

# Learn Then Preserve

## Historical and Theoretical Notes about the First Fifteen Years of the University of Udine's Archival Training Program (2001-2016)

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### 1. Learn then Preserve

In 2002, the Danish Film Institute published *Preserve then Show*, the well-known proceedings of the Copenhagen Seminar of 2001. This state-of-the-art meeting was devoted to some of the new challenges faced by film archives at that time: the shift in film's ontological status; film storage surveys and assessment, and their effects on preservation policies and strategies; the new world of digital restoration; and the issue of film selection and transmission at the dawn of the digital access era.

In the introduction, Dan Nissen explained how the seminar's title was a "mirror image" of Langlois' statement "to show is to preserve" (Nissen et al. 2002, 9-12). The aim was to overturn archival priorities, by offering an overall synthesis of the opposing ideologies of Lindgren and Langlois. In addition, the seminar sought to pave the way for new preservation strategies a few years before the emerging paradigm of large-scale digitization and digital access, countered by those movements demanding the curatorship and musealization of film artefacts and by the resilience and rebirth of analogue film stock and devices.

Since the millennium, film archives have been grappling with the transformation of their historical status and the emergence of new institutional identities, while taking on more and more complex and stratified roles, functions, required skills, and institutional, economic and social relationships.

Similarly, the scholarly community is facing a far-reaching change in its scientific purpose—its research and didactic tools and disciplinary boundaries—and is gradually losing its historical position of dominance and exclusivity in research and knowledge transmission.<sup>1</sup>

Since the late 1990s, more and more archival roles and university positions have been covered by persons and scholars who have (also) acquired their wider knowledge, specific competencies, and skills through specific archival training programs and internships. Others have also achieved academic qualifications or advanced their careers by working on archival topics. If we are to further paraphrase the title of the DFI Seminar, we can obtain a new "mirror image," with an additional epistemic layer: *Learn then Preserve*.

## 2. The University of Udine's archival training program: the early years

The Udine archival training program blends humanistic traditions and technological innovation, in a balanced approach combining strict training on cinematographic works, documents, materials and technologies, and the acquisition of creative skills and practical abilities. It also involves a great deal of different disciplines and innovative teaching methods, based on the principles of participation and cooperation (applied interdisciplinary projects, use of digital resources and tools, intensive seminars, practical exercises, lab teaching, specific training placements, involvement of experts and professionals for seminars and temporary professorships).

The master's degree in *Scienze del Patrimonio audiovisivo / Educazione ai media* ["Audiovisual Heritage and Media Education"] and the PhD in *Storia dell'arte, cinema, media audiovisivi e musica* ["History of Arts, Cinema, Audiovisual Media and Music"] train highly specialized graduates in the field of film and video preservation and restoration. The close connection between the course, film and video heritage institutions and private companies enables the students to come into immediate contact with a full range of academic, professional, archival and museum spheres, and to obtain specific skills and know-how.

The course dates back to the beginning of the 2000s, at the crossroads between the apex of reflections on the philology and restoration of analogue film initiated by the Italian School of film restoration,<sup>2</sup> the spread of film artefact analysis, monitoring and long-term preservation models, and the new challenges of digital.

Within this framework, under the directorship of Leonardo Quaresima, the University of Udine launched a new BA course (under the L-3 national category of the Performing Arts) for the 2000-2001 academic year which included a specific curriculum devoted to audiovisual archival training.

A long-standing supporter and collaborator of the main international festivals devoted to Film Heritage, and one of the driving forces behind the pioneering *Archimedia* project, the farsighted Quaresima accompanied and in some cases preceded the movements that achieved a new dialogue between archives and universities in the 1980s and 90s:

Leonardo était en train de réaliser, intellectuellement, pratiquement et institutionnellement (ce qui en soi n'est pas rien!), sinon la synthèse, du moins la convergence de la recherche théorique universitaire, de la construction historique et de l'émergence des archives, émergence dans laquelle l'Italie a joué dans les années 1990 et joue encore un rôle de premier plan grâce à quelques hommes remarquables comme Paolo Cherchi Usai, Gian Luca Farinelli, Nicola Mazzanti et Leonardo, pour ne citer qu'eux (que les autres me pardonnent), pour créer un véritable dialogue entre universitaires et archivistes (Vernet 2017).

The commencement of the program must also be framed within the wider project to create a stable base for Film and Media Studies in Udine, spearheaded at the time by the combination of the Udine International Film Studies Conference (begun in 1994) and the Magis – International Film Studies Spring School (devised in 2002 and inaugurated in 2003).<sup>3</sup>

Since the very beginning, as part of a wider film and media studies program, the specific archival training program included courses and professorships in "Teoria e tecnica del restauro cinematografico" ["Theory and Technique of Film Restoration"]; "Documentazione Cinematografica" ["Research on Film-related Materials"]; "Laboratorio di restauro cinematografico I e II (base e avanzato)" ["Film Restoration Laboratory I and II (basic and advanced)"]; "Chimica dei supporti audiovisivi I e II (base e avanzato)" ["Chemistry of Audiovisual Materials I and II (basic and advanced)"]. In the early years, temporary professorships were held by Paolo Caneppele, Gian Luca Farinelli, Nicola Mazzanti and other younger collaborators and technicians from the Bologna School.<sup>4</sup>

Since the very first years, local audiovisual technicians and young graduates from Bologna helped the degree course to substantiate and develop the archival training curricula. This paved the way for a future class of professors, lecturers, technicians and collaborators trained entirely within the university, in partnership with Italian and European archives and laboratories.

