

# FROM THE *SALON INDIEN DU GRAND CAFÉ* TO *YOUTUBE*



## A CULTURAL-ECONOMIC ANALYSIS OF CINEMATOGRAPHIC HERITAGE PRESERVATION AND (ONLINE) ACCESS IN THE DIGITAL AGE

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## ABSTRACT

Since the aesthetic and historical value of motion pictures received universal recognition, films and cinema have been officially considered cultural heritage and therefore worthy of being preserved. Once defined and classified the *cinematographic heritage*, this Master thesis discusses the issue of its preservation and access within the theoretical framework of cultural economics. More specifically, the research question addressed is: what is the impact of digitalization and the Internet on the cinematographic heritage sector?

The paper is divided into two parts. In Part I – in which the main literature is reviewed, ranging from the cultural economy of heritage to the economic analysis of the cultural industries (including issues related to copyright), and from the literature developed within film archival practices to the current debate on digitalization – the topic and the research question are investigated theoretically. At first, a case is made for the definition of a new category of heritage, labelled ‘information heritage’, which differs from both the tangible and the intangible heritage and whose essential attribute is *reproducibility*. The information heritage comprises all the products of the content industries and (only) within this category digitization *equals* preservation; as far as films are concerned, however, only their ‘content’ but not their ‘narrative’ can be transferred on new media, hence the authenticity value of a movie’s original negative and prints must be acknowledged. Having outlined the domain of the inquiry, the section continues with the application of the cultural economic theory on heritage to the cinematic sector, with the description of how the world of film preservation is organized (how archives, cinémathèques and film museums operate) and finally with the investigation of the revolutionary changes digital technologies have brought about in the field. The cultural economic analysis of a concrete example of a large-scale film heritage digitization project is also included.

Part II, the empirical section of the thesis, researches how the potential power of digitalization is currently used (or not used) in the cinematographic heritage field and in particular how the audiences perceive this new reality. To address those objectives, a survey is designed, organized around a central willingness to pay question. The sample is selected among the users of YouTube who normally watch, upload and/or comment on (parts of) heritage movies on the ever increasingly popular website. The data collected is subsequently analysed both with descriptive statistics and econometrics (logistic regression). The outcome of the survey shows that peer-to-peer networks and online video on demand systems are considered the best ways of delivery of cinematic heritage content, especially in terms of accessibility. The results of the data analysis suggest that this occurs because (for several reasons) cultural institutions do not offer a satisfactory alternative and ignore contemporary audiences’ needs.

In the concluding section, further research is recommended into the development of legal alternatives to YouTube and the torrents (that should occur under the supervision of experts), including extensive WTP studies that would help understanding how to maximize the revenue capture potential of the systems and assure their economic sustainability overtime.

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*“Just as water, gas, and electricity are brought into our houses from far off to satisfy our needs in response to a minimal effort, so we shall be supplied with visual or auditory images, which will appear and disappear at a simple movement of the hand, hardly more than a sign.” (Paul Valéry).*

## BACKGROUND and INTRODUCTION

My interest in motion pictures began relatively recently (a few years ago). During school years I did not benefit from any exposure to cinematographic works, my parents not being interested and because the area where I live lacks cinema services. Before starting to develop a “rational addiction” for classics, cult movies and art movies, I actually became somewhat addicted to classes and lectures in film theory, history of cinema, film analysis and the like. Cinema education in Italy only occurs at the university level, but it is extremely popular: at the Ca’ Foscari University (where I graduated in 2007) courses in cinema-related subjects are attended by far more people than those who need ECTS for them. It was at that time that I understood that movies are not just entertainment goods to be seen once and that old films are not “obsolete”, if one knows how to watch them (cf. Costa, 1985/2001). Among the infinite variety of those complex cultural goods there are masterpieces that in every respect can be considered Art, and that are worth to be consumed as cultural goods and *studied*, as it happens with, say, the Divine Comedy or a Rembrandt painting. What I also learned was that accessibility of (old) movies is terribly limited. I remember Professor Alessandro Tedeschi Turco, aware of students’ budget constraints, starting each class with reading down a “menu” of films to be seen on TV during the week; those were almost all broadcast late at night. Since then I have started wondering why the possibility for the public to access cinematic content (for study purposes) is so low on the priorities of municipalities, libraries, universities, broadcasting services and so on.

While introducing the key principles of how to design a research project, Kelly (quoting Weber, in Seale, 2004:130) states that social scientists need to ‘achieve a balance between creativity and passion for a topic with rigorous scientific endeavour’. This is particularly true for cultural economists, who (usually) apply the economic tools to the cultural or artistic fields they are most interested in. I believe it is of primary importance in our subject to be familiar with the cultural productions we are about to analyze, to be curious to learn more and to be motivated to contribute to making the sector in question work better – at least finding out why there are certain problems or why things do not work properly.

So far, my interest during my studies has mainly been related to cultural heritage and the economics of its preservation, looking in particular at the architectural heritage (being an assiduous ‘consumer’ of architectural works). This time I would like to focus on movies, which, as I just explained, are also a cultural production I have a fondness for.

