

PHOTOCONSORTIUM: Digitizing Europe's Photographic Heritage

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Abstract. Photoconsortium is an association of photographic archives that contributed over 450.000 images of early photography to Europeana. In this contribution we discuss lessons learned, in particular on digitization and copyright issues and describe the activities involved in managing state-of-the-art digitized photographic archives. We discuss follow-on project activities such as Europeana Space, which focuses on creative reuse of digitized cultural heritage and the Europeana thematic photography channel.

Keywords: Photography · Digitisation · Europeana · Heritage · Cultural heritage · Metadata · Archives

1 Introduction

EuropeanaPhotography [1] was an EC funded project under the ICT Policy Support Programme of the Competitiveness and Innovation framework Programme, led by KU Leuven and Promoter, which started in 2012 and successfully completed its work in January 2015, delivering all the expected results.

The main outcome of the project was the delivery of hundreds of thousands of digitised masterpieces of early photography, coming from the most prestigious photographic archives and museums in Europe. These digital collections were ingested into Europeana [2], the European portal for digital cultural heritage, and are now accessible to researchers, students, and all the interested people.

The partners of EuropeanaPhotography decided wisely to give a “new life” to the outcomes of the project, and to make them alive beyond the end of the EC funded period. The partners agreed on a **long-term strategy**, transforming **cooperation synergies** into **PHOTOCONSORTIUM Association, the International Consortium for Photographic Heritage** [3].

PHOTOCONSORTIUM association was established on the 29th of October 2014 and its first General Assembly took place in Bratislava on the 6th of November 2014 where President Prof. Fred Truyen and Vice-president Dr. Antonella Fresa were elected together with the nomination of the members of the Steering Committee and of the Executive Council. The aim of the association is to **expand and enlarge the results of**

EuropeanaPhotography, providing a sustainability model to ensure the long-term maintenance of the project results and to continue to cope with its original aims. In what follows, we describe the work of PHOTOCONSORTIUM, during and after the EuropeanaPhotography project.

2 Digitization of Photographic Cultural Heritage: Lessons Learned

Digitization of photographic cultural heritage involves many aspects, which we will shortly discuss in what follows. First of all, photographic archives contain a diversity of materials. Photographs can be kept as negatives, or as positive prints. The negatives can be individual glass negatives, but also paper negatives (e.g. in the calotype process), or they can be still part of celluloid film rolls, or cut out bands. Prints can be stand-alone photographs, often in folders or in albums, or be part of published books. Many photo houses also keep contact prints. The works in question could have been published or not. Often archives hold unselected materials relating to famous published photographs from famous photographers. Contact sheets are often revealing, as they show the selection process, in many cases not only performed by the photographer himself but also by the editor or publisher.

Managing a photographic archive hence involves a multitude of tasks, which have to do with **collection, documentation (metadata), curation, publication and preservation**. In all these tasks, digitization and digital technologies play a major role. These efforts need to keep in mind the key roles of an archive: protecting the authenticity and integrity of the stored documents, preserving this cultural heritage and on the other hand offering the public the means to exert their right to access this heritage. In EuropeanaPhotography, we gained several key experiences that we aim to provide as expert knowledge to other photographic archives.

3 Collection

In EuropeanaPhotography, we set up a content committee to oversee what collections were actually relevant to fit our goal, namely documenting the first one hundred years of photography. We had several kinds of archives: the world famous collections of Fratelli Alinari, Parisienne de Photographie, Imagno, Pofoto and TopFoto on the one hand, which are funded privately, and public archives such as Arbejdsmuseet from Copenhagen, Denmark, ICCU/SGI in Italy or Gencat in Catalunya, Spain. Most of the masterpieces in these collections are widely known. We also had an important group of Central and Eastern European Archives which brought absolutely undiscovered material to the table. Archives such as Divadelny Ustav from Slovakia, the Museum of History of Photography in Krakow and ICIMSS from Poland, NALIS from Bulgaria, Lithuanian Art Museums from Lithuania brought in unseen collections. In the case of ICIMSS and NALIS, new material was researched and acquired from private family holdings. In Germany, United Archives specializes in acquiring unknown photographic collections to sell those to archives. Contributions were made by institutions that did not belong to the original partnership, such as the Cyprus University of Technology, the specialized

centre Bali LTD, the Soviéta Géografica Italiana and the Israel Museum. The National Technical University of Athens provided technical support and the Koninklijke Musea voor Kunst en Geschiedenis in Belgium offered metadata expertise. The Centre for Image Research and Diffusion in Girona and the KU Leuven Imaging Lab took care of digitization research.

