title, classification, or a catalog number are missing in Karlsruhe. At least some of Meyer's slides that are preserved at the *Albertina* in Vienna have such labels on the back, matching the catalog entries.

The labeling corresponds to the descriptions of the index from *Glasphtogramme*. Both the archive in Karlsruhe and Meyer's cataloging system is subject based. On the first level, it is structured by epochs: Antiquity, Middle Ages, and Renaissance. On a second level, it is organized topographically. It then covers the genres, such as Architecture, Sculpture, Painting, Graphic Arts, Arts and Crafts, but then also presents sections such as Costumes and Customs, Epigraphy, Heraldry, and Numismatics.

The first 2,190 slides entered into the catalog are dedicated to Greek and Roman antiquity and therefore constitute over half of the index. The Middle Ages and the Renaissance

¹³ According to the documents, between 1882 and 1884, several creditors filed lawsuits against Meyer. His salary was confiscated and an enforcement proceeding was initiated: GLA 448 No. 210 Best. 10001 Sign. 210 (KIT Archives, Karlsruhe Institute of Technology).

¹⁴ The documents show, however, that problems arose around 1882, when Meyer requested more public funds in order to acquire a biunial lantern and cabinets for his slide library. Back in 1879, he had even urged the university to allow him to set up a photographic studio at the *Polytechnische Hochschule*. Cf. GLA 235/4422 quoted after Hotz (1965, n.p.).

are each represented by one quarter of the slides. Concerning the medieval content, it is noteworthy that Meyer included examples of Muslim architecture, which cover not only Andalusian buildings but also examples from Egypt and Algeria. Of the Renaissance slides, around one hundred address Italian and German Baroque and Rococo architecture. The examples of Renaissance painting and sculpture include Baroque artists such as Andreas Schlüter or Gian Lorenzo Bernini, or Guido Reni and his disciples. When Meyer first began teaching art history, the field was still an emerging one. Consequently, Meyer's index preserves the subject at an early stage of being an academic discipline, viewing itself still as art history of all times and nations. Since Johann Joachim Winckelmann, archaeology for instance had been one important part of the field, becoming a discipline in its own right by the end of the nineteenth century. Meyer himself declares the project "incomplete," and even "arbitrary" as regards the final selection. He advertises a second index to appear in autumn, which never came to be. It is remarkable that he describes the index as a work with a clearly scientific (in the sense of the German term "wissenschaftlich") approach equivalent to a written monograph (Meyer 1883, col VII). This significant remark illustrates Meyer's method: in his catalog, the systematic order of what later was to become known as the art historical slide library is already prefigured. The author clearly emphasizes the importance of the visual material by understanding art history as a field of visual practice rather than a textual scholarship.

The photograms accessible in Karlsruhe are not black and white but sepia (see Figs. 2–4). They represent a wide range of tonal values. They are carbon prints carried over onto glass. When we look at the originals, it is possible to discern the thin gelatin layer which was fixed through exposure. The area around the reproduction appears not to have been masked subsequently but rather exposed to light during production. Whether this process was the optimal one was also a point of contention between Meyer and his first associate, Max Fritz. Fritz favored dry plate, while Meyer opted for carbon prints that had pigment superadded to the exposure. Apart from tonal reproduction, one advantage of carbon prints, according to Meyer, is their lightfastness. This is naturally important for projection, where the glass slides are repeatedly exposed to intense light and heat.

The Meyer slides disprove Dilly's presumption that the first art historical glass slides represented original photographs only (Dilly 1995). Meyer names many picture agencies, such as Brogi, Bruckmann, Hanfstaengl, and E. A. Seemann, whose templates he used (Meyer 1883, col XI). Depending on what kind of material was available, Meyer himself took photographs of books and other photographs, as well as engravings and plaster casts in his studio and museums. This corresponds to the photography and reproduction techniques at that time. While high-quality photographs of architecture had already been readily available, reproducing paintings was still problematic and would remain so for decades (Peters 2009; Bader 2013; Heß 1999). In the late nineteenth century, manual reproductions still served as templates for reproducing art works, as photography had its problems in translating color adequately into gray scales. This is also one of the main reasons why Meyer's project was so dependent on access to print galleries.



Fig. 2: Lantern slide photograph of Titian's Flora (1515–20), slide no. 3738, Bruno Meyer, c. 1883, carbon print on glass, 85 x 100 mm, KIT Archives, Karlsruhe, inv. no. 28002 sign. 872.



Fig. 3: Lantern slide photograph of Titian's La Bella (1536), Bruno Meyer, c. 1883, carbon print on glass, 85 x 100 mm, KIT Archives Karlsruhe, inv. no. 28002 sign. 872.



Fig. 4: Lantern slide photograph of Titian's *Allegory of Marriage* (c. 1530), slide no. 3725, Bruno Meyer, c. 1883, carbon print on glass, 85 x 100 mm, KIT Archives, Karlsruhe, inv. no. 28002 sign. 872.

In this context, Titian's *Allegory of Marriage*, now kept in the Louvre, can serve as a paradigmatic example (see Fig. 5). Etchings of the painting had been produced throughout the centuries, like that of Michael Natalis (see Fig. 6). It is this copperplate from the second half of the seventeenth century (see Fig. 7) that makes it into the ambitious index of glass slides of the art historian. This fact seems to echo Marshall McLuhan's idea of the old media becoming the content of the new media (McLuhan [1964] 2015, 19). It also may explain why the slides were quickly rendered obsolete, as reproduction processes were improving constantly. During the nineteenth century, the photograph was far from being seen as a substitute for the original piece of art, but it had to compete with older media. This reality of nineteenth-century reproductions becomes clearer by comparing Bruno Meyer and Herman Grimm, which I will do in the next section of this paper.

The Berlin connection: Meyer and Grimm

Meyer moved back to Berlin after quitting his job in Karlsruhe due to the troubles at the university. To date, I have not found any sources providing information about the next three decades of his life. We know of his published works dealing with pedagogical and ethical issues, and his commitment to copyright issues in photography. His publishing house was founded in Berlin in 1884. But a year later, "Bruno Meyer's Selbstverlag" became "Helios, photographische Kunst- und Verlagsanstalt Berlin." Then, from 1888, Meyer ran the company under the name "Bibliographisches Bureau," which may indicate that he withdrew entirely from the picture agency business.¹⁵

¹⁵ See <http://d-nb.info/gnd/117555916>, accessed December 20, 2017.



Fig. 5: Allegory of Marriage (Portrait of Alphonse d'Avalos, Marquis de Guast), Titian, c. 1530, oil on canvas, 123 x 107 cm, Louvre Paris, inv. no. 754.



Fig. 6: Portrait of Alphonse d'Avalos, Marquis de Guast after Titian, Michael Natalis, seventeenth century, engraving/print, 32.2 x 26.8 cm (image), Fine Arts Museums of San Francisco.



Fig. 7: Detail of lantern slide photograph of Titian's *Allegory of Marriage* (c. 1530), slide no. 3725, Bruno Meyer, c. 1883, carbon print on glass, 85 x 100 mm, KIT Archives, Karlsruhe, inv. no. 28002 sign. 872.

What we do know is that a few years later Berlin became a hotspot for slide projection. Art historiography accordingly places the Berliner Herman Grimm (cf. Rößler 2010) in the role of the successful promoter and the Karlsruher Bruno Meyer in that of the failed inventor (Dilly 1995), but I would argue that it is not that straightforward. Although it may be true that Herman Grimm (1897), who published a quite influential manifesto on slide projection,¹⁶ was indeed an important protagonist, further research would be necessary to be certain exactly what kind of influence Meyer had on Grimm.

In order to explain Grimm's success in Berlin, we have to consider that his former student Franz Stoedtner founded a picture agency called the Institut für wissenschaftliche Projektions-Photographie (Institute for Scientific Projection-Photography) in 1895. It is remarkable to observe that with Stoedtner, another art historian (Meyer being the first) became a picture producer serving the needs of his own academic field. While Dilly (1995, 39) has suggested that electrical light technology was essential for the breakthrough of slide projection, we can conclude, following Meyer, that questions of production and distribution of the

¹⁶ The essay is entitled "Die Umgestaltung der Universitätsvorlesungen über neuere Kunstgeschichte durch die Anwendung des Skioptikons" (The Transformation of the University Lectures on Modern Art History through the Use of the Optical Lantern). In fact, the essay from 1897 is a compilation of three different texts that Grimm had published in the *Nationalzeitung*. Several articles of his had already appeared in the newspaper in 1892. In the winter term of 1891/92, Grimm began to teach art history using slide projection. He reports problems similar to Meyer's with finding the image material.

picture material were just as crucial in establishing art historical slide projection.¹⁷ The latter is precisely what we can observe in the case of Grimm: although the latter never makes any reference to it, the availability of slides was dramatically improved upon by Stoedtner's picture agency, which was located right next to the university building in Berlin, as Dorothee Haffner (2007, 123) has pointed out. When Grimm wrote his three reports in 1892 and 1893, he used slides from other picture agencies and only mentioned a photographer named Günther who worked for him (Grimm 1897, 288). Similar to Meyer, Grimm also used his own lantern and bought the slides himself (Rößler 2010, 85). However, a broader historical context calls into question the claim that Grimm was the principal protagonist and a type of genius figure (Dilly 1975, 162; 1995, 39; 2009, 95) whose rhetoric talent and outstanding position in academia allowed him to establish slide projection. In his diffusion theory, Everett Rogers, for instance, attempts to describe the structure of processes of innovation that new technologies face (Rogers 2003; cf. Ruchatz 2003, 50–58). Further basic research is required to reconstruct the network of the nineteenth-century protagonists in art historical slide projection. From what we know at present, we can only conclude that Meyer's project was one of the earliest, when it comes to university education. According to Rogers, Meyer might be characterized as an "innovator," while Grimm, who first began giving his slide lectures ten years after Meyer,—as the situation had changed dramatically in terms of the availability of visual material—could be called an "early adopter" (Rogers 2003, 248–249).

When it comes to Grimm's euphoric depiction of slide projection in his text from 1897, he focuses on two main topics. First, he addresses the artwork itself, and second, this work as part of a larger art historical context—when, for instance, he refers to the ability of slides to illuminate the qualities of single artists or whole epochs. Concerning the first, Grimm is preoccupied primarily with the role of magnification. As Grimm describes it, enlargement allows us to study the work of art more closely and engenders a heightened knowledge of individual artists. In his manifesto, Grimm is deeply committed to the aesthetic effects of projection. For him, the work of art becomes "isolated" and therefore "a new creation of present time"¹⁸ through projection (Grimm 1897, 318), which is described as being easier than etchings and prints for students to commit to memory. A comparison could be drawn between the projected black and white image and preparations known from science. Hence, not only photography but also projection provides a basis for comparison of the diverse objects and artifacts beyond their medial boundaries, as Silke Wenk (1999, 299–300) and Julica Hiller-Norouzi (2009, n.p.) have pointed out. Grimm discusses the specific effects of enlargement with regard to several artists, such as Michelangelo, Raffael, Dürer, and Rembrandt. From his point of view, the role of the optical lantern is equivalent to that of the microscope (Grimm 1897, 359–360). It can be said that such sentiments of Grimm take part in a very old discourse, which is deeply rooted in the history of photography itself. With the invention of the daguerreotype back in 1839, the magnifying lens proved to widen the horizon of what could be seen. The discussion of magnifying effects runs through the discourse of photography in the nineteenth century like a central theme and becomes

¹⁷ Dilly also suggests that picture agencies would already have divided the market up among themselves in terms of image rights, but, first, Meyer reports using agency photographs, second, copyright laws were only passed in 1911 in Germany, for example, and, third, it was mainly technical problems that affected the reproduction of artworks.

¹⁸ "Das Werk wird isoliert und wie zu einer neuen Schöpfung der Gegenwart."

particularly evident during the development of slide projection, as mentioned above in the Langenheim brothers' sales pitch.¹⁹

While Grimm's first argument is for the slide as a tool to study a single piece of art better, his second addresses the context in which the artwork finds itself. Through slide projection, the development of an artist's oeuvre or even of whole epochs become readily deducible. As Wenk (1999, 296–299) has elaborated, slide projection and the idea of a universal museum are kindred concepts to Grimm. The affinity between the two was of course to become even more refined and popular through André Malraux's concept of the *Musée Imaginaire* [1947] six decades later (Malraux 1987).