To combine my interest in the cultural economy of heritage and my interest in the movie industry – two issues that present stimulating intellectual problems within the field of cultural economics –, in this Master thesis I have decided to research the *cinematic* heritage. The starting point is the assumption that cinema<sup>1</sup> is part of the European cultural heritage, as stated in the Audiovisual and Media Policy of the European Commission<sup>2</sup>. What are its characteristics and peculiarities, compared to other heritage items?

Once defined, film heritage and the issue of its preservation will be discussed within the theoretical framework of cultural economics (Chapter 1 and Chapter 2). In Chapter 3 cinematographic heritage practice will be outlined more in details, while Chapter 4 and 5 will deal with the advent of digitalization, which represents the major challenge and one of the most (if not the most) discussed topics at this moment within the film industry, including the world of film archives.

As mentioned in the beginning, what brings about my curiosity is the limited accessibility of cinematographic heritage items, compared for instance to books in libraries and artefacts in museums, a problem I personally encountered during my studies.

Three years have passed since I attended the course of *Audiovisual Language Analysis* (2005). If I were to take the course now again, I would still face the same difficulties of finding the movies to be studied for the exam. Nevertheless, today I could count on a new tool, which was created right at the time I was following the course (February 2005): YouTube. The website ([www.youtube.com](http://www.youtube.com)), which allows users to upload, share and watch video content of any kind has quickly become famous worldwide, especially since it was purchased by Google in November 2006. Subscribers can also rate, favourite and comment on the postings.

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<sup>1</sup> Here the word ‘cinema’ refers to motion pictures and film culture and practice in the broadest sense (cf. Note 9).

<sup>2</sup> [http://ec.europa.eu/avpolicy/reg/cinema/index\\_en.htm](http://ec.europa.eu/avpolicy/reg/cinema/index_en.htm)

Being an amateur video-maker, I have been using YouTube for leisure reasons for quite some time, but it was only when I started writing my research proposal for this thesis that I tried to search for cinematographic content in it. I was surprised to find many of the movie sequences Professor Tedeschi Turco had projected in class.

In about the same period (January 2008) I also participated in a conference about online video production and distribution, organized by the Institute of Network Cultures of Amsterdam. The title of the international conference was *Video Vortex, responses to YouTube*. Whether we like it or not, YouTube 'made 2006 the year of Internet video'.

Unfortunately, few statistics are publicly available regarding the scale of this phenomenon. A "scrape" of the site was done by Lee Gomes for an article he published on the Wall Street Journal in 2006: he found that the number of uploaded videos in one month had grown by about 20% from 5.1 to 6.1 million. Furthermore he calculated that in the first year the total time people around the world spent on YouTube was more than 9,300 years. At present, figures continue to multiply at an ever growing rate: as of March 2008 a YouTube search returned about 72.1 million videos and 2.89 million user channels; as of April the figures have gone up to 83.4 million videos and 3.75 million channels<sup>3</sup>. The website's immense popularity is beyond doubt.

The *Video Vortex* conference was an attempt to contextualize the evident 'shift of audience to vlogging and video-sharing websites', and it opened the way to the exploration of 'the rise of the database as the dominant form of storing and accessing cultural artefacts'. One of the questions they intended to raise was: 'how are cinema, television and video art being affected by the development of a ubiquitous online video practice?'

My own question is whether or not those developments are relevant to the film heritage sector as well. A quick scan is sufficient to say that the answer is yes. Among the users of YouTube, many upload high quality cinematographic content, in particular original trailers and famous scenes from classic and silent movies. Sometimes entire full length films are uploaded (in sequences of about 10 minutes each). I am aware of the fact that those practices are illegal, except the relatively few cases in which the movies are in the public domain<sup>4</sup>, and it is not my intention to say that illegal practices should be favoured. What I want to show is that those new patterns of consumption need to be investigated or at least

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<sup>3</sup> [http://en.wikipedia.org/wiki/YouTube#cite\\_note-4](http://en.wikipedia.org/wiki/YouTube#cite_note-4)

<sup>4</sup> Movies enter the public domain when the copyright term expires; the date of that depends on the country.

taken into account to offer proper alternatives. I agree with Tollman (2008:26), who states that ‘platforms like YouTube are so far underestimated and under theorized’. She also notes that it would be interesting to analyze online video consumption and the new user habits.

The second section of my thesis (Part II), the empirical one, is based on the assumption that we ‘live, work, consume and watch in a networked society’ and that this is a premise to devise radically new distribution systems, also for archival films (Fossati<sup>5</sup> and Verhoeff, 2007:331).

The general research question the thesis addresses is:

What is the impact of digitalization and the Internet on the cinematic heritage sector?

The focus will be restricted to the issue of **accessibility** of (old) cinematographic content.

According to Fossati and Verhoeff (ibid., pp.334-335), audiences today are being replaced by ‘individual *users*’, who demand immediate access to content and show already an insatiable need to ‘grab’ or ‘tap’ it directly from its source.

I consider it to be an interesting and important question whether or not and how much people are willing to pay for cultural goods as delivered via the Internet. My intention is to make use of contingent valuation methods, which are at the moment the most widely used tool among cultural economists to estimate the value people place on unmarketed cultural goods – in this case the digital versions of cinematographic heritage goods.