4 Documentation and Metadata

In any of these different cases, it is important to know that large parts of current archives are in fact undocumented, laying often unprocessed in maps and folders in their original packaging when they came from the donations. In large part, the activity in European-aPhotography thus resulted in actually discovering part of the reality of the first one hundred years of photography as it emerged from the archives. To have some consistency in the descriptions and to allow thematic organization we setup a metadata committee that developed a multilingual thesaurus in originally 13 – know 16 – languages describing the techniques, styles and themes of early photography. This thesaurus has been published as linked open data in skossified format [4]. Of course we are open to accept translations in other languages and further additions to the vocabulary. It was the first time that European photographic heritage was described using a common vocabulary. Since many of the established archives already used their own database and metadata system, this required a mapping which we did using an intermediate LIDO standard, which was the mapped to the Europeana Data Model using the widely used MINT tool developed at NTUA. The metadata standard committee oversees the consistent use and quality of the applied metadata. Besides correct photographic metadata we want good content descriptions allowing for clear identification of the author, subject, place and time of the photograph, which often poses serious problems as many photographs are poorly documented by the original donators. This is BTW one of the compelling reasons, as we will highlight further on, to publish these photographs in large databases such as Europeana, as background metadata enrichment can take place derived from similar photographs from other contributors. Problems with exact attribution of the author and lack of exact date information also brings some copyright issues as we will discuss.

5 Curation

As photographic archives contain a wide diversity of materials, we implemented a two-phased approach on curation. At first, each archive would look into its holdings and look what themes emerged from the yet to be digitized material. This was then brought together when partners showcased their collections to each other. This allowed us in a second phase to determine topics of interest that would be pursued further, so that there were transversal links between the partner collections. We decided e.g. not to focus too much on the first world war, as there was a specific Europeana project working on this. Themes would include a.o. leisure, sport, politics, art, culture, news and media. To make the large EuropeanaPhotography collection (currently at more than 450.000 images) more understandable and “tangible”, a selection was made for a showcase exhibition,

“All our Yesterdays”, [5] focusing on the lives in Europe in that era, with subthemes such as “The City Lives”, “The Art of the Portrait”, “Yesterday’s Children”, “Hardship and Drama”, “The Eye of the Beholder”, “Joy & Leisure” and “A Brave New World”. A special subset “The Photographer at work” emerged from the finding that in many collections a kind of “selfies” avant-la-lettre were discovered. The focus on the average city lives was new to many of the archives, who usually focused on the important political, artistic and cultural heritage when curating collections. Rather than the famous poet of renowned prime minister we wanted to show people strolling the streets, enjoying a fair, going about their daily business. We discovered some lesser, more locally or even squarely unknown photographers that easily deserve a place among the world famous ones like Maurice Branger, Henry Cartier-Bresson and John Topham, such as Polish photographer Tadeusz Rząca or the unknown German photographer Karl Heinrich Lämmel (Fig. 1).



Fig. 1. Genre scene in the village, Krakow area. Rząca Tadeusz (1868–1928) – Museum of History of Photography, Poland

6 Publication

Digitization of cultural heritage allows for publication of this heritage in a multitude of formats and channels, thereby enhancing greatly access by the public. Communities have the cultural right to access their heritage, as has been advocated in important EC funded research such as Riches. The European Commission has made this goal one of its policies, hence its continuing support for Europeana, the portal to Europe’s cultural heritage. This means there is some pressure on museums, libraries and archives to open up their content to the public. While this is quite natural for museums and libraries, this is not so evident for archives. The whole point of an archive is to protect the documents it keeps: it is absolutely essential that the very same, untampered document deposited at an archive can be retrieved unaltered decades later. This often means that archives have to shield documents in their holdings from changing moods and political turmoil. Many archives have been threatened in the past when revolutions or civil strife took place. Changes such as the move from Baltic countries out of the Soviet influence have

an impact on the expectations the public has about what is being published out of the archive, and what is kept behind closed doors. There should be no illusion that there is ever a thing such as simply opening up the whole contents of an archive to the public. Besides societal pressures and political interference, two major problems are faced by archive professionals when envisaging publication of archive contents: copyrights and privacy.