Just as Meyer does in his introduction from 1879, Grimm also suggests that photography should still only be supplemental to etching. "Photographs of paintings as templates of glass plates for the optical lantern never create what good copperplates and etchings provide,"²⁰ he writes in his manifesto (Grimm 1897, 362–363). Grimm remained rather skeptical about the benefits of photography itself; his emphasis is very much on how photographic processes enable projection, not necessarily on the projected photograph itself. The role of the slide is thus clearly attributed as one of transmission. Meyer's decision to reproduce etchings in order to make projectable slides of paintings is only pragmatic. In contrast, Grimm represents a more mannered position, emphasizing the shape (or the *disegno*) as the far more important formal category for the evaluation of art (Ullrich 2009, 95–104)—an attitude which would be characteristic of later protagonists promoting slides in art historical education, such as Heinrich Wölfflin (Wyss 1996, 103–119). As a result of Grimm's skepticism combined with Meyer's pragmatism, the art of printmaking becomes revitalized by the new medium.

This echoes the contemporary discussion of the pros and cons of etching versus photography. It was Bruno Meyer, however, who, by representing a more progressive position compared to Grimm, celebrated the scientific progress brought about by photography. He points out that the errors occurring through photographic reproduction of artworks (in terms of contrast and color) are more measurable and easier to control (cf. Matyssek 2005, 229) than those resulting from other manual reproductions. Imprecisions of manual reproductions may be more detrimental to the attempt at faithfully reproducing a work of art, he argues in 1879.

The question of color

Due in large part to the convincing visual strategy that Wölfflin developed in his *Principles of Art* (1915), art history has primarily been understood as a huge panorama in black and white. Wölfflin's method, a technique of comparing images side by side to demonstrate formal polarities in art actually required black and white, as Wyss (1996) and Thürlemann (2013, 79–95) have pointed out. Art history in the second half of the twentieth century could be perceived as being skeptical about reproductions in color. The new findings which I discuss here give rise to the question of whether this would also apply to the early twentieth and late nineteenth centuries.

¹⁹ Cf. Section "The Beginnings of Photographic Slide Projection" above.

²⁰ "Photographien von Gemälden als Unterlage von Glasplatten zum Skioptikon bringen nie das hervor, was gute Kupferstiche oder Radierungen liefern."



Fig. 8: Hand-colored lantern slide photograph, Leonardo da Vinci's *Annunciation*, Department of Art History and Musicology, Johannes Gutenberg University, Mainz.

Given their marginalized role in photo historiography, we know very little about the use of slides in general, and there is very little evidence on the use of colored slides in particular. Aby Warburg is reported to have shown an Autochrome Lumière²¹ in 1912 at the Tenth International Congress of Art History in Rome in 1912 (Fawcett 1983, 457). In his article “Die Photographie im Dienste der Kunstwissenschaft,” Meyer (1879, 204–209) dedicates a whole section to the techniques of color photography and color reproduction, claiming that he presented colored prints to his students (Meyer 1879, 198). In the index of *Glasphotogramme für den kunstwissenschaftlichen Unterricht*, Meyer seems to be far more critical regarding the question of colored slides, yet offers colorizing them on demand (Meyer 1883, cols IX–X). Eventually, the Meyer slides did not appear in black and white at all but in a sepia tone.

Looking back at the history of projection from our vantage point today, it is the colored hand-painted lantern slides of the eighteenth and nineteenth centuries that characterize the age of the magic lantern at its heyday. As mentioned above, during the process of innovation, photographed slides had to be differentiated from the older painted slides in terms of the accuracy of their reproduction. Painted slides represented nothing less than the antithesis to the photographic ones. Manufacturers had to bridge the introduction of photographic slides, where the absence of photographic color processes required them to be black and white, and the requirements of the audience who were used to seeing colored projection of painted slides (Ruchatz 2003, 196–209). Before—and even after—the market launch of the Autochrome Lumière, adding a layer of pigment by hand to the photographic plates was a rather simple way to overcome this deficit. Instructions of painting photographic slides are prevalent documents in the history of the medium. Lorenzo J. Marcy's *Sciopticon Manual* (1877, 77–83), for instance, describes the technique.

²¹ The Autochrome Lumière was a color process patented in 1903. Based on grains of potato starch which were dyed in different colors, an additive color mixing was achieved through exposure. Due to their darkness, the Autochromes had to be illuminated by transmitted light. Therefore, special viewing arrangements like the stereoscope, the diascope, or even projection were necessary.

The impressive number of 700 hand-colored art historical slides is still preserved at Johannes Gutenberg University, Mainz (see Fig. 8). They represent the series of *Seestern Lichtbilder*, which were distributed by E. A. Seemann in Leipzig from 1911 on.²² After World War I, Seemann used uvatypy to produce slides. This was a dye transfer process comparable to technicolor, which had been developed as an alternative to the Autochrome process and was marketed by Uvachrom AG in Munich. The tradition of expensive hand-painted and hand-colored magic lantern slides continued to survive until the 1920s. In 1925, Stoedtner offered hand-colored slides on demand: “Besides black and white, I also provide colored slides on demand, which, as far as it concerns art history, are colored by first-rate artists in the museums in front of the originals. (They are not to be confused with the usual colorized pictures.)”²³ The advertisement seems to address a specialized audience, or at least we might presume that there must have been some demand for this. The text mentions the value of the slides to art history by claiming direct contact with the original. Indeed, the old medium of painting experiences a kind of afterlife here.

Examples like this show that photography, in terms of slide projection, did not necessarily mean photography in a genuine sense as we imagine it today, but also implies photographic reproductions from etchings and prints. When it comes to the early glass slides, photography works mainly as a medium of transference, a method of reproducing prints for projection purposes. Photographs executed on glass are, of course, part of the history of mechanical reproduction, and consequently face the same problems, such as adequate color reproduction in grey scales and stability. As described, we observe a coexistence of both photography and older reproduction techniques in the new medium of slide projection, which has not yet been discussed. Regarding the scholarly value of slides, hand-colored pieces appear to be somewhat paradoxical at first sight, in that the technical image seems to be corrupted by the older media, such as printmaking and painting. By causing an epistemological problem, they could link practices deriving from the use of the magic lantern more closely to photographic slide projection. These objects could help us become aware that producing pictures always depends on a variety of intentional decisions, no matter how hidden or obvious these processes are. In this regard, Grimm’s statement on the projected image being a new creation has to be considered to be valid for visual representations in general.

²² See https://archiv.sachsen.de/archiv/bestand.jsp?oid=09.22&bestandid=21082&syg_id=256811#einleitung, accessed December 20, 2017.

²³ “Außer schwarz-weiß liefere ich auch auf Wunsch farbige Diapositive, die, soweit es sich um Kunstgeschichte handelt, von ersten Künstler in den Museen vor den Originalen koloriert werden. (Nicht zu verwechseln mit *gewöhnlichen* kolorierten Bildern.)”

List of Figures

- Fig. 1:* Lantern slide photograph on glass in wood mount of Smithsonian Institution Building under construction, William Langenheim (1807–1874) and Frederick Langenheim (1809–1879) Philadelphia, 1850, Smithsonian Castle Collection, gift of Tom Rall, Arlington, Virginia, <https://newsdesk.si.edu/photos/langenheim-lantern-slide>, accessed December 20, 2017.
- Fig. 2:* Lantern slide photograph of Titian's *Flora* (1515–20), slide no. 3738, Bruno Meyer, c. 1883, carbon print on glass, 85 x 100 mm, KIT Archives, Karlsruhe, inv. no. 28002 sign. 872.
- Fig. 3:* Lantern slide photograph of Titian's *La Bella* (1536), Bruno Meyer, c. 1883, carbon print on glass, 85 x 100 mm, KIT Archives, Karlsruhe, inv. no. 28002 sign. 872.
- Fig. 4:* Lantern slide photograph of Titian's *Allegory of Marriage* (c. 1530), slide no. 3725, Bruno Meyer, c. 1883, carbon print on glass, 85 x 100 mm, KIT Archives, Karlsruhe, inv. no. 28002 sign. 872.
- Fig. 5:* *Allegory of Marriage* (Portrait of Alphonse d'Avalos, Marquis de Guast), Titian, c. 1530, oil on canvas, 123 x 107 cm, Louvre Museum, Paris, inv. no. 754.
- Fig. 6:* Portrait of Alphonse d'Avalos, Marquis de Guast after Titian, Michael Natalis, seventeenth century, engraving/print, 32,2 x 26,8 cm (image), Fine Arts Museums of San Francisco.
- Fig. 7:* Detail of lantern slide photograph of Titian's *Allegory of Marriage* (c. 1530), slide no. 3725, Bruno Meyer, c. 1883, carbon print on glass, 85 x 100 mm, KIT Archives, Karlsruhe, inv. no. 28002 sign. 872.
- Fig. 8:* Hand-colored lantern slide photograph, Leonardo da Vinci's *Annunciation*, Department of Art History and Musicology, Johannes Gutenberg University, Mainz.

References

- Bader, L. (2013). *Bild-Prozesse im 19. Jahrhundert: Der Holbein-Streit und die Ursprünge der Kunstgeschichte*. München: Wilhelm Fink.
- Beyrodt, W. (1975). Diareihen für den Unterricht. In: *Kunstwissenschaft und Kunstvermittlung*. Ed. by I. Below. Gießen, 173–187.
- Caraffa, C., ed. (2009). *Fotografie als Instrument und Medium der Kunstgeschichte*. München: Deutscher Kunstverlag.
- Dilly, H. (1975). Lichtprojektion: Prothese der Kunstbetrachtung. In: *Kunstwissenschaft und Kunstvermittlung*. Ed. by I. Below. Gießen, 153–172.
- (1995). Bildwerfer: 121 Jahre wissenschaftliche Dia-Projektion. In: *Zwischen Markt und Museum: Beiträge der Tagung Präsentationsformen von Fotografie am 24. und 25. Juni 1994 im Reiß-Museum der Stadt Mannheim*. Rundbrief Fotografie, Sonderheft 2: Göppingen, 39–44.
- (2009). Weder Grimm noch Schmarsow, geschweige denn Wölfflin ... Zur jüngsten Diskussion über die Diaprojektion um 1900. In: *Fotografie als Instrument und Medium der Kunstgeschichte*. Ed. by C. Caraffa. München: Deutscher Kunstverlag, 91–116.
- Eisenhauer, J. F. (2006). Next Slide Please: Studies in Art Education. *A Journal of Issues and Research* 47(3): 198–214.
- Fawcett, T. (1983). Visual Facts and the Nineteenth Century Art Lecture. *Art History* 6(4):442–460.