No close connection between theory and practice—or university-archive dialogue to form a shared

training plan—could have been possible without the presence of the university laboratories specializing in scientific research, teaching and performing film preservation and restoration projects under contract for film and audiovisual heritage institutions.

And so it was that in 2000 Quaresima founded the CREA and La Camera Ottica laboratories. The focus of the CREA laboratory was on audiovisual post-production, over time playing a core role in the transition to digital. La Camera Ottica film and video restoration laboratory came about with the purpose of supporting teaching and scientific research in the sector. By attending lessons and gaining experience in the lab and on special placements, the students acquired practical skills and abilities in the field of film preservation and restoration.

In 2002-2003 Udine was one of the first universities to introduce a master's degree in *Discipline del Cinema* ["Film Studies"] (two-year course equivalent to a Master of Arts, following the 1999 Berlinguer Reform), with specific courses dedicated to archival practices. Starting in the 2007-2008 academic year, a new joint master's degree course was offered in *Discipline del Cinema/Études cinématographiques* with the Université Paris III – Sorbonne Nouvelle. This joint master's program set out to unite the cultural outlook prevalent in Paris, with its many resonances around cinema and contemporary image forms, with that of Udine, with its stress on the cinema as cultural heritage.

In 2003-2004, the new PhD in *Teoria, Tecnica e Restauro del cinema, della musica, dell'audiovisivo* ["Cinema, Music and Audiovisual Theory, Technique and Restoration"] completed the training courses on offer. This course too became international in 2006. Right from the start, the PhD has strived to train researchers with specific profiles and CVs specializing in archiving, preserving and restoring film, musical and audiovisual works, and in film, music and audiovisual archive management.

The period from 2000-2001 (when the BA was established and the laboratories opened) to 2006-2007 (when the PhD went international and the first students graduated from the local master's and PhD courses) can be considered the phase of the establishment and primary consolidation of the Udine archival training program experience. Considerations must be made about 1) the teaching methods and 2) the theoretical frameworks used as a reference for the study program in that period.

Firstly, teaching methods. While on one hand they still appeared anchored to a traditional model, at the same time they were already opening up towards innovative and specific techniques and experiences which are now very well known and widespread: learning by doing; flipped classroom; open digital repositories; involvement of world-level archival experts in workshops and temporary lectureships; intensive work experience; internal internships and participation in research and preservation projects in the restoration lab; intensive training on specific archival practices such as storage or cataloguing, or on state-of-the-art hardware and software for preservation and restoration.

Secondly, as far as the benchmark theoretical frameworks were concerned, the contents of the courses devoted to archival practices: a) followed the precepts and methods of the Bologna School matured in the 1990s and summed up in 2001 in *Storia del cinema mondiale* by Gian Piero Brunetta (Canosa 2001; Farinelli and Mazzanti 2001; Cherchi Usai 2001); b) followed the studies on photochemical restoration matured by the Gamma Group and summed up in 2000 in the volume *Motion Picture Restoration* (Read and Meyer 2000); c) studied the management, monitoring and long-term preservation of film materials, developed in particular by the Image Permanence Institute; d) carried on the tradition of historical-philological studies on the multiple and plural forms of film; e) followed the technological history of cinema and the material forms of film and cinema devices, according to procedures and practices that in certain ways anticipated current experimental media archaeology.

In terms of applied research, the Udine group started to deal with film sound (also owing to joint work with the musicology laboratories specialized in preserving and restoring sound documents present in the same study course), acquiring state-of-the-art professional equipment to start to preserve and restore film soundtracks.<sup>5</sup> Parallel to this, the research group and the correlated teaching began to deal with the preservation of obsolete analogue video media.

In both fields, the research group developed methods and protocols that are still in use today, with specific attention to video art preservation and restoration (Bordina and Venturini 2006; 2012). The protocols and case studies (drawn from the actual preservation of historical archives, such as the Venice Biennale Archivio

Storico delle Arti Contemporanee collection of video art and collaboration with *L'Immagine Ritrovata*) then became contents and guidelines for the theory courses and lab experiences and the subject of the internal student placements. The analogue video media and soundtrack digitization practices, and development of protocols and IT environments for the management and documentation of these processes provided the archival training program in Udine with immediate and real points of access and transition to digital.

### 3. From Restoration to Preservation and Access

The program's declared continuity with the Bologna School provided the teaching with a solid theoretical and methodological framework. On the other hand, however, the film restoration theory component based on the concept of film-as-a-work-of-art was a limit that had to be overcome, and so the Udine group shifted its research and teaching interests towards preservation theory.