As for copyrights, this is one of the toughest areas in digitization. While many legal systems have provisions for archives that allow to make copies for preservation ends – such as the US copyright law §108 – the same holds not true for publication. In particular, this is an issue for publication on Europeana. This is the very reason why Europeana developed a Licensing Framework, and provides in adapted Rights labels, partly based on Creative Commons Licenses. Anyway, it is a quite laborious effort to determine which works are in the Public Domain and which have rights attached to them that prevent publication. EuropeanaPhotography built extensive expertise in this matter and published useful tools and reports on this [6]. An even greater challenge is the so-called “orphan works”, of which the author cannot be determined. Europe provides in an Orphan Works Directive, to be implemented by the national authorities, to make it possible for archives to publish these orphan works. Unfortunately, the procedure remains very cumbersome and anyway involves a time-intensive “diligent search”, making it impractical. Collecting societies strongly oppose this idea and want to charge copyright indemnities, adding to the risk. Nevertheless, EuropeanaPhotography published a large volume of reusable content in the form of Public Domain marked and Creative Commons labelled works. In particular, readers might want to explore the open collections of Generalitat de Catalunya and Lithuanian Art Museum (Fig. 2).

Privacy is another issue that needs careful handling. Many archives document periods of strife and conflict. Certainly in smaller communities where families share long histories opening up an archive to the general public might stir up emotions and open old wounds. Serving the right of the public to access these testimonies of their shared past requires a professional, respectful and balanced approach, as collections themselves might be biased and do not necessarily reveal the whole story. It goes without saying that, e.g., the opening of archives on the Spanish civil war is an issue of much contention and debate.

Besides these two major issues other problems need some consideration. First of all not all objects that are safely kept in an archive are fit for publication. Some are legally forbidden, as is the case for some Nazi works, or would be perceived differently today as they were in the past. As communities and ethics have diversified and evolved, many documents or works that would have been perceived as neutral or harmless in past times could be felt quite offensive or divisive today, for example as being utterly racist. A related issue is the status of the original metadata. Depending on shifting ethics and sensitivities, past documentation of works, e.g. the assigned title or description, could be perceived today in a very different light. This is often the case with archives of colonial heritage. This poses a dilemma: the public, in particular also stakeholders and researchers, have a right to know the complete original metadata, while sometimes these cannot be published within the confinements of the law. EuropeanaPhotography members agreed in such cases to adapt the metadata, but to indicate that this has



Fig. 2. Portrait of the actress Míriam, dressed with Manila shawl and Cordovan hat. Antonio Esplugas National Archive of Catalonia (ANC).

happened and that the original ones are available for consultation at the archive. However, none of the partners has indicated that they actually had to use this procedure, probably given the fact that our collections did not focus on conflict documentation.

A particular problem faced by EuropeanaPhotography is the concern of many private contributors to archives about the moral integrity of the works or documents they deposit. Many people would love to donate family photo heritage to their local archive, but fear that when it becomes published online as public domain material, it could be reused without any moral restraint. Photos of their family might be altered, “defaced”, ridiculed and republished. Or worse: they could be used in computer shooting games! The fear of desecration of personal or cultural heritage is important, and e.g. the Italian law has a provision protecting Italian Art works against such misuse. In many cases however, the owners think that only copyright protects them against such malpractice, and so are reluctant to donate when these copyrights do no longer exist, as with public domain works. However, in many jurisdictions there are solid protections of moral rights that can be successfully defended in court, regardless of copyright. Anyway EuropeanaPhotography was forced to develop rich documentation on these issues, and would recommend archives to provide similar information to their stakeholder communities.

7 Preservation

Digitization has become part of any serious preservation strategy. Often because original documents are prone to decay, and it is cheaper to preserve a digital copy. In the case of photography, glass negatives and metal plate positives such as daguerreotypes or tintypes preserve very well on their own, but the same certainly does not hold true for paper and celluloid negatives. For the original period worked on by PHOTOCONSORTIUM, the first 100 years of photography, the main issue are the calotypes and albumen prints, which are difficult to preserve and where digitization allows at least to keep the information that we have now. However, since the focus of PHOTOCONSORTIUM will move upwards in the 20th century, a lot of acetate and nitrate films in real danger of being lost forever urgently need to be digitized.

This means of course that this digitization needs to be done at the highest standards. For EuropeanaPhotography collections, with a large number of silver gelatine and wet collodion glass plates, specific digitization procedures with backlighting and multiple exposure in high dynamic range (HDR) were developed. For the KU Leuven collection, e.g., a dual exposure method was developed so that both the glass diapositive photograph as well as the surrounding frame with metadata could be captured in one image.

Current technology deployed amongst partners in PHOTOCONSORTIUM is very well suited for glass and celluloid negatives and diapositives. For Daguerreotypes, Ambrotypes and Tintypes research is being done with reflectance imaging techniques to yield better results and capture the true properties of the analogue object (Fig. 3).