- Grimm, H. (1897). Die Umgestaltung der Universitätsvorlesungen über Neuere Kunstgeschichte durch die Anwendung des Skioptikons. In: *Beiträge zur Deutschen Culturgeschichte*. Ed. by H. Grimm. Berlin: W. Herts, 276–395.
- Haffner, D. (2007). "Die Kunstgeschichte ist ein technisches Fach." Bilder an der Wand, auf dem Schirm und im Netz. In: *Bild/Geschichte: Festschrift für Horst Bredekamp*. Ed. by P. Helas, M. Polte, C. Rückert, and B. Uppenkamp. Berlin: Akademie-Verlag, 119–129.
- Heß, H. (1999). *Der Kunstverlag Franz Hanfstaengl und die frühe fotografische Kunstreproduktion: Das Kunstwerk und sein Abbild*. München: Akademie Verlag.
- Hiller-Norouzi, J. (2009). "Logos Versus Aisthesis. Die kunsthistorische Diaprojektion als codierendes Instrument. In: *Raum – Perspektive – Medium: Panofsky und die visuellen Kulture*. Ed. by Philipp Freytag et al. Tübingen, n. pag. URL: https://publikationen.uni-tuebingen.de/xmlui/bitstream/handle/10900/46390/pdf/Hiller_BL.pdf?sequence=1&isAllowed=y, accessed December 20, 2017.
- Hotz, J. (1965). *Aktenauszüge zur Geschichte des Lehrstuhls und Instituts für Kunstgeschichte an der Technischen Hochschule Karlsruhe*. Karlsruhe.
- Lankheit, K. (1966). Kunstgeschichte unter dem Primat der Technik: Rektoratsrede gehalten bei der Jahresfeier am 4. Dezember 1965. *Karlsruher Akademische Reden, Neue Folge* 24:5–23.
- Leighton, H. B. (1984). The Lantern Slide and Art History. *History of Photography* 8(2):107–118.
- Malraux, A. (1987). *Das imaginäre Museum*. Frankfurt, New York: Campus Verlag.
- Marcy, L. J. (1877). *The Sciopticon Manual, Explaining Lantern Projections in General, and the Sciopticon Apparatus in Particular: Including Magic Lantern Attachments, Experiments, Novelties, Colored and Photo-transparencies, Mechanical Movements, Etc.* Philadelphia: James A. Moore.
- Matyssek, A. (2005). "Entdecker" und "Finder": Über die fotografische Wissensproduktion der Kunstgeschichte. *Berichte zur Wissenschaftsgeschichte* 28(3):227–235.
- McLuhan, M. [1964] (2015). *Understanding Media: The Extensions of Man*. Berkeley: Gingko Press. Critical Edition edited by Terrence Gordon.
- Meyer, B. (1879). Die Photographie im Dienste der Kunstwissenschaft und des Kunstunterrichts. *Westermanns illustrierte deutsche Monatshefte: Ein Familienbuch für das gesamte geistige Leben der Gegenwart* 47: 196–209.
- (1883). *Glasphotogramme für den kunstwissenschaftlichen Unterricht*. Karlsruhe: Selbstverl.
- Nelson, R. S. (2000). The Slide Lecture, or the Work of Art "History" in the Age of Mechanical Reproduction. *Critical Inquiry* 26(3):414–434.
- Papenbrock, M. (2006). Der Lehrstuhl für Kunstgeschichte in Karlsruhe: Ein Rückblick. In: *Kunst und Architektur in Karlsruhe: Festschrift für Norbert Schneider*. Ed. by K. Büttner and M. Papenbrock. Karlsruhe: Universitätsverlag Karlsruhe, 179–191.
- Peters, D. (2009). Fotogeschichte als Teil der kunsthistorischen Wissenschaftsgeschichte. *Kunstgeschichte. Open Peer Reviewed Journal*. URL: <http://www.kunstgeschichte-ejournal.net/13/2/Peters.pdf>, accessed August 17, 2019.
- Preziosi, D. (1989). *Rethinking Art History: Meditations on a Coy Science*. New Haven: Yale University Press.
- Reichle, I. (2002). Medienbrüche. *kritische berichte. Zeitschrift für Kunst- und Kulturwissenschaften* 1:40–56. URL: <http://www.kunstgeschichte.de/kgs/publikationen/mb1.html>, accessed August 17, 2019.
- (2005). Fotografie und Lichtbild: ‚Die unsichtbaren‘ Bildmedien der Kunstgeschichte. In: *Sichtbarkeit und Medium: Austausch, Verknüpfung und Differenz naturwissenschaftlicher und ästhetischer Bildstrategien*. Ed. by A. Zimmermann. Hamburg: Hamburg University Press, 169–181.
- Rogers, E. M. (2003). *Diffusion of Innovations*. 3rd ed. New York.
- Röbler, J. (2010). Erlebnisbegriff und Skioptikon: Herman Grimm und die Geisteswissenschaften an der Berliner Universität. In: *In der Mitte Berlins: 200 Jahre Kunstgeschichte an der Humboldt-Universität*. Ed. by H. Bredekamp and A. S. Labuda. Berlin: Gebr. Mann Verlag, 69–90.
- Ruchatz, J. (2000). The Magic Lantern in Connection with Photography: Rationalisation and Technology. In: *Visual Delights: Essays on the Popular and Projected Image in the 19th Century*. Ed. by S. Popple and V. Toulmin. Wiltshire: Flicks Books, 38–49.
- (2003). *Licht und Wahrheit: Eine Mediumgeschichte der fotografischen Projektion*. München: Fink.
- Thürlemann, F. (2013). *Mehr als ein Bild: Für eine Kunstgeschichte des hyperimage*. München: Fink.
- Ullrich, W. (2009). *Raffinierte Kunst: Übung vor Reproduktionen*. Berlin: Wagenbach.
- Wen, S. (1999). Zeigen und Schweigen: Der kunsthistorische Diskurs und die Diaprojektion. In: *Konfigurationen: Zwischen Kunst und Medien*. Ed. by S. Schade. München: Fink, 293–305.
- Wölfflin, H. (1915). *Kunstgeschichtliche Grundbegriffe: Das Problem der Stilentwicklung in der neueren Kunst*. Munich: Bruckmann.
- Wyss, B. (1996). *Der Wille zur Kunst: Zur ästhetischen Mentalität der Moderne*. Köln: Dumont.

Chapter 17

Photographing Tutankhamun: Photo-Objects and the Archival Afterlives of Colonial Archaeology

Christina Riggs

In a catalog of “photographic treasures” published in 2016 by the Institut Français d’Archéologie Orientale (IFAO), a double-page spread of black-and-white photographs, surrounded by the white page, placed a rough-textured, hand-modeled, raw clay face on the left page and on the right page, a front-facing portrait of an elderly bearded Egyptian man, his wrinkled face framed by the folds of a turban and scarf (Driaux and Arnette 2016, 144–45). Founded in Cairo in 1880, IFAO continues to sponsor excavations, and its photographic archives are approaching a half million negatives (Driaux and Arnette 2016, 2). The photographs of the raw clay object and the white-bearded man selected from those archives do not share a date, photographer, place taken, or physical format. Instead, they appear to have been paired based on formal similarities between the two faces they represent—one ceramic, one human. At the back of the book, the editors give the dimensions, media, and catalogue numbers of the negatives, and lament the lack of information otherwise available (Driaux and Arnette 2016, 301–2). On YouTube¹, the book’s publication was announced with a short film soundtracked by vaguely North African- or Middle-Eastern-sounding music, by the same Australian performer (Lisa Gerrard) whose work featured in the film *Gladiator*.

Archaeological archives, and their millions of photographs, must be among the most substantial archives formed during the colonial era, yet neither the concept nor any critique of colonialism has managed to stick to them, as this example from IFAO’s recent archive-based project—however well-intended it was—makes clear. Archives, and perhaps photographic archives in particular, or most obviously, continue to be seen within archaeology (including Egyptology) as direct and unmediated sources of information about a site or an artefact, or as evocations of a golden age of archaeology in Egypt.

Given that archaeology is a discipline widely seen to have had its material turn, what makes “the archive” seem so immaterial, so inviolable—and so orientally alluring? Working with archives, or with a museum collection as I used to do, should quickly undermine any idea that objects and the archival practices associated with them can ever be distinct (Riggs 2014, 7–18; 2017). Both take material form, and both bear the mark—sometimes literally—of the colonial realities and imaginaries that made Egyptian archaeology possible. Archaeology’s resistance to seeing photographs as anything other than images or evidence may seem to be a function of photography’s famed indexicality and the two-dimensional ease of reproducing it (Bohrer 2011, 7–26). However, I argue that there is more at work here, and more at stake, and that this has to do with the endurance—the entrenching, to use

¹ See <https://youtu.be/r5ZpjQ-UzTc>, accessed December 21, 2017.

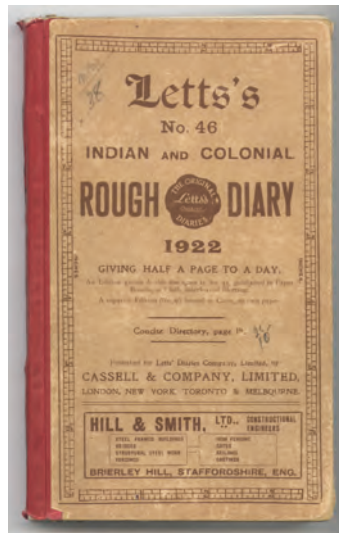


Fig. 1: Front cover of Howard Carter's pocket diary for the year 1922 © Griffith Institute, University of Oxford.

an apt metaphor—of a disciplinary consciousness: that is, how ways of doing, thinking, and seeing replicate themselves. The materiality of the photo-object (much like a museum artefact) exists within an archival ecosystem or constellation of catalogues, mounts, correspondence, meeting minutes, and files, all of which I draw on for this paper—and all of which have a very real physical presence demanding some kind of attention or inattention, however unacknowledged those forms of attention, or inattention, may be. Specific archival practices may change over time; apparent revolutions, like digitization, may occur. But if the underlying structures are undisturbed, unquestioned, there is no “turn” in ways of doing, thinking, and seeing that originated in a colonial context. There is only a deep and well-worn track.

I begin not with a photo-object, but with a Letts pocket diary, the *No. 46, Indian and Colonial* (see Fig. 1). Letts diaries were probably the most widely used in the British empire. Both the company and the diary format had their origins in Britain's expansionism, after all: stationer John Letts devised the diary in the early nineteenth century for his customers in London's Royal Exchange, as a way to record movements of stock and financial transactions (McConnell 2004).

In 1922, the owner of this diary, archaeologist Howard Carter, used it for much the same purpose. In the last week of October (see Fig. 2), Carter was busy in Cairo, preparing for another winter of digging in the Valley of the Kings, 400 miles south at Luxor. His business in Cairo included a dentist's appointment, several bank visits, and dinner at the Turf Club, favored by British civil servants (Mak 2012, 95–97). Mostly, Carter was doing his usual round of the antiquities dealers, buying and selling on his own behalf or for his employer, the Earl of Carnarvon.² He could not know that by the end of the next week, his Egyptian

² For the antiquities trade in Egypt, see Hagen and Ryholt 2016.

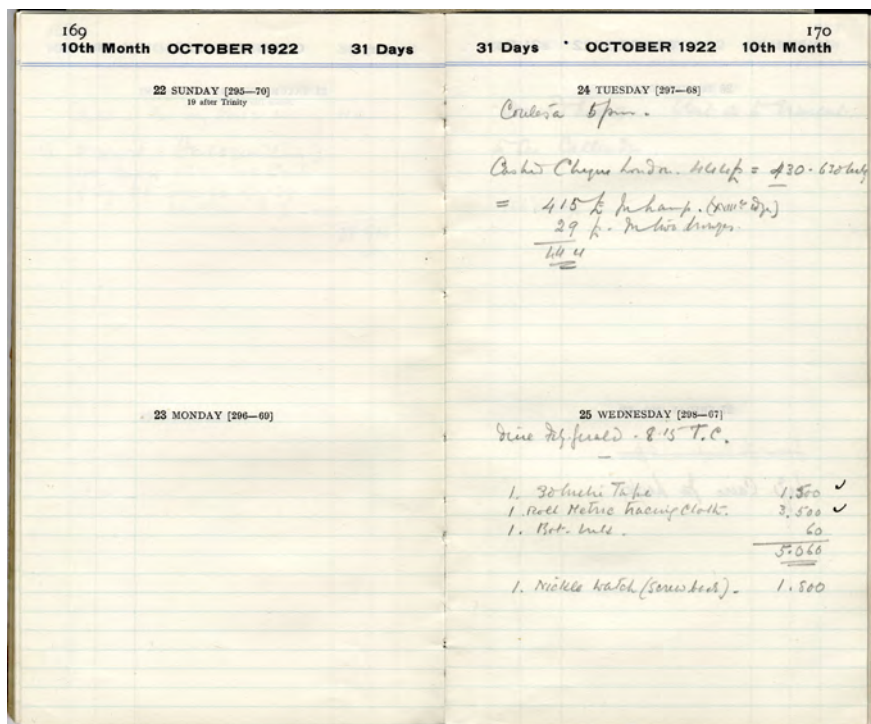


Fig. 2: Pages for the week of October 25, 1923 in Howard Carter's pocket diary © Griffith Institute, University of Oxford.

excavators, led by foreman Ahmed Gerigar, would uncover the flight of steps leading to the tomb of Tutankhamun.

The colonial suffuses Egyptian history in the nineteenth and early twentieth centuries—and suffuses the practice of Egyptian archaeology, from the name of your pocket diary, to your dentist in Cairo, to your dinners at the Turf Club, and all the transactions in between through which antiquities—and photographs—moved as both commodities and sources of scientific knowledge. (Nor was colonialism in Egypt a specifically British phenomenon: we could easily add German shipping firms, Italian grocers, and Palestinian stationers, like Edward Said's father, to that list.) There was no archaeology without colonialism, and colonialism in an antiquities-rich country like Egypt was able to take certain forms and do certain things through archaeology. What exactly archaeologists could do in Egypt was in flux at this moment in 1922, in part because the United Kingdom had given Egypt limited independence a few months earlier, to stave off more wide-reaching demands from Egyptian nationalists. Under the UK's unilateral terms, the British kept control of foreign affairs, the Suez Canal, and the Sudan, with a British high commissioner still in place and a British advisor in each Egyptian government ministry, including the Ministry of Public Works that oversaw the Antiquities Service—itsself headed by a French Egyptologist by long-standing custom (Reid 1997).