This shift initially took place along three axes: studies on the management, monitoring and long-term preservation of film and audiovisual materials; European studies and projects aimed at defining guidelines, protocols and digitization, archival and digital access models;<sup>6</sup> and the adoption of non-theatrical heritage as a line of study, that is, those significant parts of audiovisual heritage that consist of materials outside the official production and distribution system. Several expressions are currently used to define this extensive and hidden domain of film production: non-fiction films, ephemeral movies, vernacular images and neglected cinema. However, the expression "non-theatrical" (Streible, Roepke and Mebold 2007) is particularly effective in indicating any audiovisual work that is not distributed in cinemas and instead serves different purposes: military training films; scientific and medical films; educational and religious films; amateur, industrial, ethnographic, or tourism films.

These three axes are linked by their shared attention towards whole collections and classes of elements. As a result, the pivot and applications of the studies shifted from the single *individual* to the *species*, from documentation of film restoration to building databases for the quantitative analysis of data and for sharing acquired knowledge about the materials and know-how with end users and stakeholders.

Lastly, for La Camera Ottica laboratory the shift in paradigm became a business spin-off project called *ReDial* (*Recovery, Digitization, Access, Linkage*). In 2007 the business project won the "Premio Start Cup - innovazione nei beni culturali" [Start Cup Award for Innovation in the Cultural Heritage]. Adopting the so-called "long tail" guidelines (Anderson 2006), innovative technologies and enhancement strategies, *ReDial* aimed to recover and regain access to marginal audiovisual products with a high rate of obsolescence. By safeguarding non-broadcast videos and non-theatrical cinema it pinpointed a wide field for research and didactics, and began a virtuous entrepreneurial product for the research laboratories and students, university and archives.

Along this line, the more the research groups took care of and coordinated the preservation projects in close contact with the archives and Italian and European institutions,<sup>7</sup> the more the knowledge and competencies to transmit were updated and consolidated in the meeting between theoretical-methodological reflection and the archival practices applied in the lab courses and internal placements with La Camera Ottica. In addition, it also led to an increase in the network of institutions where internships could be requested and the students could then find work.

To this end, between 2009 and 2012 La Camera Ottica completed its equipment for the video preservation sector, and designed and created its own 2K film scanner prototype for small formats (8, 8, 9.5mm, 16mm). Further, it added a professional 8mm to 28mm multi-format scanner (MWA Choice), extended the digital restoration and colour correction sector, and promoted ICTs for the archiving and management of the digital master, copies produced, and documentation of the preservation processes.

Hence the project was emblematic of a wider shift in the archival training program (its goals, teaching programs and training profiles) from a film restoration paradigm to a preservation-and-access paradigm focused on wider film collections. It also made a definite step towards digital for the production of preservation master and access copies instead of restoration, in terms of repairing, cleaning and touching up materials. The teaching program was also affected, an example being the introduction of a course on *Principi di conservazione e preservazione del film* ["Film Preservation and Presentation"].

#### 4. The IMACS Master, archival profiles and internship experiences

As of 2010-2011, again thanks to Quaresima's proactive drive, the master's course went even more international, forming a network (IMACS) of 12 European and North American universities before its reorganization in 2015.<sup>8</sup> The current structure of the master's degree course in *Scienze del Patrimonio audiovisivo / Educazione ai media* ["Audiovisual Heritage and Media Education"] / *International Master in Cinema and Audiovisual Studies (IMACS)* derives both from the various past layers of the archival training program (therefore it still features the same key aspects, characteristics and focal points outlined hitherto) and a changed set of politico-cultural, economic and research perspectives.

First of all, the aim of the IMACS master's course in recent years has been to transmit general knowledge in order to create solid and wide-ranging familiarity with the scientific, cultural and professional field that can be used in the mid to long term. Different disciplinary fields come together to impart these basic areas of knowledge. For example, the Italian tradition of historical and philological studies has now become part of the larger sphere of new film history and media archaeology, which place a great deal of emphasis on "laboratorial" and "experimental" teaching methods, heavily involving direct contact with documents, film and audiovisual materials and technical devices. (In 2016 Udine became the first university in Italy to offer a media archaeology course taught in English.) Similarly, the Italian theory of preservation and restoration is moving in sync with visual studies and wider media and archival theories.

Another specific sphere of learning includes the study of film, visual arts and new media relations, and preservation methods and practices in contemporary visual arts. Finally, a last training area concerns digital humanities and media literacy, digital archives and ICTs. Its purpose is to connect the digital preservation of audiovisual heritage, the digital sharing and transmission of knowledge on this heritage, and entrepreneurship and cultural consumption. Thanks to this knowledge, specific archival practices are learnt, including study of original and film-related materials; collection preservation and management; cataloguing and documentation; photochemical and digital preservation workflow; digital restoration techniques; archival and digital preservation models, strategies and practices; film reuse, valorization and presentation practices. Starting from these basic sets of knowledge and skills, the master's program aims to prepare its students in specific sectors.

An important specialization is represented by collection management. The master's course aims to train new generations of workers and managers whose skills can be put to the service of planning collection management and preservation.<sup>9</sup> A further, and complementary, sphere of specialization is data and metadata management and preservation. The understanding and application of theoretical models, cataloguing standards, sustainability strategies and protocols require know-how and skills that are still not so widespread.

The entrance of film and analogue video into the museum and cultural heritage spheres also makes it pressing to train experts in the field of museology, contemporary visual arts, virtual heritage, digital storytelling and new media. Here, video preservation occupies an important niche for specializing in and learning preservation methods, protocols and techniques, and presentation for the museum field.

