

I-MEDIA-CITIES

**Innovative e-Environment
for Research on Cities
and the Media**

**Teresa-M. Sala
Mariona Bruzzo (eds.)**



Singularitats Collection

CONTENTS

11 PROLOGUE

I-Media-Cities. Reflective Societies: Cultural Heritage
and European Identities

Mariona Bruzzo Llaberia, Teresa-M. Sala

15 SPREAD. (RE)SEARCH

Nicola Mazzanti

THE FILMED CITIES

23 Research Subjects Related to Images of the City

*Teresa-M. Sala, Irene Gras Valero, Isabel Fabregat, Núria F. Rius,
Enric Ciurans*

35 IDENTITY. IDENTITIES

Athens: Constructions of National Identity in Newsreels
and Feature Films of the 1930s

Ioulia Mermigka, Anna Poupou

47 MULTITUDE

The Image of the Crowd in Animated Urban Scenes. Barcelona,
the City of People / People of the City

Teresa-M. Sala

53 ARCHITECTURE AND URBANISM

Documenting City Change. The City and its Images 1928-1936

Giulietta Fassino

63 HERITAGE

Bologna, City of Water

*Silvia Ferrari, Margherita Lanzi, Stefano Pezzoli, Pier Giacomo Sola,
Priscilla Zucco*

69 GENRE
Genre in I-Media-Cities: Urban Imagery and Film Categorization
Ingrid Stigsdotter

81 VANTAGE POINT / LOOKOUT POST
The City in Views (Vienna)
Vrääth Öhner

FILM HERITAGE

89 A Curatorial Approach to Making Cinematic Heritage
Available Online
Mariona Bruzzo Llaberia, Camille Blot-Wellens

101 CURATORIAL
Turin. The Museum, Films and the City
Claudia Gianetto

109 FILM COLLECTIONS
Two Collections of Ephemeral City Films from Vienna
Raoul Schmidt, Jakob Zenzmaier

115 RE-USE
How Might we Unlock and (Re-)Use what the European Film
Archives Hold?
Thomas C. Christensen

119 LEGACY
Legacy and Heritage: Connecting Past and Present
Gian Luca Farinelli

TECHNOLOGY, TOOLS AND APPLICATIONS

127 PLATFORM AND PROJECT-SPECIFIC DEVELOPMENTS
I-Media-Cities: A Research Framework for Moving Images
*Gabriella Scipione, Antonella Guidazzoli, Silvano Imboden, Giuseppe
Trotta, Mattia D'Antonio, Margherita Montanari, Cinzia Caroli,
Simona Caraceni, Maria Chiara Liguori, Beatrice Chiavarini*

135	METADATA The I-Media-Cities Data Model: A Hybrid Approach <i>Davy Hanegreefs, Julia Welter</i>
145	ARTIFICIAL INTELLIGENCE TOOLS IN SUPPORT OF RESEARCH Automatic Content Analysis Tools as Support to Researchers in I-Media-Cities <i>Alexander Loos, Christian Weigel</i>
157	SUSTAINABILITY Profiting from Archives: Value Models of Pan-European For- and Non-Profit Audio-Visual Archives <i>Olivier Braet, Koen Vervoort, Heritiana Ranaivoson</i>
167	EPILOGUE: HORIZON 2020 <i>Enrica Serrani, Anna Fiaccarini</i>
173	CONTRIBUTORS

PROLOGUE

I-Media-Cities. Reflective Societies: Cultural Heritage and European Identities

I-Media-Cities (IMC) is an ambitious, innovative project designed by the Association of European Film Archives and Cinematheques (ACE) that began life in 2016 with the wish to generate new ways of approaching cinematic heritage. The European Union's Horizon 2020 programme (H2020) offered the appropriate framework for carrying out a project of these characteristics, and Nicola Mazzanti, then president of the ACE and director of the Royal Belgian Film Archive, managed to encourage nine film archives to take part. Then, within the framework of H2020, which is focused on research and innovation, these film heritage institutions thought that cinema, and especially that which has least exposure, could be adapted to make the most of new technologies. And so, Innovative e-Environment for Research on Cities and the Media, the project we call I-Media-Cities, was born.

The nine film archives involved placed their respective cities at the heart of the project (Athens, Barcelona, Bologna, Brussels, Copenhagen, Stockholm, Frankfurt, Turin, and Vienna), and several research centres and technological innovators were co-opted as partners.