Fig. 3. Rogier Van der Weyden 1436 – Art History collection – KU Leuven Imaging Lab

The consortium decided on the best suited file formats to store and preserve the photos, where more and more the Jpeg format comes into consideration as it has broad industrial support. PHOTOCONSORTIUM established a liaison with the Jpeg standard

committee. In particular we are interested in encoding multispectral image data, in fingerprinting and invisible watermarking, and interoperability issues. But PHOTOCONSORTIUM also looks into the digital preservation cycle as a whole, on the long term, and the physical storage and preservation. For this, common best practices were developed and shared. They are available to the larger community through the PHOTOCONSORTIUM website.

On the other hand maybe the best preservation of photographic cultural heritage is to share it online, e.g. on Europeana. The more photographic testimonies are shared, the better they survive. For repressive authorities, it is easier to shut down a physical archive than to chase digital copies roaming the internet.

8 Results

The EuropeanaPhotography project produced excellent results. First of all, it digitised and delivered to the European portal of cultural heritage Europeana about 450,000 of the finest examples of early photography (1839–1939), increasing the value of the digitized photographic heritage retrievable via Europeana and accessible to everybody. These photographs provide a unique insight into the evolution of European society and the art of photography between the 19th and 20th centuries, which is a valuable source for understanding our history from multiple approaches (history, economics, sociology, anthropology, politics, art...). This extremely valuable source of information is promoted by PHOTOCONSORTIUM through narratives able to attract the attention of the general public and to contribute with novel information to the research. In this light, PHOTOCONSORTIUM participates in the second edition of the Digital Service Infrastructure project coordinated by Europeana Foundation (DSI-2), with the task to develop a photography channel in the Europeana portal. The new featured channel is planned to become available online for public access in 2017.

The Consortium includes both public and private bodies with complementary backgrounds and it diffuse the useful guidelines about digitization and cataloguing of early photography items which were produced in the European project. The Association also gives access and maintains the multilingual vocabulary released by the project and specifically tailored for photography, available in 16 languages¹. PHOTOCONSORTIUM provides information IPR management and rights labelling of digital cultural content, exploiting and re-using the extremely valuable contribution to a very lively discussion which was carried out in the frame of the EuropeanaPhotography project. All the knowledge resources produced by the project continue to be available and to be maintained and updated by the PHOTOCONSORTIUM associates.

The project built a network of excellence on digitization and photographic heritage, which continues to be active in the framework of the PHOTOCONSORTIUM Association. All the relevant results produced by the EuropeanaPhotography project are kept updated in order to offer valuable solutions to the sector's needs and to prepare to face

¹ English, French, German, Dutch, Danish, Bulgarian, Slovak, Lithuanian, Polish, Spanish, Catalan, Italian, Russian, Ukrainian, Chinese and Hebrew.

new challenges. The members of the PHOTOCONSORTIUM Association represent a real aggregation of competences able to take care of updating technical documentation and guidelines, taking into account the latest research and technical advances, and promoting best practices and disseminating success stories. Cultural organisations, photographic archives, research and educational institutions and any other party interested in participating and contributing to the network can find in the PHOTOCONSORTIUM Association the right place to meet experts and share experiences.

The **purpose of the Association is the promotion and enhancement of the culture of photography and the photographic heritage**. To achieve its statutory goals, PHOTOCONSORTIUM aims to promote, organize and manage conferences, exhibitions, awards and training courses as well as to carry out publishing activities. The Association participates – and promote the participation of its members – in new projects and initiatives, including but not limited to the participation in the Programmes of the European Commission. All the initiatives of the association are primarily devoted to serving the interests of its members. In this light, it carries out and encourages research and studies on the themes of valorising and discovering photographic heritage, digitising early photographic content, communicating and sharing photographic collections. The association also continues to collect data and information of interest for the activities of the members. Through the expertise of its members, the association provides consultancy and personalised services both to its members and to third parties.

9 Current Projects

Digital cultural heritage is considered by the EU one of the key drivers of **economic growth and social innovation**. The Association is actively involved in European initiatives and projects. PHOTOCONSORTIUM represents a centre of expertise and knowledge on digitization, aggregation of content to Europeana and other portals, metadata standards, indexing, cataloguing and controlled vocabularies, best practices for the management of digital archives, and much more. This expertise and knowledge is the core to generate activities, provide services, organise training programs and seminars and participate in new research.