The increasing attention being paid in the sector to so-called "orphan" and "non-theatrical" heritage means that new skills are needed for the analysis, cataloguing and interpretation of originals. It requires openness towards a varied set of sources with unusual or weak hierarchies, and towards a whole range of disciplines in order to give meaning and value to these kinds of twentieth-century audiovisual artefacts, only partially preserved by traditional film archives.

Such an extended and fragmented research field and market demand will increase the need for professional figures in the cultural marketing sector: these figures must be confident with institutions' archival practices and materials, and well aware of the legal, ethical and practical issues implied in handling a heterogeneous cultural heritage for cultural and commercial purposes. Based on the main legal framework drawn up in 2012 under the European Directive 2012/28/EU and subsequent projects and activities such as the Orphan Work Database (Office for Harmonization in the Internal Market, OHIM) and the FORWARD Project, a further objective of the archival training program is to promote professional figures who can create a fruitful exchange between public institutions and private stakeholders.<sup>10</sup>

Furthermore, specialization in the digital humanities applied to film and the audiovisual heritage is also of particular interest. In the last ten years, the employment of digital tools for research has become one of the

key innovative features of media studies. The digital turn has, in fact, provided both new access possibilities and new tools for handling large amounts of data (film and audiovisual texts) and metadata (related to the film/video context and their archival life). Thus our training program has started to focus on digital analysis methods such as pattern matching (for instance, the use of specific colour film stocks in the amateur domain), large-scale investigation of particular stylistic features in the heterogeneous “orphan media realm” and multiple-scale analysis (interactions between the macro and micro scales) (Lundemo 2016; Olesen et al. 2016). The digital humanities will help students explore the connections between archive theory and museum theory, to employ distant reading tools (Moretti 2013) and to elaborate multi-layered access platforms. Moreover, the digital humanities provide a deeper insight into practices that reuse, recycle and remediate found footage and archival materials as artistic items in various areas of contemporary culture, including museum exhibitions and digital environments.

The field of digitization, restoration and post-production (scanning, digital restoration, colour correction, production of master and access copies, etc.) has now become a familiar subject (Venturini 2012 and 2013; Frappat 2011 and 2013), widely proposed in training courses. Nevertheless, it should be noted that the diffusion of these practices (previously in the hands of a few archives and laboratories) is now generating a whole range of digital output and processes, whose results cannot yet be assessed in terms of the quality of the digital master, access copies produced, or their effective interoperability. As yet, the sector has not fully assumed or applied shared standards and protocols, and careful training is needed with specific skills and general knowledge of the short- and mid- to long-term problems, especially considering that phases of radical transition are also those most liable to incorrect and distorted transmission (or even loss) of information.

Once the know-how and skills have been learned, before going onto the internship and thesis project stages, the program offers advanced and intensive training activities such as the FilmForum (which for some years now has included the International Conference and the Spring School for PhD and Master’s students). The connection between the archival training program and these intensive programs can be seen in particular when looking at the most recent topics of the Conference (the Film Canon, Archives, Film Rights, New Film History and Media Archaeology, the long-running “History of Cinema without Names” project—Bianchi, Bursi and Venturini 2011; Bordina, Campanini and Mariani 2012; Bertolli, Mariani and Panelli 2013; Beltrame, Fales and Fidotta 2014; Beltrame, Fidotta and Mariani 2015; Cavallotti, Giordano and Quaresima 2016) and at least three sections of the Spring School (Film Heritage, Media Archaeology, Cinema and the Visual Arts). The School, Conference and other seminar initiatives at various points in the two semesters allow the students to come face to face with the most important international scholars, artists and archivists. Today the FilmForum is accompanied by other intensive programs: the Material Archival Studies Network established by the universities of Udine, Stockholm and Lausanne and aimed at the PhD students of the three institutions, carried out in collaboration with archives and laboratories; and the Lisbon Spring School, organized in collaboration with the Cinemateca Portuguesa-ANIM of Lisbon, aimed at master’s students with a focus on learning the photochemical workflow.

Lastly, the archival training program sets out obligatory internships as part of its curriculum. A first possibility to gain work experience is a placement in La Camera Ottica laboratory. The laboratory also hosts interns from other training programs (such as the University of Amsterdam master’s program in *Preservation and Presentation of the Moving Image*, or La Sapienza University of Rome’s master’s program in *Digital Restoration*), from the IMACS network, and from foreign institutions and universities. In recent years the laboratories have hosted students from the universities of Rome, Bologna, Turin, Amsterdam, Lille, Lausanne, Stockholm, Vienna, Buenos Aires, Universidad Católica del Uruguay and Universidade Federal de Minas Gerais, and staff from Italian and European archives for refresher courses (Turin, Bologna, Vienna and Ljubljana).

During the internal placements the students are included in film or video preservation projects according to their interests and course activities. They are given specific activities, carried out under the supervision of technicians and researchers. They always start by studying and experiencing the materials and then progressively try and become familiar with all the phases in the process and the technological workflow. The procedure goes from the detailed description and analysis of the collection and its state of preservation, to the repair and cleaning of the originals; from scanning to the production of preservation master and access copies. An important part of the activities are concentrated on outlining the preservation or restoration program,

collecting, organizing and archiving the metadata, and finally drafting the final report. The aim is to transmit a method and all-around understanding of the audiovisual preservation process, whatever the intrinsic aesthetic and historic-cultural value of the collection, the single materials and the technologies used.