Fig. 3: Ten photo albums from the Howard Carter archive, compiled c. 1924–1926 by photographer Harry Burton © Griffith Institute, University of Oxford.

I will return to the 1920s and Carter’s conflict with the recently empowered Egyptian authorities at the end of this paper. First, I want to look in some detail at the history of the archives and photo-objects from the Tutankhamun excavation, mindful of the question with which I began, about how archaeological archives enable the quiet perpetuation of colonial disquiet into the present day.

Making the archive: Oxford

When Howard Carter died in London in 1939, his only heir, his niece Phyllis Walker, donated his excavation records to the then newly founded Griffith Institute at Oxford University, established to promote the study of Egyptology. Like most archives derived from archaeological excavations, Carter’s includes thousands of photographic objects: glass and film negatives dating from the 1910s to the 1930s, some of the metal boxes large-format negatives were shipped in, his lantern slides, and ten British-made photograph albums (see Fig. 3), which were compiled for him, probably in Egypt, by the man who did the bulk of the photography for the tomb of Tutankhamun, Englishman Harry Burton (Riggs 2016).

Within Egyptology, Burton’s photographs have become almost as legendary as Tutankhamun himself, to the extent that on the website of the Griffith Institute,³ all the Tutankhamun photographs in the archive are referred to collectively as “Burton photographs,” even though they include some clearly taken by other people.⁴ The Carter albums, for instance, contain some of his own photographs of the large-scale indigenous labor, including

³ See <http://www.griffith.ox.ac.uk/discoveringtut/>, accessed December 21, 2017.

⁴ For Burton’s work in Egypt, from the perspective of Egyptology, see Hornung and Hill 1991, 27–30; Johnson 1997; Ridley 2013; Collins and McNamara 2014, 34–43, as well as https://www.metmuseum.org/toah/hd/harr/hd_harr.htm, accessed December 21, 2017.



Fig. 4: Page from Carter album 10, with photographs printed from negatives XL and XLI; the former was taken on January 17, 1920, according to other documents in the Carter archive (see <http://www.griffith.ox.ac.uk/gri/cc/page/photo/335.html>, accessed December 21, 2017), photo: Christina Riggs © Griffith Institute, University of Oxford.

child labor, that went into excavation (Riggs 2016). True to the reproducibility inherent in photography, and the structuring enabled by the album format, photographs Carter had taken in January 1920 (see Fig. 4) could be printed and mounted by Burton some four or five years later, supporting Carter's by then well-rehearsed narrative of discovering the tomb.

Like albums, archives are formed, and re-formed, after the fact. In the 1920s, English archaeologists like Carter did not use the word "archive" to refer to what they were doing as they compiled photograph albums, excavation notebooks, and index cards. They were creating "records," and that is how the clerical staff (always female) of the Griffith Institute would refer to this material for almost forty years. The word "archive" first appeared in the Griffith Institute's annual reports in 1957, referring to a different group of photographs altogether (Ashmolean Museum 1957, 77). In the 1960s, the annual reports began to mention the "Egyptological archive," until "the Archives" became a separate subheading in 1974 (Ashmolean Museum 1973–1974, 62–63). "The Carter archive" was first described as such in 1976, a full four years after "The Treasures of Tutankhamun" exhibition at the British Museum, which had been timed with the 50th anniversary of the discovery and which made use of historic photographs from the Institute's holdings (Ashmolean Museum 1975–1976, 71; Edwards 1972). There is a tone of weary resignation in the Griffith Institute's annual report for the year of the British Museum show, in which staff observed that Burton's photographs had

contributed in a spectacular and admirable fashion to the exhibition in the British Museum, but could not escape notice also of the press and of innumerable publishers and broadcasting organizations in whom they inspired

an insatiable desire for prints and information, stretching the capacity of the staff and photographic studio at times to their limit (Ashmolean Museum 1971–1972, 58).

In all likelihood, however, the attention the Institute received as a result of the “Treasures” exhibition was one impetus for identifying its records more explicitly as archives, and itself as (in part) an archive, in the following years.

Making the archive: New York

To see the entire photographic archive of the Tutankhamun excavation, however, we have to go from Oxford to New York, not only by way of the tomb site in Egypt—but by way of Florence. Such are the geographic bedfellows that modernity, and colonialism, helped make.

Like excavator Howard Carter (they were near contemporaries), photographer Harry Burton had left England as a teenager to make a career abroad. Carter went to Egypt in the late 1880s, Burton to Florence in the mid-1890s, as the secretary and companion of British art historian Robert Henry Hobart Cust. Burton took up photography, eventually operating a small studio on Borgo San Jacopo; through Cust, he had formed connections in the city’s Anglo-American community, earning some kind of reputation, and some independence from Cust, as a photographer of Renaissance art.⁵ When Cust returned to England, he ceded Burton their apartment on the Via dei Bardi (see Fig. 5). Having formed a new friendship and patronage relationship with retired American lawyer Theodore H. Davis, who wintered in Florence and Egypt and funded excavations in the Valley of the Kings, Burton entered a new phase of his life in 1910 as an archaeologist in Davis’s employ (Adams 2013, 284–87). When ill health curtailed Davis’s work in Egypt (he died in 1914), he then recommended Burton to the Egyptologists of New York’s Metropolitan Museum of Art, to which he was an important donor.

As a result, from 1914 until his death in 1940, Burton was an employee of the Museum’s Egyptian Expedition—an archaeologist, but specialized in photography. He spent every winter in Egypt, usually at Luxor, where the Museum had a luxurious dig house not far from Carter’s own home. There were long-standing personal and professional ties between the Museum and Carter (who knew its archaeologists well, and had sold it antiquities) and between Burton and Carter (who had worked closely with, and at times for, Theodore Davis, see Reeves and Taylor 1992, 71–85). Thus, when Carter announced the discovery of Tutankhamun’s tomb in November 1922, the Metropolitan Museum was quick to offer its support, not only out of collegiality but also in hope of receiving a share of the artefacts, thanks to the generous division of finds (*partage*) that the Egyptian antiquities service had operated for decades, in part to encourage foreign sponsorship of excavations (Goode 2007, 71–72; Reid 2002, 93–137, 172–201).

The Museum had to settle for photographs instead because, after years of negotiations between Carter and the Egyptian government, all the tomb’s objects (officially, at least) remained in Egypt (James 2001, 447–8, 469–71). The destination of the excavation records

⁵ Some of Burton’s photographs can be viewed online in the catalog of the Kunsthistorisches Institut, Florence. See <http://photothek.khi.fi.it/gallery/pic-gesamt/burton>, accessed December 21, 2017.



Fig. 5: Postcard sent by Harry Burton to his employer Albert Lythgoe in New York, showing a view of Florence from the terrace of Burton's flat, photo: Christina Riggs, used by kind permission of the Department of Egyptian Art, Metropolitan Museum of Art.

was never up for dispute, however: they remained in Carter's possession, with a parallel—so-called duplicate—set of negatives that he gave to the Museum, off and on, over the ten years it took to clear and record the tomb. By a gentleman's agreement, Carter and the Metropolitan Museum's head Egyptologist, Albert Lythgoe, planned for Burton to contribute to the photography—but without knowing how long the excavation would take (Carter at first thought two years) or how much work would be required, much less that no division of the finds would, in the end, take place. Instead, an ad hoc system emerged whereby Burton sometimes made additional negatives for the Museum, by taking two consecutive exposures, and, at other times, Carter passed on to the Museum negatives that he did not want to keep himself. Burton's contribution was flexible, particularly in the later years of the work, when he himself did not know whether or not Carter planned to call on his services in a given season.⁶

Throughout the excavation, as Burton printed the negatives Carter wanted him to print, he also printed and mounted Tutankhamun photographs in the albums he kept for the Museum at its dig house, probably with the help of his wife and the dig house secretary (see Fig. 6). These albums were in the same format the Museum used for all its work in Egypt. But it was Carter who numbered the Tutankhamun negatives, and who made the final decision about which would eventually go to New York. To complicate things further, Carter used at least two sets of numbers for the photographs, and often (particularly in the first two

⁶ The contingent nature of his work for Carter crops up regularly in Burton's correspondence with Museum colleagues, particularly after the Antiquities Service let Carter resume work at the tomb in 1925: letters from Burton to Alfred Lythgoe, March 17, July 7, and September 13, 1925 and July 3, 1928; to Herbert Winlock, March 9, 1926; and from Winlock, July 3, 1928 (Metropolitan Museum of Art, Department of Egyptian Art, Burton correspondence files).



Fig. 6: Page from the Tutankhamun albums compiled in the 1920s, and added to in the 1950s, for the Department of Egyptian Art, Metropolitan Museum of Art, photo: Christina Riggs, used by kind permission of the Museum.

seasons) numbered a single plate three or four times if it depicted multiple artefacts. Those were the objects that mattered, after all, not the negatives and positives we now think of as photographic objects. Although it is difficult, if not impossible, to correlate the different numbers now, Burton seems to have kept track of Carter’s system as best he could: a partial list in his hand, marked in one corner, “Keep!,” is indeed kept today with the registers that correspond to the Egyptian Expedition’s photographic archive.

That archive, though, is no longer in Egypt but in the Metropolitan Museum in New York. The dig-house photograph albums were shipped “home” (as staff saw it) in 1948, when the Museum finally closed its Luxor dig house.⁷ At the same time, it also cleared Carter’s own nearby house, which he had left to the Museum in his will, and in doing so, sent another 500 Tutankhamun negatives to New York. These represent negatives Carter had kept in Egypt for himself, mostly from the final stages of his work at the tomb; the rest of his negatives and notes had been sent, during his lifetime, to his London address. Closing up both houses in the postwar era was no accident: it was a moment when many Western institutions sensed that change was coming and were rethinking what resources to commit to archaeology in Egypt and the Middle East (Goode 2007, 116–25; Reid 2015, 263–68).

⁷ Nora Scott (New York) to Donald B. Harden (Oxford), June 8, 1949 (Griffith Institute, NYMMA Photos file, Acquisitions—Gifts Accepted. MMA—Tutankhamun material 1949–50).

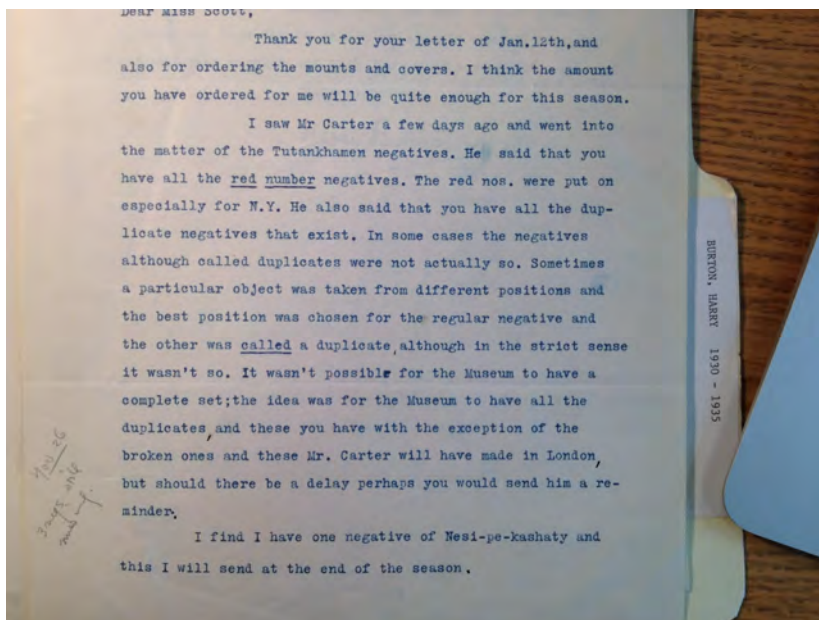


Fig. 7: Excerpt from a letter Harry Burton (Luxor, Egypt) sent to Nora Scott (New York), February 6, 1934, Burton correspondence files in the archives of the Department of Egyptian Art, Metropolitan Museum of Art, photo: Christina Riggs.

Dividing the archive

Curtailing the fieldwork of a field science like archaeology or Egyptology did not mean curtailing all the work it could do: by mid-century, institutions outside of Egypt had amassed sizeable collections not only of artefacts but also of notes, drawings, and photographs. In 1948, when the contents of its dig house and Carter's house arrived on Fifth Avenue, the Tutankhamun material should have slotted neatly in among the negatives the Metropolitan Museum already possessed. At that time, the Museum and the Griffith Institute believed that each had essentially an identical set of photographs because of confusion over the word "duplicate." This was a confusion Burton himself addressed in a letter to a colleague in the Museum in the 1930s (see Fig. 7), explaining that sometimes he took two negatives without changing anything, but sometimes what was called a "duplicate" was in fact a different angle or exposure of the same subject. Carter kept the best angle or exposure (the negatives now mostly in Oxford), and the Museum got the rest.