The Association is the framework for participation in **new initiatives and experimentation activities involving photographic heritage at the European level**. As an example, the digitized materials provided to Europeana through the EuropeanaPhotography project is the basis for the pilot activities in the Europeana Space [7] project. Europeana Space - Spaces of possibility for the creative re-use of digital cultural content - is a Best Practice Network project funded by the European Union under the ICT Policy Support Programme, whose project coordinator is Coventry University and technical coordinator is Promoter S.r.l. The network aims to increase and enhance the creative industries' use and re-use of Europeana and other digital collections. Multiple themed pilots present innovative models of digital cultural content exploitation in interactive TV, dance, games, publishing, museums, and, namely, photography.

PHOTOCONSORTIUM cooperates in the photography pilot of Europeana Space under the coordination of KU Leuven.

The pilot on photography is experimenting the reuse of the content aggregated through EuropeanaPhotography and demonstrating a range of possibilities offered by apps, the Europeana API², the Technical Platform of Europeana Space, and a multitude of tools developed by the open source community, to come up with innovative models involving photography. The experimentation activities include a hackathon (which took place in Leuven in February 2016), where developers of novel museum applications, storytelling and augmented reality apps met and proposed their projects. The best ideas were tunnelled through a monetization event and currently incubated to prepare for launch on the market in 2017.

At the same time, PHOTOCONSORTIUM Association cooperates with crowd-sourcing and citizen science initiatives. Photographic heritage is everywhere around us and helps us to enlighten personal and community stories, by visually transmitting ways of life and all kinds of experiences. The citizens' involvement in photographic heritage activities is a key element for the Association, not only as audience but also as an active actor in the activities promoted by PHOTOCONSORTIUM. An example of how to activate public participation in photographic heritage projects was the public digitisation activities carried out in the framework of "All Our Yesterdays" [8], the important photographic and multimedia travelling exhibition which showcases the best examples of the photographs digitised in EuropeanaPhotography. The first round of this exhibition was held in April–June 2014 in Pisa and the second in January–March 2016 in Leuven. Both editions included as a side element a digitisation station: a dedicated space provided with advanced digitisation technology and curated by professionals of photography, where visitors of the exhibition brought their own vintage photos to be digitised. In fact, a large part of our photographic cultural heritage is preserved and hidden in family albums, which not only include wedding pictures and grandfathers' portraits, but also reveal photographs of great historical and societal interest. It is of the utmost importance that citizens are encouraged to share this wealth of cultural heritage with the whole community. To explore more in depth how to address this participatory research, the association established a cooperation agreement with CIVIC EPISTEMOLOGIES [9], a successful European project, coordinated by the Italian Ministry of Economic Development. The main outcome of CIVIC EPISTEMOLOGIES is the roadmap for Citizen Researchers in the Age of Digital Culture. The collaboration between PHOTOCONSORTIUM and CIVIC EPISTEMOLOGIES contributed to activate citizen involvement in photographic heritage research.

The participation of PHOTOCONSORTIUM in the Digital Service Infrastructure project coordinated by Europeana Foundation is the most recent example of commitment of the Association to participate in European initiatives. The project, which lasts from July 2016 until beginning of 2018, foresees the creation of a range of thematic channels to promote access, use and re-use of digital cultural heritage content. Within the DSI-2 project, PHOTOCONSORTIUM curates the creation of the thematic channel on photographic heritage. This is a great acknowledgement of the value of Association within the European framework of research and development, which is expected to continue in the coming years through new initiatives.

² Application Program Interface.

The Association's **commitment to photographic culture and heritage** brings its members to proactively lead initiatives to value and transmit this rich heritage. The Association creates specific programs to reach all target audiences, including cultural institutions, photographic archives, specific research communities, the educational sector, younger and elder generations, the general public, and activists and amateurs in general.

The promotion and enhancement of photographic heritage finds in the Association a valuable tool to reach its objectives: a dedicated website giving visibility to all the digitised materials. Complementary to PHOTOCONSORTIUM website, a dedicated showcase was established in the *digitalmeetsculture* magazine edited by Promoter S.r.l. (one of the founding members of PHOTOCONSORTIUM) which counts currently more than 25,000 visits per month [10].

PHOTOCONSORTIUM was established as a non-profit association with a democratic structure, political independence, and unlimited duration. PHOTOCONSORTIUM allows membership to both natural and legal persons, public or private bodies, companies, and associations. It aims to enlarge its network internationally and welcomes new members sharing its aims.

More details about PHOTOCONSORTIUM and its future activities are available online at: www.photoconsortium.net and on our blog Digital Meets Culture.

Join our community by contacting info@photoconsortium.net.

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