The final list of participants is as follows:

- Cinematek. Royal Belgian Film Archive, Brussels (film archive)
- Cineca. Consortium of Universities, Bologna (technology developer)
- Fraunhofer Institute for Digital Media Technology IDMT, Ilmenau (technology developer)
- iMinds-IMEC, Brussels (i-business)
- Cineteca di Bologna, Bologna (film archive)

- Institute For Cultural Heritage of the Emilia-Romagna Region, Bologna (research)
- National Museum of Cinema – Maria Adriana Prolo Foundation, Turin (film archive)
- Urban Center Metropolitano, Turin (research)
- Austrian Film Museum, Vienna (film archive)
- University of Barcelona, GRACMON, Barcelona (research)
- Filmoteca de Catalunya – ICEC, Barcelona (film archive)
- Swedish Film Institute, Stockholm (film archive)
- Stockholm University, Stockholm (research)
- Greek Film Archive Foundation, Athens (film archive)
- University of Athens, Laboratory of Visual Media, Athens (research)
- Danish Film Institute, Copenhagen (film archive)
- Deutsches Filminstitut, Frankfurt (film archive)
- Ludwig Boltzmann Institute for Digital History, Vienna (research)

The principal objective of the project has been to develop a digital platform in order to view a significant selection of films from archive collections, with the aim of stimulating research in the field of the humanities. Thus, the cities and the films shot in them are the essential core of the I-Media-Cities project, as works in their own right and as documents. The producers, actors, directors, places, people, and historical, social and political events are there to be studied, interpreted, analysed and compared, with similarities and differences being established, by fields such as sociology, urban anthropology, town planning, and the history of architecture, among others. The research carried out for the project has been a fruitful laboratory of experiences and exchange, but it can be considered merely a starting point for new methodologies that may be developed in the future. This ambition, what we called “wild ideas”, has required an innovative technological approach in the development of the platform and other computing applications, in order to make this cross-sectional research into film collections possible and also to offer this content to other users, especially the educational community and the general public.

Finally, and in accordance with European guidelines, a specialist in new digital business models has been incorporated, to propose

economically sustainable models to continue the project after EU funding ends.

A selection of significant work resulting from the project is presented below in the following sections.

The Filmed Cities (research into new methods of research)

In order to unify the chronology, it was agreed to establish the time-span of 1890 to 1989, from the period of the demolition of the walls of the major European cities to the fall of the Berlin Wall, a symbolic time that, seen today, takes on new meaning.

Within the general context of the filmed cities, some important points about their idiosyncrasies are raised. Thus, Stockholm analyses the question of cinematic genres, while Athens focuses on the structures and the processes of constructing identities. Of movement through the modern metropolis, Barcelona points out the phenomenon of the crowd as a protagonist. The portrait of the city of Turin, based on urban planning and architecture as a factor in tourism, contrasts with that of Bologna, a missing or unknown city that is recovering its images, while those of Vienna show how space becomes a social and representative product. All this came about when the city and the cinema were an intrinsically urban phenomenon.

Film Heritage

More than 1,000 films have been incorporated in the platform, expressly selected to give the project coherence and meaning. Each city is represented both singularly and generally, revealing similarities and differences between them. As for the technical aspect, we must say that we have seen and understood the complexity of being able to transmit the physical characteristics of films in an online research environment.

When the initial stage of IMC is over, the film archives proposed introspective views of other dissemination and research projects carried out previously, contextualizing and highlighting not just what has been done so far, but the ability to take a step further in or-

der to advance in the promotion of research connecting the past with the present.

Technological Tools

IMC is the attempt to join together two worlds — films and researchers — and so we needed to find a common sustainable environment. Thus, in a sort of hackathon, in the first stage the technology developers invited us to a collective experience in order to talk about everything we were expecting from the project, even the most unexpected things. The aim was therefore to pool all the ideas that could take us towards a new paradigm in the field of research, education, and the dissemination of cultural heritage. This is how the “user stories” emerged, to systematize the proposals and gradually be able to specify their technological development, and in which the metadata of each title became a basis for interoperability, essential to the project. Nowadays, the automatic indexing of images has become a very powerful tool in the audio-visual world. In this context, IMC was presented as an opportunity to test these tools on archive images, some of them more than 100 years old and of very poor quality.