To this day, the Museum and the Institute to some extent persist in thinking that the photographic archive of Tutankhamun, the most famous excavation in Egyptology, is almost half the size it actually is: the Museum sometimes estimates that Burton made around 1,400 photographs (Allen 2006, 12), while the Institute suggests 1,850 (Collins and McNamara 2014, 10). The actual number is a combination of the two, or more: my own research in both archives yields a minimum estimate of 3,400 photographs surviving as negatives, positives, or both. This includes photographs by Carter, his sponsor Lord Carnarvon, or

unknown photographers that have been incorporated into one or other archive, sometimes by Carter himself (as we saw with his albums above; see Fig. 4) Since neither institution has fully accounted for both negatives and positives, nor compared the original negatives in the way that scanning technology would now permit, it remains impossible to be more precise than this at present. For instance, in the current documentation of the archive, especially in Oxford, some prints identified as “new” or distinct images are cropped or rephotographed versions from a single negative, while some negatives appear never to have been printed and therefore have “disappeared,” included neither in the albums nor in the online database, as I discuss below.⁸

These kinds of gaps and confusions, in the best-known and most praised photographic archive in Egyptology, came as a surprise to me when I began my research with the Oxford archive in early 2015. But as Edwards and Morton (2015) have pointed out, multiplicity and reproducibility are what made photography such a useful tool, not only in the field but also in museums and archives. In addition to having staff perhaps unfamiliar with either the technical or theoretical specifics of photography, these institutions by their nature are more accustomed to dealing with singular artefacts or documents, not multiply reproducible visual material (Schwartz 1995; 2002). That the exact number, physical format, or specific date of the Tutankhamun photographs has seemed entirely untroubling to generations of Egyptologists also reflects a long-established, and difficult-to-shift, tenet of archaeology as a discipline: it does not look at the photograph but through it, as Bohrer (2011, 50) has pointed out (see also Baird 2011; Shanks 1997).

Archaeology now uses historic photographs to see site features or artefacts represented at a moment of origin that is doubly in the past—first, in antiquity and, second, at the point of discovery. Hence Egyptologists’ overriding concern with the Tutankhamun photographs has been what objects or deposition pattern they show and—especially since the British Museum “blockbuster” in 1972—the British (never Egyptian) presence in the lionized excavation. An increasing trend has also foregrounded descriptive admiration of Burton’s technical and aesthetic accomplishments (e.g. Ridley 2013). The technical aspects of his work are in some of those multiple exposures, however—as is the history of the archive, which is so crucial to any history of photography as well as the history and current practice of archaeology and Egyptology.

Reuniting the archive

An example of multiplicity in the Tutankhamun archive will serve both to exemplify one aspect of Burton’s technique, and to continue the postwar history of the archive. Burton’s correspondent back in the 1930s (see Fig. 7) was Nora Scott, who was then the most junior member of staff, eventually working her way up to become the first woman to head the Egyptian department in 1970. In the late 1940s, when the albums once kept in the dig house arrived in New York, together with the extra 500 negatives from Carter’s house, it was Scott

⁸ Two of several examples of “new” or distinct photographs from the Griffith Institute’s online database: negative P1710 is a copy negative, c. 1980s, replicating a print from negative TAA1096 (New York), and P0598A is not a separate negative but a print probably from P0598 (Oxford) or TAA45 (New York). One of several examples of “disappeared” negatives: P1298 (Oxford) appears only once in the online database, but there are three large-format glass negatives with this number in the Griffith collection, each taken with different adjustments to the camera. In addition, several dozen prints of the burial shrines, for which no negatives exist, are excluded from the Oxford database.



Fig. 8: A Burton negative depicting object 101 from the tomb, given first to the Metropolitan Museum of Art (where it was number TAA 964), then sent to the Griffith Institute in Oxford, reversed digital scan from the 18x24 cm glass plate © Griffith Institute, University of Oxford.

who tried once again to make sense of the Tutankhamun photo-objects. She was put in touch with the Griffith Institute’s assistant secretary, Penelope Fox, and over almost three years, at considerable effort and expense, these two women tallied, and tried to make equivalent, the two collections.

Among many other outcomes, their work included an exchange of the large-format, 18x24cm glass negatives that Burton always worked with. A negative now in Oxford (see Fig. 8) bears the number “137,” followed by “dup” for duplicate. But at the edge of the emulsion, the lettering “TAA 964” is the number the Metropolitan Museum had used to label its own share of the negatives. When Scott saw that the Museum already had a negative showing the subject of this image, Box 101 from the tomb’s antechamber, she dispatched this glass negative, with several others, to Oxford.

There, Fox discovered that the Griffith Institute also already had a negative showing Box 101, the negative Carter had preferred, with his number “137” written on it (see Fig. 9). In this negative, compared to the others, Burton adjusted the swing and tilt mechanisms of his view camera to help square the box on the plate, presumably so that the hieroglyphic inscription at its near end would be at a more legible angle to the viewer while still preserving the sense of depth created by the box’s slanted position in relation to the camera lens.

Of the three photographs (that is, the three exposed negatives) that Burton had thus taken of this box, from this angle, he printed only one—the one Carter preferred and that Oxford already owned via the bequests from his niece in 1939 and 1946.⁹ Because of difficulties both Scott and Fox faced when comparing negatives and prints in their own and

⁹ Carter’s notes on the tomb were first offered in 1939 as a loan, then in 1946 as a gift, at which point his niece added the glass negatives and his lantern slide collection (Griffith Institute, correspondence for the Carter Deposit, file Carter 194546).



Fig. 9: Carter's negative of object 101, now negative P0137 in the Griffith Institute, reversed digital scan from the 18x24 cm glass plate © Griffith Institute, University of Oxford.

each other's collections, such confusions easily arose. Fox in particular faced the challenge of working largely from negatives, attempting to identify what were sometimes minute differences.¹⁰ It was easier to go by subject matter—Box 101—and so all three of the separate negatives became conceived as one, and only the negative Burton printed appears on the relevant database entry for Box 101.¹¹

In the correspondence files of the Griffith Institute, there are hints of unease about what else the photographs might have represented in the immediate postwar era. Its then director Edward Thurlow Leeds (the role was *ex officio* for the Ashmolean Museum's Keeper of Antiquities) sought advice from colleagues in the university, at the British Museum, and, on the grapevine, from Cairo about whether the Egyptian government might have a claim on the Tutankhamun records, in particular the photographs: would it be a problem, for instance, if Oxford licensed them for printing? Learning that the Museum in Cairo had begun to take its own photographs of the objects seems to have assuaged these concerns, one photograph being as good as another.¹² To be on the safe side, however, the next director of the Griffith Institute, Donald B. Harden, and the head of the Egyptian department at the Metropolitan Museum, Ambrose Lansing, agreed only to charge for commercial use of the photographs, anxious not to be seen making a profit from the tomb's legacy.¹³

¹⁰ Fox complained about working from negatives in a letter to Nora Scott, March 15, 1952 (Griffith Institute, NYMMA Photos file, Acquisitions MMA photogr. Tut Corres. 1952–). Carter's set of photograph albums was only donated in 1959, after the Fox and Scott collation took place.

¹¹ See <http://www.griffith.ox.ac.uk/gri/carter/101.html>, accessed December 17, 2017.

¹² Relevant letters in Griffith Institute, correspondence for the Carter Deposit, file Carter 194546.

¹³ For example, letters from Lansing to Harden, July 7, 1946, and from Harden to Egyptologist Jean Capart, December 14, 1945 (in same file as preceding note).

By the late 1940s and early 1950s, when Nora Scott and Penelope Fox undertook their collation and exchange of Tutankhamun photographs, any concerns about the Egyptian government's potential interest in the tomb records had been put to rest—but in the background will have remained other concerns about the future of Egyptology in Egypt. Fox presented her final report of the successful collation exercise to the Griffith Institute's management committee on January 24, 1952—two days before “Black Saturday,” when Cairo erupted in anti-British riots (Kerbouef 2005).¹⁴

When Fox married and left her post that spring, she must have thought that the Tutankhamun archive was now complete. Her laboriously typed, 65-page guide to the New York and Oxford collections remained a consultation document until the creation of a computerized database in the 1990s, but an archive, by its nature, is never fixed and never complete. Within months of Fox's departure, her successor Barbara Sewell was writing to Nora Scott in New York again, acknowledging receipt of further Tutankhamun prints and listing corrections both women should make to their respective copies of the guide:

Thank you for setting out so clearly the latest (perhaps it is wiser not to say ‘final’!) developments of the Tutankhamun exchange. I must say, I am not sorry to have come in at the end of this stupendous task [...] - it must have been a real headache at times.¹⁵

Collations, renumberings, and reorderings of the Tutankhamun prints and negatives in the Griffith Institute would continue at intervals for decades, and are ongoing as I write.

In 1980, the Griffith Institute, by then conscious of itself as an archive, commissioned a conservator to evaluate its photographic holdings.¹⁶ Acting on this advice, the Ashmolean Museum's photographic studio “cleaned,” that is, refixed, many of Burton's glass plates and made a fresh set of prints from most of them. During this time, they also made hundreds of copy negatives from prints that had no original negatives in Oxford; these copies, made on Kodak SO-015 film sheets, were also printed to “complete,” once again, the archive. Prints of a mixed quality and from mixed sources were then scanned in the late 1990s by a commercial firm and put online in one of the earliest digitization projects in Egyptology.¹⁷ Low image resolution further reduced the quality of the images, due to the limitations websites then faced in terms of file sizes and storage capacity. However, it remains *the* presentation—the “Anatomy,” as it is called—of the Tutankhamun excavation online. It presents itself as the “definitive archaeological record,” as if it has perfected what Scott and Fox began a generation earlier, and Howard Carter and Harry Burton before that.

Repeating the archive

For all its materiality, its physical presence, its unwieldy heft, it is the archive itself that keeps insisting on the priority of the photographic image rather than the photographic object. However many changes in values, use, or format may occur, it is as if there is a quality of

¹⁴ Griffith Institute, NYMMA Photos file, under Acquisitions MMA fotogr. Tut Corres 1951.

¹⁵ Barbara Sewell to Nora Scott, October 9, 1952 (Griffith Institute, NYMMA Photos file, Acquisitions MMA fotogr. Tut Corres. 1952 –).

¹⁶ Report by Anna Western, January 23, 1980 (Griffith Institute, correspondence for the Carter Deposit, file Carter 1978–80).

¹⁷ See <http://www.griffith.ox.ac.uk/discoveringtut/>, accessed December 21, 2017.

stasis or suspension in the archival project from its beginnings, where something—a way of seeing, filing, thinking—is set down with such weight that further movements serve to make a groove and dig that well-worn track. Practices that have their own rationale at one moment in time, in part to deal with the physicality of the archive, inevitably look back on previous practices—and we are meant to look back, directly, at the heroic archaeology of the 1920s and the golden boy king.

The producers of a 2016 British miniseries dramatizing the tomb's discovery had clearly studied photographs of the excavation closely not only for set designs, but also for publicity stills, such as one that showed actor Max Irons in the role of Carter, working in solitude on Tutankhamun's innermost gold coffin.¹⁸ The publicity shot, however, excluded the Egyptian *ra'is* working at Carter's side, one of three or four experienced Egyptian excavators who, like Burton, worked on the Tutankhamun excavation throughout. In the source photograph (see Fig. 10), the two men work side by side, both holding still while Burton took the shot; the *ra'is* is meant to be brushing away the resin coating Carter is hammering off the coffin. It was one of the last of such staged "work-in-progress" photographs Burton would take, although he continued to photograph the tomb and its artefacts until January 1933. Intended for Carter's own publicity purposes in the lead-up to the unwrapping of the royal mummy (still safely inside the coffin), the photograph appeared in *The Illustrated London News* on February 6, 1926, was reproduced as a cigarette card in the 1930s (Collins and McNamara 2014, 101), and was reactivated in the American tour of the Tutankhamun "treasures" (Cone 1976, 2). It has not been out of circulation since: it has a busy existence on the internet and in commercial photo libraries,¹⁹ and I have often seen it—in the offices of museums and archives, for instance—turned into a "spoof" image by pasting someone else's face over the head of the Egyptian man, never of Carter.²⁰

There was always an outward face to the Tutankhamun archive: in the 1920s, Carter and Lord Carnarvon licensed Burton's photographs to *The London Times* and *The Illustrated London News* to help finance the work—a move that thoroughly angered the Egyptian press and rival British and American papers (Colla 2007, 172–226; Reid 2015, 51–79). Conflict over who controlled the tomb, and who would present it to the public, led to a falling-out between Carter and Egyptian officials, including the French head of the antiquities service. At the time this photo was taken, he had only just returned to work, after the downfall of the nationalist Egyptian government and the installation of a more pro-British caretaker government.