In addition, the students in the archival training course do their placement outside the university. Over the years the program has become a trusted partner of numerous film and audiovisual heritage institutions (archives, museums, laboratories, festivals, publishers) and the list of institutions that have hosted or are hosting students from Udine is very long. To cite some from recent years: Le Giornate del Cinema Muto, Il Cinema Ritrovato, Cineteca del Friuli, Archivio Cinema del Friuli Venezia Giulia, La Biennale di Venezia (ASAC), Cineteca di Bologna, Home Movies - Archivio Nazionale del Cinema di Famiglia, Museo Nazionale del Cinema, Archivio Nazionale del Cinema d'Impresa, Cineteca Nazionale, Cineteca Italiana, La grande mela, L'immagine Ritrovata, RAI, Österreichische Filmmuseum, HagheFilm, Národní filmový archiv (NFA), Archives françaises du film (AFF-CNC), Cinemateca Portuguesa - ANIM, Filmoteca Española, Reto.ch, Slovenska kinoteka and the Cinémathèque Royale.

Furthermore, it is not rare for the students themselves to contact new institutions. This is an immediate demonstration of their maturity in creating relations and dealing with the market in question. In other cases still, during and after their degree, the students put their skills to work by offering consultancy to external facilities, using the University of Udine as a point of reference for their work, not only in preservation, but also in post-production of contemporary films based on found footage.<sup>11</sup>

International mobility sponsorship is fundamental. This includes funding for thesis research, foreign placements (Erasmus+ Traineeship) and Erasmus grants for outgoing IMACS students, which are supported by the European program during the two semesters spent abroad at the two chosen locations in the IMACS network.

In terms of employment, the former course students work with or are employed at institutions in the field, amongst which are the Cineteca del Friuli - Archivio Cinema del Friuli Venezia Giulia, Cineteca di Bologna, Home Movies - Archivio Nazionale del Cinema di Famiglia, Archivio Nazionale del Cinema d'Impresa, Cineteca Italiana, Cinémathèque Royale, Österreichisches Filmmuseum, Cinemateca Portuguesa-ANIM, L'immagine Ritrovata, Reto.ch, Film Restoration Lab of the National Film Archive in Mexico and Cineric Portugal.

## 5. An (Un)certain Future

Despite its strong points, the archival training program displays some shortcomings, risks and weaknesses. A historic shortcoming for example has been the failure to diffuse the precepts and definitions of the Italian School of restoration abroad (Wallmüller 2007; Bordina and Venturini 2012). The field of film restoration, more or less at a standstill in terms of theoretical and methodological reflection,<sup>12</sup> does not present clear or shared definitions for standard terms (preservation, restoration, reconstruction) and standard documentation reports, as is glaringly obvious if one compares the various archive policies dedicated to restoration.

A risk of the program derives from a decrease in the importance of the university and its single mission as a place for the production and transmission of knowledge. This holds especially true in such a young sector and field of specialization which has been to a large part derived outside of the academic tradition.

On one hand, this tendency could be found in some contemporary curatorship and museological practices, which see archives not as a place where research can be done but where it can be produced.<sup>13</sup> On the other hand, it is shown by the increasing number of intensive courses, seminars, conferences, scientific journals and publications promoted and organized by single institutions, federations, foundations and international associations in the film and audiovisual heritage field.<sup>14</sup> Also, as technocratic agency becomes increasingly widespread, more and more initiatives are increasing and boosting the spectrum of non-university knowledge and skills on offer. In this connection, sometimes the best practices and projects are once again to be found, like at the time of the Bologna School, in projects and places where archives, technologies, research centres and universities once again come together.

Lastly, a threat to the sustainability of the program is the high costs involved in managing and updating the technological equipment. The use of state-of-the-art technologies boosts the teaching experience and

fosters the osmosis between research and the needs and tasks of the audiovisual archives.

Nevertheless, what can we learn from the Udine's experience? Firstly, it must be underlined that Udine's training philosophy is based on the combination of different disciplinary fields and the convergence between hard and soft sciences, in an institutional dialogue which balances different political, cultural and scientific positions and institutions operating in the field of film and media studies and film preservation.

Furthermore, it considers archival tasks, practices and processes as only partially depending on state-of-the-art technologies, technical skills, or hands-on experiences. Following this perspective, the archival training seems to be more a complex system of knowledge-building and knowledge transmission than a technology or series of practical skills to be learnt.