As an epilogue, we can say that the incipient results point to a promising future, with a new way of disseminating and bringing film collections to the public. It is with this sincere and legitimate wish that we confront the challenge of the financial sustainability of the project, in a Europe where access to culture is not only an option but a right.

MARIONA BRUZZO LLABERIA (Filmoteca de Catalunya)
TERESA-M. SALA (University of Barcelona)

SPREAD. (RE)SEARCH

Nicola Mazzanti

When thinking and talking about I-Media-Cities for this book, I was brought back to the beginning of the idea for the I-Media-Cities platform. Therefore, if you permit me, I would like to start with some of the issues that laid the foundations for this project.

As any director of an audio-visual archive will tell you, cultural heritage and museum institutions across Europe are increasingly holding large digital collections — either digitized or born digital — that can have a significant impact on many research fields, both in Social Sciences and Humanities. This available digitized content being a somewhat recent development, a strong, efficient link between many of these institutions and the research field still largely needs to be established, as well as a true bi-directional dialogue that aligns the efforts and the focus of these institutions to the needs of research.

It is not a revelation to say that at the dawn of the twenty-first century all the humanities, social sciences and historiographical disciplines now use sources and documents in traditional and interdisciplinary approaches, which they would certainly not have used a few decades ago. And in this context the iconographic sources of the media, or of so-called popular culture, play an increasingly fundamental role that goes well beyond the narrow confines of the disciplines of cinema history and the media. No historian or serious sociologist would today face a twentieth-century research question without referring in any way to the existing iconographic sources, be they fixed or moving images.

But if these sources have multiplied in type, importance, and origin, their access has certainly not been simplified. Indeed, this multiplication of types and origin and this exponential increase in their quantity (millions of hours of motion pictures, hundreds of millions of photographs, of pages, of various materials...) has actually contrib-

uted to complicating the lives of researchers and, in fact, to making the use of these sources frustratingly complex.

If we keep in mind that some analogue types of sources need technology to be consulted — you read a book with your eyes, as you look at a picture, but if you put your ear on a record or lift a film to the window, you do not hear or see the work — then we might conclude that having digitized versions of these sources would take away those particular difficulties and open up the path to increased research efforts. However, when we first started thinking of the idea for I-Media-Cities, there was also the important fact to take into consideration that neither cultural heritage institutions nor the research field are yet taking full advantage of information technologies in order to improve opportunities and quality for research, nor to provide access to these collections. As a result, audio-visual content suffers from what I would call “technological barriers”, which has led to a situation where almost no significant research has been done on them and there is a need for intelligent, technology-intensive, and user-engaging solutions (platforms, working environments, applications, etc.), designed to foster research on digital cultural collections across Europe.

Unfortunately, access is made even more complex by legal barriers, mainly copyright law, which often seems to be deliberately written in Europe to prevent research, education and culture. Whereas in other contexts and countries the notion of “fair use” allows all researchers to do their job, in Europe even the act of seeing a visual document from the past can sometimes be illegal, let alone that it could be studied for scientific purposes. In the twenty-first century, it is difficult to justify and accept that there is no effective and efficient exception whatsoever across all the EU member states for non-commercial use, and more specifically for research. Why should it be conceivable that collections which are maintained and sometimes digitized with public money cannot be studied or even viewed by anybody in any country in a legal way?

Surely in a digital society, a mechanism that allows European citizens and European scholars to watch moving image content in a safe and legal way can be found and actualized. Europe has a great need and would greatly benefit from introducing a blanket exception for any type of research on moving image and photographic materi-

al. This blanket solution should be valid across all member states, and allow universities, professors, teachers and students to access documents that at the moment are locked away. It seems to be a strange dichotomy to invest in digitization, if this material then cannot be viewed, not even for research purposes. Of course, some might rightly say that research can be done on the physical documents, on papers, on photos, on films, and that there is no need for internet access, but all sources necessary for a research project are rarely to be found in one archive, let alone one country, which would mean that research would need more funding. The reality these days, however, is that budgets for travelling to research these materials are often severely slashed, and it is hard to imagine that only providing research access to non-digitized materials is in line with the digital goals the European Commission has set for itself.