In archaeology, the photographic image remains stubbornly fixed as an "objective" record of a site or an artefact, or as a self-regarding snapshot of Egyptologists in action. Such photographs easily lend themselves to the colonial or imperial nostalgia that plays all too well in mainstream culture, as well as in the discipline's performance of itself. The history of the Tutankhamun archive demonstrates that disciplinary replication is bottom-up as much as top-down, that is, it takes place in the work of "invisible technicians" like Penelope Fox and the photographic studio as much, sometimes more than, in the work of professors or

¹⁸ It is available on the last page of the press pack and appeared in a range of print and online media: https://web.archive.org/web/20161019190956/http://presscentre.itvstatic.com/presscentre/sites/presscentre/files/tutankhamun_itv.pdf, accessed December 21, 2017.

¹⁹ See <https://www.alamy.com/BTKGC8>, accessed December 21, 2017.

²⁰ Staff at the Griffith Institute advised me that they had been unaware their negative was not an original until they came to scan it for an Ashmolean Museum exhibition ("Discovering Tutankhamun": Collins and McNamara 2014).



Fig. 10: A copy negative dating c. 1930–1960, reversed digital scan from the 12x16 cm glass plate, now negative P0770 © Griffith Institute, University of Oxford.

editorial board meetings (Shapin 1989). For the almost thirty-year period between Carter’s last—and popular—book on the tomb (Carter 1933) and the 1960s launch of an academic series publishing tomb objects in more detail,²¹ the work that Nora Scott, Penelope Fox, and other essentially clerical-level (and largely female) staff did with the archive was the most sustained and substantial attention the tomb of Tutankhamun received.²² Fox in fact published her own book on the tomb, reproducing a number of the Burton photographs from the Griffith Institute holdings for the first time (Fox 1951). The Griffith Institute described it as a “picture-book” and hoped it would generate income (Ashmolean Museum 1951, 71). It has largely been forgotten.

There are both disciplinary and institutional factors that contribute to examples like the one with which I opened this paper, whereby a colonial establishment still operating in Egypt unquestioningly, no doubt unwittingly, has adopted an Orientalist “Other-ing” to present its photographic archive, juxtaposing humans and objects as if they were ethnographic types and publicizing the results with suitably “exotic” musical accompaniment. One factor is that most excavation archives are cared for within archaeological institutions of some kind, often those that first sponsored the work. The archive is thus at the heart of disciplinary history and identity; it is the foundation myth and mirror of an entire field of study. Another factor, already touched on, is the methodological focus of archaeology and Egyptology on image content, which takes photography as a means of direct access to the object “in” the photograph, en route to accessing antiquity itself. Moreover, the distinctive features or technical issues that a photographic archive presents (such as copy negatives) are outside the expertise or interest of most archaeologists, and for that matter, many archivists as well. The result is

²¹ See list at <http://www.griffith.ox.ac.uk/gri/5publ.html>, accessed December 21, 2017.

²² Thus also Reid 2015. In the 1940s, Belgian Egyptologist Jean (1943) republished his 1923 volume on the tomb as well.

that institutions holding excavation archives may lack technical and theoretical awareness as well as a capacity or inclination for critique; each of these factors in turn may amplify the others.

In this paper, the history of the Tutankhamun archive shows that it is not the photographic image alone that has made the well-worn track between Egyptology's colonial past and its present day. Rather, it is the photo-object, its archival lives, and the information and ideas with which they file, label, stick, and stamp it. Archival practices carry traces of the knowledge communities, power structures, and value systems in which photographs were created and used, as surely as the photographic image carries traces of what was in front of the camera at a given moment in time. New cataloging, rephotography, scanning, conservation interventions: all such practices serve only to compound or mask the issues at stake if they are used without critical and historical awareness. Throughout its almost one hundred years of existence, the photographic archive of the Tutankhamun excavation has been "brought up to date" or "made complete" several times, and each instance has contributed to, even impelled, the normalization and sublimation of colonial knowledge formations and visualities. No matter how iconic an image may be, and many of the Tutankhamun photographs certainly are, we must look beyond the image and into the archive in order to understand—and confront—the fact that photo-objects, like Egyptian pharaohs, have long and powerful afterlives.

List of Figures

Fig. 1: Front cover of Howard Carter's pocket diary for the year 1922 © Griffith Institute, University of Oxford.

Fig. 2: Pages for the week of October 25, 1923 in Howard Carter's pocket diary © Griffith Institute, University of Oxford.

Fig. 3: Ten photo albums from the Howard Carter archive, compiled c. 1924–1926 by photographer Harry Burton © Griffith Institute, University of Oxford.

Fig. 4: Page from Carter album 10, with photographs printed from negatives XL and XLI; the former was taken on January 17, 1920, according to other documents in the Carter archive (see <http://www.griffith.ox.ac.uk/gri/cc/page/photo/335.html>, accessed December 21, 2017), photo: Christina Riggs © Griffith Institute, University of Oxford.

Fig. 5: Postcard sent by Harry Burton to his employer Albert Lythgoe in New York, showing a view of Florence from the terrace of Burton's flat, photo: Christina Riggs, used by kind permission of the Department of Egyptian Art, Metropolitan Museum of Art.

Fig. 6: Page from the Tutankhamun albums compiled in the 1920s, and added to in the 1950s, for the Department of Egyptian Art, Metropolitan Museum of Art, photo: Christina Riggs, used by kind permission of the Museum.

Fig. 7: Excerpt from a letter Harry Burton (Luxor, Egypt) sent to Nora Scott (New York), February 6, 1934, Burton correspondence files in the archives of the Department of Egyptian Art, Metropolitan Museum of Art, photo: Christina Riggs.

Fig. 8: A Burton negative depicting object 101 from the tomb, given first to the Metropolitan Museum of Art (where it was number TAA 964), then sent to the Griffith Institute in Oxford, reversed digital scan from the 18x24 cm glass plate © Griffith Institute, University of Oxford.

Fig. 9: Carter's negative of object 101, now negative P0137 in the Griffith Institute, reversed digital scan from the 18x24 cm glass plate © Griffith Institute, University of Oxford.

Fig. 10: A copy negative dating c. 1930–1960, reversed digital scan from the 12x16 cm glass plate, now negative P0770 © Griffith Institute, University of Oxford.

References

- Adams, John M. (2013). *The Millionaire and the Mummies: Theodore Davis's Gilded Age in the Valley of the Kings*. New York: St Martin's Press.
- Allen, Susan J. (2006). *Tutankhamun's Tomb: The Thrill of Discovery*. New York, New Haven, and London: Metropolitan Museum of Art and Yale University Press.
- Ashmolean Museum (1951). *Report of the Visitors, 1951*. Charles Batey. Oxford: Oxford University Press.
- (1957). *Report of the Visitors, 1957*. Charles Batey. Oxford: Oxford University Press.
- (1971–1972). *Report of the Visitors, 1971–2*. Vivian Ridler. Oxford: Oxford University Press.
- (1973–1974). *Report of the Visitors, 1973–4*. Oxford: Oxford University Press.
- (1975–1976). *Report of the Visitors, 1975–6*. Oxford: Oxford University Press.
- Baird, J. A. (2011). Photographing Dura-Europos, 1928–1937: An Archaeology of the Archive. *American Journal of Archaeology* 115(3):427–446.
- Bohrer, Frederick N. (2011). *Photography and Archaeology*. Exposures Series. London: Reaktion Books.
- Capart, Jean (1943). *Tout-Ankh-Amon*. Brussels: Vromant.
- Carter, Howard (1933). *The Tomb of Tut.Ankh.Amen, Volume III*. London: Cassell.
- Colla, Elliot (2007). *Conflicted Antiquities: Egyptology, Egyptomania, Egyptian Modernity*. Durham, NC: Duke University Press.
- Collins, Paul and Liam McNamara (2014). *Discovering Tutankhamun*. Oxford: Ashmolean Museum.
- Cone, Polly, ed. (1976). *Wonderful Things: The Discovery of Tutankhamun's Tomb*. New York: Metropolitan Museum of Art.
- Driaux, Delphine and Marie-Lys Arnette (2016). *Instantanés d'Égypte: Trésors photographiques de l'Institut Français d'Archéologie Orientale*. Cairo: l'Institut Français d'Archéologie Orientale.
- Edwards, Elizabeth and Christopher Morton (2015). Between Art and Information: Towards a Collecting History of Photographs. In: *Photographs, Museums, Collections: Between Art and Information*. Ed. by Elizabeth Edwards and Christopher Morton. London: Bloomsbury, 3–23.
- Edwards, Horwerth E. S. (1972). *Treasures of Tutankhamun*. London: Thames and Hudson.
- Fox, Penelope (1951). *Tutankhamun's Treasure*. London, New York, and Toronto: Oxford University Press and Geoffrey Cumberlege.
- Goode, James F. (2007). *Negotiating for the Past: Archaeology, Nationalism, and Diplomacy in the Middle East, 1919–1941*. Austin: University of Texas Press.
- Hagen, Fredrik and Kim Ryholt (2016). *The Antiquities Trade in Egypt 1880–1930: The H.O. Lange Papers*. Copenhagen: Royal Danish Academy of Science and Letters.
- Hornung, Erik and Marsha Hill (1991). *The Tomb of Pharaoh Seti I*. Zürich and Munich: Artemis.
- James, T. G. H. (2001). *Howard Carter: The Path to Tutankhamun*. London and New York: Tauris Parke. First edition 1992.
- Johnson, George B. (1997). Painting with Light: The Work of Archaeology Photographer Harry Burton. *KMT* 8 (2):58–77.
- Kerboeuf, Anne-Claire (2005). The Cairo Fire of 26 January 1952 and the Interpretations of History. In: *Re-Envisioning Egypt 1919–1952*. Ed. by Arthur Goldschmidt, Amy J. Johnson, and Barak A. Salmoni. Cairo and New York: American University in Cairo Press, 194–216.

- Mak, Lanver (2012). *The British in Egypt: Community, Crime and Crises 1822–1922*. London and New York: I.B. Tauris.
- McConnell, Anita (2004). Letts, Thomas (1803–1873). In: *Oxford Dictionary of National Biography*. Oxford University Press. accessed May 26, 2017.
- Reeves, C. N. and John H. Taylor (1992). *Howard Carter before Tutankhamun*. London: British Museum Press.
- Reid, Donald Malcolm (1997). Nationalizing the Pharaonic Past: Egyptology, Imperialism, and Egyptian Nationalism, 1922–1952. In: *Rethinking Nationalism in the Arab Middle East*. Ed. by James P. Jankowski and Israel Gershoni. New York: Columbia University Press, 127–149.
- (2002). *Whose Pharaohs? Archaeology, Museums, and Egyptian National Identity from Napoleon to World War I*. Berkeley: University of California Press.
- (2015). *Contesting Antiquity in Egypt: Archaeologies, Museums and the Struggle for Identities from World War I to Nasser*. Cairo and New York: American University in Cairo Press.
- Ridley, Ronald T. (2013). The Dean of Archaeological Photographers: Harry Burton. *Journal of Egyptian Archaeology* 99(1):117–130.
- Riggs, Christina (2014). *Unwrapping Ancient Egypt*. London: Bloomsbury.
- (2016). Shouldering the Past: Photography, Archaeology, and Collective Effort at the Tomb of Tutankhamun. *History of Science* 55(3):336–363.
- (2017). The Body in the Box: Archiving the Egyptian Mummy. *Archival Science* 17(2):125–150.
- Schwartz, Joan M. (1995). ‘We make our tools and our tools make us’: Lessons from Photographs for the Practice, Politics, and Poetics of Diplomats. *Archivaria* 40:40–74.
- (2002). Coming to Terms with Photographs: Descriptive Standards, Linguistic ‘Othering,’ and the Margins of Archivy. *Archivaria: The Journal of the Association of Canadian Archivists* 54:142–171.
- Shanks, Michael (1997). Photography and Archaeology. In: *The Cultural Life of Images: Visual Representation in Archaeology*. Ed. by Brian Leigh Molyneux. London / New York: Routledge, 73–107.
- Shapin, Steven (1989). The Invisible Technician. *American Scientist* 77(6):554–563.