## References

- Anderson, Chris. *The Long Tail. Why the Future of Business is Selling Less of More*. New York: Hyperion, 2006.
- Beltrame, Alberto, Ludovica Fales, and Giuseppe Fidotta, eds. *Whose right? Media, Intellectual Property and Authorship in the Digital Era*. Udine: Forum, 2014.
- Beltrame, Alberto, Giuseppe Fidotta, and Andrea Mariani, eds. *At the Borders of (Film) History. Temporality, Archaeology, Theories*. Udine: Forum, 2015.
- Bertolli, Anna, Andrea Mariani, and Martina Panelli, eds. *Can We Learn Cinema?* Udine: Forum, 2013.
- Bianchi, Pietro, Giulio Bursi, and Simone Venturini, eds. *The Film Canon*. Udine: Forum, 2011.
- Bordina, Alessandro, and Simone Venturini. "Preserving Video Art. A Work in Progress." *Cinéma&Cie*, no. 8 (2006).
- Bordina, Alessandro, and Simone Venturini. "Operational Practices for a Film and Video Protocol." In *Preserving and exhibiting media art: challenges and perspectives*, edited by Julia Noordegraaf, Cosetta G. Saba, Barbara Le Maître, and Vinzenz Hediger, 253-269. Amsterdam: Amsterdam University Press, 2012.
- Bordina, Alessandro, Sonia Campanini, and Andrea Mariani, eds. *The Archive*. Udine: Forum, 2012.
- Canosa, Michele. "Verso una teoria del restauro cinematografico." In *Storia del cinema mondiale. Teorie, strumenti, memorie*, edited by Gian Piero Brunetta. Turin: Einaudi, 2001.
- Cavallotti, Diego, Federico Giordano, and Leonardo Quaresima, eds. *A History of Cinema Without Names*. Milan-Udine: Mimesis, 2016.
- Cherchi Usai, Paolo. "La cineteca di Babele." In *Storia del cinema mondiale. Teorie, strumenti, memorie*, edited by Gian Piero Brunetta. Turin: Einaudi, 2001.
- Cherchi Usai, Paolo, Francis, David, Horwath Alexander and Loebenstein Michael. *Film<sup>[1]</sup>Curatorship - Archives, Museums, and the Digital Marketplace*. Vienna: Filmmuseum, 2008.
- Farinelli, Gianluca and Nicola Mazzanti. "Il restauro: metodo e tecnica." In *Storia del cinema mondiale. Teorie, strumenti, memorie*, edited by Gian Piero Brunetta. Turin: Einaudi, 2001.
- Fossati, Giovanna and Annie van den Oever. *Exposing the Apparatus. Film Archive as a Research Laboratory*. Amsterdam: Amsterdam University Press, 2016.
- Frappat, Marie. "'Réactiver' les œuvres : histoire et pratiques des professionnels de la restauration des films." In *L'Histoire à l'atelier : restaurer les œuvres d'art (XVIIIe -XXIe siècles)*, edited by Noémie Étienne and Léonie Hénaut, 181-201.

Lyon: Presses universitaires de Lyon, 2012.

Frappat, Marie. "L'ecole bolonaise' de restauration de films." In *L'Avenir de la mémoire. Patrimoine, restauration, réemploi cinématographique*, edited by André Habib, Michel Marie, 39-45. Villeneuve d'Ascq: Presses Universitaires de Septentrion, 2013.

Frappat, Marie. "Histoire(s) de la restauration des films." *Journal of Film Preservation* 94 (2016).

Hagener, Malte, ed. *The Emergence of Film Culture. Knowledge Production, Institution Building, and the Fate of the Avant-Garde in Europe, 1919-1945*. New York-Oxford: Berghahn, 2014.

Horwath, Alexander. "The Market vs. The Museum." *Journal of Film Preservation* 70 (2005).

Laurent, Natacha and Christophe Gauthier, "Zoom Arrière, Une tentative pour incarner une idée de cinémathèque." *Journal of Film Preservation* 74-75 (2007).

Lundemo, Trond. "Towards a Technological History of Historiography?" In *At the Borders of (Film) History. Temporality, Archaeology, Theories*, edited by Alberto Beltrame, Giuseppe Fidotta, and Andrea Mariani. Udine: Forum, 2016.

Mazzanti, Nicola. "Response to Alexander Horwath." *Journal of Film Preservation*, no. 70, 2005.

Moretti, Franco. *Distant Reading*. New York-London: Verso, 2013.

Nissen, Dan, Lisbeth Richter Larsen, Thomas C. Christensen and Jesper Stub Johnsen. *Preserve then Show*. Copenhagen: DFI, 2002.

Olesen, Christian G., Eef Masson, Jasmijn van Gorp, Julia J. Noordegraaf, and Giovanna Fossati. "Data-Driven Research for Film History: Exploring the Jean Desmet Collection." *The Moving Image*, vol. 16, no. 1, 2016.

Quaresima, Leonardo, "Recherche et archives (en Italie): l'encrier de <sup>[L]</sup><sub>[SEP]</sub>Schiller." In Institut national du patrimoine, *Recherche/Archives: numériser les images, et après?* <sup>[L]</sup><sub>[SEP]</sub>Archimages09, Actes du colloque des 18, 19 et 20 novembre 2009, Paris: INP, 2010.

Read, Paul, and Mark-Paul Meyer. *Restoration of Motion Picture Film*. Oxford: Butterworth-Heinemann, 2000.

Streible, Dan, Martina Roepke and Anke Mebold. *Nontheatrical Film*. Special issue, *Film History* 19, no. 4 (2007).

Venturini, Simone. "Il restauro cinematografico. Una storia moderna." In *Il restauro cinematografico. Principi, teorie, metodi*, edited by Simone Venturini, 13-52. Udine: Campanotto, 2006.