There is this pervasive idea amongst national and European governmental institutions that the digitization work done so far on cultural heritage collections, and the existence of Europeana (www.europeana.eu/portal/nl), has solved all the problems described above. Unfortunately, this could not be further from the truth. First off, the multiplication of digital access channels has, in a strange way, had the adverse effect of complicating and multiplying the rules of copyright. This, in turn, has generated the impression that any document — even the most general or harmless — could or should generate some form of income (the discourse on culture and education is much more barbaric in the digital age than in the analogue one).

Secondly, the so-called digital revolution that was promised to researchers as a golden haven filled with limitless potential, was hindered by two phenomena on the European level. The first was the birth and subsequent development of the overarching Europeana platform, which for years and years appropriated more and more of the available funds for digital projects, thereby blocking any development not strictly centralized in the Europeana vision. The second was the economic crisis that swept through Europe, washing away available national funds dedicated to research institutions and archives. Combined, these two factors have pushed digital research developments, and the research infrastructure in general, back for at least a decade or two.

The assumption which lay at the basis of the H2020 call, for which I-Media-Cities was submitted, is that a significant amount of work has been done on the digitization of European cultural motion picture heritage, to the extent that we can consider this issue to be resolved. This is of course deeply untrue. The experiences within the project show that in the motion picture sector, within which a large number of the consortium is active, digitization projects came to almost a complete standstill in recent years. There are barely any hints of any mass digitization projects for moving image material beyond some limited projects around television content. Needless to say, at this speed and this level of budget, digitizing European cinematographic — and in a broader sense all moving image — collections, dating from 1896 to today, will never be finished. The risk therefore, of not providing FHIs with the means to further digitize specific collections will be that advanced European projects like I-Media-Cities will be left like a cathedral in the desert.

It was in this context, which certainly did not seem conducive to research and the “search for new ways of research”, that the I-Media-Cities proposal was accepted. This allowed a group of film archives, universities, and other European research centres to launch the project, with the aim of exploring the participatory modalities of access to large collections of images and creating tools to support research into them, allowing not only viewing, but also, for example, the annotation of images and sharing of these annotations with other researchers.

Even if technology plays an important role in the project (creation of a separate and free access platform for researchers, manual annotation tools and automatic image analysis, tagging possibilities for the general public, etc.), the objectives were not purely technological, but methodological. The aim was to create technical and practical conditions (digitization of documents) and legal conditions (use and access permits) to experiment with new methods of access to large single-issue collections (in this case images of different European cities from 1896 to yesterday) and to stimulate and facilitate collaborative research between scholars, and even between scholars and the general public.

I am therefore very happy to see that the overwhelmingly positive results of the I-Media-Cities project have not only addressed these overall barriers that exist, by creating conditions for effective collaboration between research institutions on one side and archival institutions on the other, but also they offer support through innovative solutions, which contain both new developments as well as the integration of existing technologies. The platform improves the research user's experience, augments the quality of research possibilities, and is built on an economically sustainable model that allows the use of digital content in different contexts.

In order to maximize the impact of this approach in the field, the project is designed to focus on areas of research and on types of content that are both neglected, and likely to bear even more fruit. A prime example of this has been our choice of European Cities as a topic as depicted in primarily audio-visual materials, which has ensured a truly multi-disciplinary project approach, and an extremely deep field of research subjects (proven by the wide-ranging research interest represented in the consortium). Let's not forget that although, during this project, we may have aimed at creating conditions and technical solutions under which researchers and scholars could work on a broad corpus of moving image materials that refer to one specific topic, the experience of the I-Media-Cities platform can be used in any topic of research based on moving image materials. The platform design and the technical solutions are created in a way that will allow them to be used independently on any topic.

The choice to focus heavily on moving images as the source and object of research (obviously properly contextualized with other data and information) has made the project highly innovative in terms of technology and conceptualization. The digital collections opened up to research are both unique and were until now almost inaccessible. Their use has guaranteed a strong impact on the research users — who have never had access to this content, and who have been able to have a strong guiding hand in the way audio-visual materials can be digitally researched.

It is my sincere hope that the results of a relatively small project like I-Media-Cities, which in and of itself is obviously too small to affect the systemic lost opportunities of the past decade, will inspire

other projects that contribute to creating the conditions for research based on digital or digitized archives, or seek to improve the interaction of the general public with digital collections. As heritage institutions, we are all convinced that the potential of digital technologies for research and education has barely been scratched.