Afterword

“In the Archives, a Thousand Photos That Detail Our Questions”: Final Reflections on Photographs and Archives

Joan M. Schwartz

The chapters in this book reflect some of the papers presented at the conference on “Photo Objects,” which posed new questions, identified new concerns, made important connections, and opened new avenues to explore.¹ In the range of subjects, images, and institutional practices being explored, we witnessed the diversity and reach of our field. There was both comfort and synergy in a community of scholars from different archives, different countries, and different disciplines, drawn together through a common focus on the photo-object. Papers that would have been on the margins of most conferences organized along professional or disciplinary lines were central to participants’ research agendas and scholarly interests.

In the workshop, panelists asked “uncomfortable questions”² and presented an array of thought-provoking photo-objects (Bärnighausen et al., Chapter 2) and related scholarly concerns, as well as new ways of addressing them. Audience interventions, questions, and observations contributed enormously to rich and productive discussions, and, certainly, it was a stroke of genius to bookend Elizabeth Edwards (Chapter 3) and Lorraine Daston (Chapter 4) as the two keynotes. In the past, their work forced us to think about photographs in terms of materiality, on the one hand, and objectivity, on the other; here, the former used the notion of “non-collections” and the latter pinpointed “archival moments in the sciences” as ways to challenge and expand our investigations of photo-objects.

We were also introduced to the Photothek of the Kunsthistorische Institut in Florenz—Max-Planck-Institut by Costanza Caraffa and Julia Bärnighausen, who explained its aims, structure, and procedures, and shared some of its treasures and tales. Surrounded by boxes of card-mounted photographic copies of works of art, organized and labeled in a particular way, we were alerted, in demonstrable ways, to some of the idiosyncrasies of photographic archives and the challenges they pose for researchers.

We have seen striking images—from a late nineteenth-century card-mounted print of a row of jars of tumours (Zeynep Çelik, Chapter 8), reminiscent of William Henry Fox Talbot’s *Articles of Glass*, to a large backlit transparency from Catherine Yass’s *Corridors* series (Haidy Geismar and Pip Laurenson, Chapter 10). We were introduced to a wide array of archives, collections, and albums (Lena Holbein, Chapter 13), presented with curious images, and confronted by disturbing issues. Speakers presented important observations and nuanced critiques on multiple originals, “duplicates,” and copies (Petra Trnková, Chapter 14). Audience attention was drawn to photographic effect and affect, to collections and non-collections, to archival ecosystems, moments, and afterlives.

¹ I extend sincere thanks to Costanza Caraffa, Ute Dercks, Almut Goldhahn, and Julia Bärnighausen, as well as the entire “Photo-Objects” research group and the very helpful staff of the KHI who made this research endeavor possible and ensured that everything unfolded seamlessly and on time.

² “Asking Uncomfortable Questions” was the title of the workshop, held February 16, 2017 in conjunction with the conference “Photo-Objects. On the Materiality of Photographs and Photo Archives in the Humanities and Sciences.”

Colonialism, displacement, and identity were themes that threaded through a number of papers, revealing links across widely divergent topics and offering insights into lingering problems. Focus on the nature, meaning, and power of photo-objects brought coherence to research in a wide variety of disciplines, including anthropology (Christopher Pinney, Chapter 11), archaeology, astronomy (Omar Nasim, Chapter 9), medicine, politics, and commerce (Anaïs Mauuarin, Chapter 12), and to inquiry into museums and science; archives as institutions and archives as evidence; duplicates and slides (Maria Männig, Chapter 16); cataloging and communication. Kelley Wilder (Chapter 15) touched on the relationship of word to image. Equally powerful, if less obvious, were the themes of invisibility, recuperation, and repurposing. Addressed directly by Lorraine Daston, but in many ways quietly permeating the overall topic of the conference, was durability—durability of substance, durability of meaning.

Underpinning all papers was a fluid, sometimes amorphous understanding of the term “archives”—highlighting the basic question: “What do we mean when we speak about the archive or archives?” The word itself is not used consistently. There are academic and theoretical as well as professional and institutional understandings of the archive(s) as: cultural institution, documentary accumulation, authored inventories, artificial collections, metaphorical construct. What, then, is our understanding of photo archives? Is it Costanza Caraffa’s *Photothek* of the art historian (Chapter 1), from which Katharina Sykora analyzed a compelling series of photographs entitled the “Triumph of the Photography” (Chapter 7)? Or the glass plate negatives of Lorraine Daston’s astronomers, the family photographic archives of Suryanandini Narain, the “affective archives” of Vered Maimon,³ the dispersed Ataturk archives of İdil Çetin (Chapter 5), the medical research archives of Zeynep Çelik (Chapter 8), or the archaeological archives of Christina Riggs (Chapter 17)? The archives addressed by the conference speakers share certain assumptions, structures, and features that make them “archives” in the scholarly imagination, but each has its own story to tell of accumulation and mandate, people and place, ideological constraints and social power. And therein lies the slippage that complicates our understanding of the nature and role of photo archives.

If the papers revealed the many ways in which “archives” are constituted and understood, less was said about the role of the archivist—in deciding what is preserved and in determining what is made available and how. There were references to “completeness” and, yet, archives are never complete. They are seldom whole and never inert; they are formed and re-formed, added to incrementally, culled, reorganized, described, reformatted, repurposed. This remains a key topic for future discussion.

“In the archives, a thousand photos that detail our questions” (Hunter 2004, 94). This line from a poem by Aislinn Hunter entitled “The Interval” flags an issue central to the study of photo-objects and photo archives. In citing it, I run the same risk as presenting a quote—or taking a photograph—out of context. But this line, for me, epitomizes a problem endemic to the scholarly use of photographs, particularly those preserved in archives. Researchers enter archives with questions in search of answers. Far too often, they are looking for a photograph of something—a person, a place, an event, a thing—to corroborate or illustrate their research findings. Far less often, they look at photographs, not for the answers they supply but for the questions they pose. This line of Hunter’s resonates with Thomas Schlereth’s observation

³ Not included in this volume.

that questions posed by historians “have usually not been phrased in ways that photographic data can answer” (Schlereth 1980, 15).

It is, therefore, not enough simply to reformulate our questions or expand the range of queries we pose. Rather, in delving into the social biographies of images, it is also necessary to be more attentive to the questions that photographs ask us, if only we are prepared to listen to them. To track changes in the meaning(s) of photographs as they come down to us across time and space—as scholars, as historians, as archivists—we must study photographs for the critical roles they play in the processes by which individuals and societies communicate and remember.

To do so requires that we change the relationship we have with photographs. Users and keepers of archives can no longer merely ask what photographs are of, naively conflating content and meaning. Rather, they must push beyond visual content to explore content in context, to shift attention from indexicality to instrumentality, to ponder what photographs are about, consider what they were created to do, reflect on how they circulated, contemplate what meanings they generated, muse upon what actions they prompted, uncover the effects they produced—at different times of their social biography. We need to foreground assumptions that underpin the ways in which photographs are digitized, published, or otherwise repurposed and recirculated—how their material nature is obscured or altered, and, consequently, how the relationships embedded in them change, why, and to what end.

Historians, archivists, curators, and librarians ask questions that variously reflect professional perspectives, disciplinary expertise, and institutional mandates. Their questions privilege and marginalize in different ways, shaping the meaning of photographs in ways that are both subtle and profound. What is important to acknowledge here is that archives are fundamentally different from other heritage repositories in their mandates and methods, approaches and patrons, their questions and their answers. That archives keep records in a particular way for a particular reason is critical to understanding the place of photographs in archives, how to find them, and what they mean there.

Our speakers have demonstrated the importance of theoretically informed but empirically grounded photographic research. Theory-driven research is self-fulfilling. Those in the audience who have worked as archivists or collections managers or have immersed themselves fully in archival collections know all too well that enthusiastic scholars inclined to impose theory on photographic archives can always find images to support their arguments. But are these images typical or unique, original or copy? For those with just a little more patience, a lot more digging, and a smattering of photo history, do they, in fact, undermine the very premise that they were chosen to reinforce visually? It is clear that the speakers here have gone into the archive prepared to let photographs pose questions. Those questions are not necessarily questions that can be answered directly from photographs themselves. Those questions may send us off on a wild goose chase, into the documentary universe in which photographs circulated—racing down dead ends, lured by red herrings, and tumbling headlong into the ecosystem and non-collections that Elizabeth Edwards described.

Several key topics were touched upon obliquely or in passing: copyright, for example, a topic almost impossible to discuss at an international gathering, except in theoretical or the most general of terms, since copyright laws vary dramatically from country to country. More universal and pressing, however, is the impact of electronic communication on copyright laws governing the reproduction and circulation of photographs and born-digital images.



Fig. 1: Humphrey Lloyd Hime, *The Prairie, on the Banks of Red River, looking south*, September–October 1858, Library and Archives Canada, Accession 1936-273, copy negative # C-018694.

In her keynote, Lorraine Daston drew attention to durability as an assumption of the archive, pointing to assumption for the longevity of ancient inscriptions on paper squeezes and a map of the heavens on glass. The durability of the unexpected—of paper and glass over stone—points to contemporary archival concerns about longevity of born-digital images in an age of electronic communication and preservation. However, the elephant in the room was not the born-digital image but digitization, by which I mean the processes and consequences of scanning analog photo-objects, attaching metadata, and making surrogates available online. Mentioned more than once in passing, it is a topic that warrants close consideration by users of archives because of the capacity of creators and keepers of archives to efface and/or emphasize elements of photographic meaning-making in the dematerialization and decontextualization that so easily occurs, often inadvertently. This concern brings us full circle back to the power of archivists and others who are responsible for determining the value of images, ensuring their preservation, and providing access to them. In questioning where, how, and by whom the value of the photo-object is assigned, we tackle thorny assumptions about the nature of value as inherent or contingent, and about hierarchies of value.

Whereas many of our speakers amply illustrated the importance of photographic evidence by elaborating on the historical significance of visual facts and sometimes obscure or minute details, some photographs are significant for what cannot be seen at different registers. Let me call upon three examples to elaborate on this point. It is easy to assume that Humphrey Lloyd Hime’s *The Prairie, on the Banks of Red River, looking south* (see Fig. 1)⁴ is an image of barren desolation. The key aspect of its visual content, in fact, has no

⁴ *The Prairie, on the Banks of Red River, looking south* and its companion *The Prairie, looking west*, were part of a series of at least three dozen photographs taken by Humphrey Lloyd Hime on the Canadian government’s



Fig. 2: [William England] London Stereoscopic Company, *The Suspension Bridge, Niagara*, 1859, Library and Archives Canada, Accession 1988-286, copy negative # PA-165997.

visible presence: it is a photograph of “treelessness.” For much of the nineteenth century, the assumption was that an absence of trees in a landscape signified aridity and a lack of agricultural potential. This stood as a critically significant barrier to dreams of westward territorial expansion on the North American continent. But this assumption had a timeline that took a dramatic U-turn in 1856 when scientific findings on the climatology of the United States disrupted the notion of the Great American Desert⁵ (Blodget 1857, viii). By the time this photograph was taken, assumptions about barren desolation had given way to an Edenic vision of a transcontinental nation. What is missing from Hime’s quintessential image of the prairie was a litmus test; the “of-ness” of the photograph was interpreted very differently after new knowledge generated new expectations in what viewers brought to the act of looking.

Similarly, in William England’s 1859 photograph of the Niagara Suspension Bridge (see Fig. 2)⁶ the international border runs invisibly and significantly down the middle of the river, bisecting the bridge and the train which straddles two countries. It is a record of

Assiniboine and Saskatchewan Exploring Expedition sent to the western interior of British North America to assess the area’s potential for settlement and agriculture. They were disseminated in conjunction with the government’s *Reports of Progress*, published in Toronto in 1859, and the popular *Narrative of the Canadian Red River Exploring Expedition of 1857, and of the Assiniboine and Saskatchewan Exploring Expedition of 1858*, which appeared the following year in London, both written by the expedition leader, Henry Youle Hind.

⁵ Blodget’s initial report was printed “by authority of the [United States] War Department” and distributed early in 1856 (viii).