Venturini, Simone, "The Cabinet of Dr. Chiarini. Notes on the Birth <sup>[L]</sup><sub>[SEP]</sub>of an Academic Canon." In *The Film Canon*, edited by Pietro Bianchi, Giulio Bursi, Simone Venturini, 451-460, Udine: Forum, 2011.

Venturini, Simone. "Il mondo nuovo." In *A scuola di cinema. La formazione nelle professioni dell'audiovisivo*, edited by David Bruni, Antioco Floris and Francesco Pitassio, 203-221. Udine: Forum, 2012.

Venturini, Simone. "La restauration de films: une histoire (post-)moderne." In *Conserver l'art contemporain à l'ère de l'obsolescence technologique*, edited by Marie-Hélène Breuil, Cécile Dazord, *Techné*, no. 37 (2013).

Venturini, Simone. "Nascita di una disciplina: <sup>[L]</sup><sub>[SEP]</sub>Luigi Chiarini e la Storia e critica del cinema." In *Dallo schermo alla cattedra. L'insegnamento universitario del cinema e dell'audiovisivo*, edited by David Bruni, Antioco Floris, Massimo Locatelli, Simone Venturini, Rome: Carocci, 2016.

Vernet, Marc. "L'Horizon Quaresima." In *Wer Ist Leonardo? From Caligari to the Cinema Without Names*, edited by Mariapia Comand, Andrea Mariani, Sara Martin, Francesco Pitassio, Cosetta G. Saba, Valentina Re, Simone Venturini,

Federico Zecca. Milan/Udine: Mimesis, 2017.

Wallmüller, Julia. "Criteria for the Use of Digital Technology in Moving Image Restoration." *The Moving Image*, 7, no. 3 (2007).

## Endnotes

1 We are aware that one of the main framework of this contribution look at the historical and archaeological conditions of existence of so-called "Film Culture" and that, consequently, this means to involve different institutional and disciplinary histories. The history of film archives and scholarly communities is more and more strictly intertwined. They share from the beginning (1930s) the genealogical and epistemic background of "Film Culture," inhabited by mutual tension and conflict, but also by genuine collaborations and shared "best practices." The time span of the present contribution corresponds to a period of radical transformation from the technological point of view. Nevertheless, the field forces, processes and agencies (archives and museums, academic and independent scholars, industrial and trade subjects, festivals and so on) show analogies and a deep genealogical relationship with the period of the emergence of Film Culture. At that time, while the transition to the sound cinema has been conceived mainly and canonically as a moment of rupture, Film Culture between the 1920s and the 1940s has been more recently framed as a layered and complex system of fields, apparatuses, dynamic struggles between different agencies and institutions (See Laurent, Gauthier 2007; Hagener 2014). In the context of Italian Film Culture, a first apical moment is the 1949, the pivotal year for the establishment of a new order in the cinematography field during the First Republic era. Since the 1930s we can retrace in Italy some specific and different policies and ideas about the identity of film heritage and film heritage institutions. On one hand, Luigi Chiarini and the Bianco e Nero's group within the Centro Sperimentale di Cinematografia in Rome look at the film archives and specially to the "National Film Archive" (the future Cineteca Nazionale) as a basic "tool" for scholars and part of a broader project of Film Studies institutional acknowledgement. On the other hand, other political and cultural subjects, starting from the FIAF member Cineteca Italiana of Milan, conceive the film archives as an independent subject. In other words, in 1949 within the diffusion of the first embryonic forms of the Film Studies, also in Italy a conflicting dialectic and a first fundamental divergence emerges between film archives as libraries and tools for the scholars and film archives as museums based on preservation and cultural programming and exhibition (Venturini 2011; 2015). Similar struggles, which redefine the boundaries and the political relationships between universities and archives and also inside the single institutions, will come back on the surface of the cultural field since the 1990s in Italy in a more polycentric context, involving the Bologna cultural and institutional situation (see here the references to the Bologna School) and other places. In any case, the political and cultural struggle echoes and resonances of the last decades in Italy are still active. It is still too early to transform them in a subject for an institutional history.

2 The reference is to the so-called "Bologna school" which grew up around the encounter between university, film archives and restoration laboratories. The movement can canonically be retraced to the respective figures of Michele Canosa, Gian Luca Farinelli and Nicola Mazzanti. For a reconstruction of this context, see Venturini 2006 and Frappat 2013.

3 The conference and school have fostered contacts with film archive institutions and laboratories, thereby extending the array of possibilities for students and colleagues from Udine, and enriching the programs with presentations, seminars and teaching dedicated to archival practices. In this connection, here is a list (in random order) of figures who have made contributions: Michelle Aubert, Jürgen Keiper, Rainer Rother, Kevin Brownlow, Paolo Cherchi Usai, Jan-Christopher Horak, Michael Loebenstein, Reto Kromer, Sergio Toffetti, Arianna Turci, Nicola Mazzanti, Davide Pozzi, Gian Luca Farinelli, Sabine Lenk, Mirco Santi, Vladimir Opela, Paolo Caneppele, Giovanna Fossati and Anke Wilkening.

4 The close relationship with the Cineteca in Bologna and L'Immagine Ritrovata laboratory is also reflected in the temporary lectureships and professorships given, among others, to Paolo Bernardini, Anna Fiaccarini, Davide Pozzi, Carine Soleilhavou and Elena Tammaccaro. Similarly, the author of this piece, pupil of Quaresima and Canosa at the University of Bologna, who then obtained his PhD at Udine under the supervision of Mazzanti, is an example of the continuity with the academic and archival side of the Bologna school.

5 The specialization would lead to the joint restoration with L'Immagine Ritrovata of *The Dance of the Toys* (C. Campogalliani, 1931) and the digitization of the soundtracks of films by Jacques Becker, Luigi Comencini, Sergio Corbucci, Mario Monicelli, Elio Petri, Dino Risi and Valerio Zurlini.

6 See the FIRST projects and in particular EDCine (Enhanced Digital Cinema), a project funded by the European Commission as part of the Sixth Framework Program. The goal of the archival applications of the project was

to form a digital storage and access system for film archives.

7 In the past ten years La Camera Ottica laboratory (scientific supervisor: Leonardo Quaresima; director: Cosetta G. Saba) has preserved hundreds of audiovisuals from Italian and European countries, ranging from the safeguarding of marginal, orphan or highly obsolete heritage (video art, experimental films, amateur, home movies, scientific and medical, industrial films, etc.) to the preservation and restoration of works by internationally renowned authors and artists, amongst whom are Abramovic, Acconci, Bacigalupo, Clémenti, Cottafavi, Deutsch, Gianikian-Ricci Lucchi, Godina, Griffith, Grifi, Kounellis, Reitz, Tambellini and Viola.

8 The current partner universities are: Université Paris 3 Sorbonne Nouvelle, Birkbeck College University of London, Université de Liège, Ruhr Universität Bochum, Université de Paris Ouest Nanterre La Defense, Università Cattolica del Sacro Cuore-Milano, Goethe-Universität Frankfurt am Main, Universitat Pompeu Fabra Barcelona, Universiteit van Amsterdam, Université de Lille 3, Université de Montréal and Università di Roma 3.

9 In this area, great aid is given by the Archivio Cinema del Friuli Venezia Giulia: built and managed by the Cineteca del Friuli and inaugurated in 2008, it enables the students to spend internships in state-of-the-art archival storage vaults.

10 The European Directive 2012/28/EU was recognized in Italy in 2014 (with the legislative decree, n. 163, November, 10). The specific acknowledging of the EU Directive regarding the Italian cinematographic orphan works appear paradoxically as a “clue” of a hidden and wider anomaly represented by the whole national film heritage, not included in the national regulations of the traditional cultural heritage. Despite the pioneering Venetian international conference of 1981 [Il film come bene culturale (Film as cultural good)], the film heritage inhabits an ambiguous polarity between cultural good and cultural product, between public cultural heritage and private economic asset. Nevertheless, as a further turn of the screw in its own historical and ontological dialectic, the current economic politics regarding the cultural heritage and creative industries place the film heritage in a sort of avant-garde position.

11 In this connection, an additional professional opportunity given by the archival training program is in contemporary documentary, experimental and independent cinema. In recent years, students or former students have promoted or collaborated in professional production projects (involving well-known artists such as Tonino De Bernardi, Gustav Deutsch, Boris Lehman, Alina Marazzi and Pietro Marcello, among others), with the post-production phase (editing, colour, theatrical and broadcast copies) performed by the CREA laboratory and in some cases (for the digitization of materials) La Camera Ottica laboratory.

12 The reference is to the strictly theoretical-methodological aspects, while the technical ones remain of constant interest and discussion (see for example *The Reel Thing* and more generally the widespread essays on restoration case studies). On the other hand, in recent years a certain recovery of interest has been emphasized in discussions of the status of restored digital editions, ethics and documentation by FIAF, as witnessed in some recent essay published on the *Journal of Film Preservation* and those lectures offered at festivals such as *Il Cinema Ritrovato* or *Toute la mémoire du monde*.

13 The concept of “curatorship” appears in the specific cultural debate during the 2000s, firstly as a reaction to the spectres of the digital access and as a discursive strategy addressed to take back a historical position of exclusivity towards the management and circulation of film heritage threatened by the digital turn: see Horwath 2005 and Mazzanti 2005; Cherchi Usai, Francis, Horwath and Loebenstein 2008. As a further result of the debate on curatorship and about the subjects appointed to exercise an hermeneutical and research function see also Quaresima 2010. More recently (not so far from the Udine’s approach), the convergence between theory and practices of film archiving, new film history and media archaeology come to envision the “film archive as a research laboratory,” see Fossati and van den Oever 2016. See also note 3.

14 With reference to the Italian context, we can mention an interesting training experience promoted within the School of Preservation and Restoration of Cultural Heritage, organized by Friuli Venezia Giulia Region. Usually focused on traditional materials the last program has been for the first time opened to the photographic, cinematographic and digital materials. The three main European festivals devoted to film heritage (*Le Giornate del Cinema Muto*; *Il Cinema Ritrovato*; *Toute la mémoire du monde*) host specific training programs, meetings, workshop (respectively, the Collegium - Sacile School for Film Music; the Fiaf Summer School; *Le Rencontres et Conférences*). Lastly, we should mention workshop, conferences, internship and student chapters organized by international associations as AMIA (Association of Image Archivists) or the European INEDITS.