⁶ In 1859, William England, chief photographer of the London Stereoscopic Company, was dispatched to North America to produce the company’s first series of New World views. He toured the United States and Canada at a time when the monumental Victoria Bridge was under construction in Montreal for the Grand Trunk Railway and the clouds of war were gathering over the slavery question south of the border. This is one of the few photographs England produced in both stereo and large format.

what David Nye has called “the American technological sublime” (Nye 1994). In the distance, embedded in the stratigraphic layers of the Niagara Gorge, nineteenth-century viewers would have seen the controversies, generated by the work of Charles Darwin on evolution, Charles Lyell on geological time, and Bishop Ussher on the date of creation of the universe, collide. Ideas about engineering, progress, biblical truth, and scientific knowledge defined this image’s “*about-ness*”—ideas brought to the act of looking by Victorian viewers, ideas not obvious to twenty-first-century eyes.

Such photographs by Hime and England are examples of temporally distanced images, the rhetorical power of which cannot be fully appreciated—or understood—without historical contextualization.⁷ But what of more contemporary photographs, the kind we see on a daily basis in newspapers, on billboards, and in magazines? Do we stop to consider the tacit but powerful messages they carry about our society, its beliefs and values? Before the internet flooded our quotidian spaces with photographs, the National Archives of Canada mounted a small display of fashion photography by noted Toronto photographer Struan Campbell-Smith. The large colour prints were matted and framed, and, as such, were divorced from the advertising copy that otherwise normalized—or distracted from—their visual content. Not surprisingly, several photographs showed women scantily clad or provocatively posed.

A controversy erupted over the show, prompting a heated letter from one irate researcher who complained about the display of “pornography” on the walls of an institution dedicated to “high culture”. One photograph, created for the Quinto shoe company for advertising purposes, showed a naked female torso bent in silhouette over a high-heeled shoe (see Fig. 3).⁸ It was stolen twice, perhaps a measure of its popular appeal. What was both striking and illuminating was the way in which the exhibition’s critics, surprised to find sexualized images of women in the corridor between the reception desk and the cloakroom, failed to look beyond the visual content of Struan’s work.

The Struan Campbell-Smith photograph, like the Hime and the England, is an image made meaningful by what we bring to the act of looking. When seen in an advertisement in a magazine, on a billboard, or in a bus shelter, surrounded by the advertising copy that supplies its functional context, the image becomes banal, its power dissipated by its placement in socially accepted—or ignored—visual circumstances. But, stripped of its advertising copy and viewed matted, framed, and decontextualized in a place usually reserved for benign, presumably neutral and objective, historical documents, the Quinto shoe photograph was seen afresh, stark and unencumbered by words.

⁷ For a fuller contextualization of H. L. Hime’s *The Prairie, on the Banks of Red River, looking south*, see Schwartz 2003, 105–130. For a detailed examination of William England’s photograph of Niagara Suspension Bridge, see Schwartz 2011, 69–110.

⁸ This photograph was created by Toronto fashion and advertising photographer Struan Campbell-Smith for an advertising campaign by the Quinto Shoe Company. Never used as intended, it was one of twenty-five prints acquired from the photographer the *Aperçu* series by the then Public Archives of Canada (accession 1980-193) and exhibited from June to October 1980. It appeared in two trade publications and was reproduced in *Treasures of the National Archives of Canada* (1992, 354) with the following text (unattributed, but written by Lilly Koltun): “The juxtaposition of a female torso dramatically hovering over a high-fashion shoe epitomizes the increasing propensity to sexualize material consumption in contemporary Canadian advertising. More than a document of a particular fashion trend in footwear, the ostensible subject of the image, this photograph transmits cultural values and mores codified into the language of ‘sell.’ Beyond any representation of the product, the image seeks to seduce the viewer by its symbolism: sophistication, youth, sexuality, power.”



Fig. 3: Struan Campbell-Smith (Toronto), *Red Shoe*, 1977, Library and Archives Canada, Accession 1980-193, copy negative # PA-181604, courtesy: Struanfoto, Toronto.

The portfolio of Struan’s fashion photography held up a mirror to advertising images employed to sell everything from women’s shoes to car mufflers. Displayed large and out of context, his *Quinto* shoe photograph is a perfect study in layered looking. One can ask: What is it *of*? What is it *about*? What was it created *to do*? On the surface, the photograph is *of* a naked woman bent over a shoe, but the Archives did not acquire the image to document the corresponding curvature of a 32A breast and a 6B stiletto shoe. Returned to the circumstances in which it was intended to be seen, the photograph is *about* sex and the exploitation of women in advertising. This points to its functional context of creation: the photograph was created *to do* something—to sell shoes.

Carrying reaction to its logical conclusion, why shoot the messenger? The wrath of critics was not leveled at the shoe industry for promoting ergonomically unsound footwear, nor at the advertising industry for using sexualized images of women to sell products (in this instance, at least, it was women’s shoes and not car mufflers), nor at the publishing industry for accepting and circulating advertisements that reinforced societal approbation of sexual innuendo and gender bias. Rather, the institution where the work was exhibited was censured for displaying the Struan photograph in its front corridor. The irony was not lost on photo archivists.

Hime’s print, England’s stereoscopic view, and Struan’s advertising image also flag how the act of looking is governed by the photo-object’s presentational form. Where cataloging information often includes dimensions, the weight of a large, leather-bound album is not usually part of a conservation treatment report or a descriptive record, and yet weight offers clues to the way in which the photographs contained in a heavy album were stored, displayed, and viewed. The “albums” created on our cell phones and computers are the antithesis of the cumbersome, leather-bound volumes with gilt and gauffered edges, marbled

endpapers, and silk headbands, all of which framed the act of looking and contributed to the meaning of the photo-object.

After two and a half days of intriguing papers that plumbed the depths of form and format, materiality, and meaning, I am inclined to ask what transformations take place when the digital surrogate not only becomes accepted as a way to preserve the original, reduce on-site access, and provide online access, but is also embraced as an aesthetic substitute, an informational equivalent, an experiential equal of the photo-object. It is most assuredly not. The elephant in the room—digitization—barely raised its problematical head. While there is no question that copying of analog photographs provides safe and easy access to fragile originals by means of digital surrogates, item-level digital access can all too easily remove differences in presentational form and perpetuate the notion that photographs can be transposed from format to format without losing the full meaning of the content. Witness this statement accompanying the corporate video *How We Serve Canadians: For the Record* on Library and Archives Canada’s website:

The future is digital. Converting as many of our assets as possible into digital form means they have the best chance of standing the ultimate test... the test of time. When you convert documents, films, paintings, photographs, music into digital form, they are no longer the prisoner of their original format.⁹

However, such “imprisonment” is at the heart of the archival mission to preserve the meaning of the document within the documentary universe in which it circulated and generated meaning. It is, therefore, dangerous for resource allocators, archival policy-makers, and collections managers to accept digitization as the cure-all for storage and access ills; equally, it is foolhardy for scholars to accept digital surrogates at face value.

If institutions are going to devote extensive resources to digital content initiatives, then it is imperative that those carrying out the work understand what and how photographs communicate and what makes them meaningful. If quality metadata is the key to successful mass-digitization projects, what, then, are the elements of visual meaning-making in the analog world that must be preserved in the digital surrogate; in turn, we might ask “What are the elements of visual meaning-making in the born-digital world?” The shift of visual content from material object to electronic file carries lessons both ways across the technological divide. Greater awareness of this shift and its lessons about the mutability of photographic meaning opens a path to a greater understanding of images— analog, digitized, and born-digital.

As the digital revolution overtook the course of human communication in the last decades of the twentieth century, anxiety over the inherently vulnerable and potentially ephemeral nature of digital archives and born-digital images produced heightened scholarly interest in the nature and locus of memory, although, remarkably, little attention has been paid to photographs as devices of memory in the burgeoning literature. The Florence Declaration¹⁰—drawn up right here at the Kunsthistorisches Institut in Florenz in 2009—codified important ideas about archives which extend far beyond their intersection with photographs in “photographic archives.” Its recommendations for the preservation of analog

⁹ Library and Archives Canada. Video and transcript: *How We Serve Canadians: For the Record*. <https://www.bac-lac.gc.ca/eng/news/videos/Pages/for-record.aspx?undefined&wbdisable=true#wb-sec>, accessed December 18, 2017.

¹⁰ <https://www.khi.fi.it/FlorenceDeclaration>, accessed December 20, 2017.

photo archives are based on two convictions: 1) photographic and digital technologies not only condition the methods of transmission, conservation, and enjoyment of photographs, but also shape their content; and 2) analog photographs are not simply visual images but also physical objects, the meanings of which are contingent upon their material form and their existence in time and space. Now, almost ten years later, we understand from some of the papers delivered here that born-digital photographs themselves merit consideration as material objects as well.

Looking forward, how will the function of photographs and archives in society change, and how will the nature and use of photographs and archives reflect that change? Especially unsettling is the “Cloud” as a metaphor for a site of permanent photographic and archival storage. Clouds are impermanent, ephemeral, transitory, ever-changing. There are no adjectives to describe clouds that instill confidence that the Cloud is capable of keeping archives and photographs authentic, trustworthy, and forever safe from a technological Armageddon.

A final concern hovering over the future of our work is the notion of “post-truth” popularized in the wake of the election of Donald Trump as President of the United States. In 1992, shortly after the advent of the first personal still video cameras ushered in digital imaging, William J. Mitchell invited us to grapple with the issue of “visual truth in the post-photographic era” (Mitchell 1992). What, then, are we to make of visual images (analog or digital) in the post-truth era? Is this a reiteration of the crisis of representation that unseated bedrock reality in the humanities and social sciences in the mid to late 1980s (Clifford and Marcus 1986; Marcus and Fischer 1986)? Or is this even more sinister, far-reaching, and unsettling in its ramifications for studies of photography and the writing of its histories?

The conference on Photo-Objects complemented the symposium series dedicated to “Photo Archives” which gave rise to the Florence Declaration. Launched in 2009, the open-ended series has been based on the premise that photo archives are “open, dynamic, and complex structures” which are the result of “sedimentation processes” that produce and transform knowledge. Together, these gatherings have nurtured the reciprocity and interaction between photographic records and academic disciplines, stretched theorizing about photographs and archives, and explored photographic archives, images, and objects in terms of key concepts—memory, objectivity, place—capable of generating fresh ideas and debates. The focus of this conference on “the materiality of photographs and photo archives in the Humanities and Sciences”—has taken as its remit “photographs as (research) objects in Archaeology, Ethnology and Art History.” In fact, as we have witnessed, its agenda has far broader reach and effect than these disciplinary parameters would suggest.

List of figures

Fig. 1: Humphrey Lloyd Hime, *The Prairie, on the Banks of Red River, looking south*, September–October 1858, Library and Archives Canada, Accession 1936-273, copy negative # C-018694.

Fig. 2: [William England] London Stereoscopic Company, *The Suspension Bridge, Niagara*, 1859, Library and Archives Canada, Accession 1988-286, copy negative # PA-165997.

Fig. 3: Struan Campbell-Smith (Toronto), *Red Shoe*, 1977, Library and Archives Canada, Accession 1980-193, copy negative # PA-181604, courtesy: Struanfoto, Toronto.

References

- Blodget, Lorin (1857). *Climatology of the United States*. Philadelphia: Lippincott.
- Clifford, James and George E. Marcus, eds. (1986). *Writing Culture: The Poetics and Politics of Ethnography*. Berkeley and Los Angeles: University of California Press.
- Hunter, Aislinn (2004). The Interval. In: *The Possible Past*. Vancouver: Raincoast Books, 96–98.
- Marcus, George E. and Michael M.J. Fischer (1986). *Anthropology as Cultural Critique: An Experimental Moment in the Human Sciences*. Chicago: The University of Chicago Press.
- Mitchell, William J. T. (1992). *The Reconfigured Eye: Visual Truth in the Post-Photographic Era*. Cambridge, MA: MIT Press.
- National Archives of Canada (1992). *Treasures of the National Archives*. Toronto: University of Toronto Press.
- Nye, David E. (1994). *The American Technological Sublime*. Cambridge, MA: MIT Press.
- Schlereth, Thomas J. (1980). Mirrors of the Past: Historical Photography and American History. In: *Artifacts and the American Past*. Nashville: AASLH.
- Schwartz, Joan M. (2003). More Than ‘Competent Description of an Intractably Empty Landscape’: A Strategy for Critical Engagement with Historical Photographs. *Historical Geography* 31:105–130.
- (2011). The Archival Garden: Photographic Plantings, Interpretive Choices, and Alternative Narratives. In: *Controlling the Past: Documenting Society and Institutions*. Ed. by Terry Cook. Chicago, IL: Society of American Archivists, 69–110.