To address the research problem I have decided to design a survey, which besides a central willingness to pay question, will investigate how audiences online value both availability and accessibility of cinematographic heritage through traditional and new ways of delivering, and also how they value the existence and the possibility of experiencing the projection of a movie’s original print – in other words, whether or not users consider digitized copies of the movies to be substitutes of the originals.

The sample will be selected among “YouTubers”.

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<sup>5</sup> Giovanna Fossati, whose work will be often quoted in this thesis, played a very important role in the first part of the research: I had the opportunity to meet her in person for an in-depth interview, in which she gave me precious information about the world of film preservation. See Fossati’s CV reported in Appendix 1.

**PART I**

## **1.1 Introduction**

The economics of cultural heritage is a fundamental area of cultural economics pioneered by Alan Peacock already in the 1970s (Towse, 2005) and that since then has attracted the interest of many scholars of our discipline. At present, a wide-ranging literature is at our disposal, which comprises the economics of the built heritage, the economics of museums and galleries, the art market and so on (see Towse, 2002).

As far as the film industry is concerned, it has in recent times been the focus of increasing research in cultural economics, as to be even worth a special issue within the *Journal of Cultural Economics* (see Volume 29, Number 3 / August 2005). More specifically, studies concerning the cultural and creative industries always include a chapter on movies. This literature, however, does not seem to be relevant for the purposes of my research, since in general it analyzes production, demand, determinants of box office and so on, rather than preservation of cinematographic goods.

Nevertheless, film preservation is a fascinating subject with an extensive literature within the field of film and media studies. In particular, several articles have recently been published on the issue of technological development and digitalization and their consequences for film archives. Furthermore, the FIAF (International Federation of Film Archives) publishes twice a year the *Journal of Film Preservation*.

My intention is to investigate the field of cinematic heritage preservation (and dissemination) as an economic problem and to address the issue with the point of view of a cultural economist. To my knowledge, this has never been done before. This certainly makes the task more challenging and risky, but at the same time particularly interesting since, as it is widely viewed, it is a duty of any researcher to find gaps in the existing literature.

In this first stage of the research, the intention is to review the main literature with the specific aim to address the following preliminary questions:

Why should cinema be recognized as part of our heritage? When did it actually start to be considered cultural heritage, which implies worthy of being preserved?

Are heritage films different from other heritage goods? What are the characteristics they have in common, and what are the peculiarities?

### 1.1.1 Motion pictures as cultural heritage

The idea that films are not just technical curiosities (as they were perceived when they were invented) or mere entertainment goods, but embody other *values* was expressed at the dawn of cinema history, in 1898, by Boleslaw Matuszewski<sup>6</sup>, a Polish cameraman who worked for the Lumière company. In *Une nouvelle source de l'histoire*, a pamphlet he published in Paris that was far ahead of its time, he recognized the historical and educational value of moving images, and suggested that seeing films is not 'a simple pastime' but 'an agreeable method of studying the past' and even 'a singularly effective teaching method'<sup>7</sup>. His considerations went beyond the theoretical acknowledgment of films as an extraordinary means to 'reawaken and relieve the hours of the past'. Matuszewski clearly recommended the creation of a Depository of Historical Cinematography and provided a set of instructions about how this new institution should have worked: specified documents previously selected by a competent committee, had to be systematically catalogued and stored; under appropriate conditions and especially considering 'special reasons of property', the committee could decide to make copies of the archived prototype and make them available.

The passage is extremely topical and the issues of film archiving practice it touches later became reality. Even though the aesthetic and artistic qualities of motion pictures are not taken into consideration (which is obvious, considering that narrative cinema had not yet been invented in 1898), we can regard this as the first recognition of the cultural value of films, of the evidence that they belong to a country's heritage and that they are worth to be preserved and made accessible as it happens with books in public libraries and artefacts in museums.

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<sup>6</sup> Source: [www.kinema.uwaterloo.ca/100yr951.htm](http://www.kinema.uwaterloo.ca/100yr951.htm)

<sup>7</sup> The English translation of the pamphlet by Julia Bloch Frey is available online: [www.latrobe.edu.au/screeningthepast/classics/clasjul/mat.html](http://www.latrobe.edu.au/screeningthepast/classics/clasjul/mat.html)



Despite its incredible farsightedness, the pamphlet was forgotten for sixty-five years (Routt, 1997<sup>8</sup>). In the context of the European Union, it was only quite recently that films have been fully recognized as works of art and source of historical information and that all the Member States have adopted public policies and some systems of deposit to collect and preserve cinematographic works. In France the legal deposit obligation recommended by Matuszewski became a reality only in 1977 (Gorini, 2004).

At present, the European Parliament and Council have adopted a *Recommendation on film heritage and the competitiveness of related industrial activities* (16 November 2005), in which cinematographic works are recognized as ‘an essential component of our cultural heritage’ that deserves full protection (2005: L 232/57).

### 1.1.2 Heritage and economics

As noted above, the available literature about the economic aspects of cultural heritage is quite wide and comprises various approaches and points of view (Towse, 2002). The starting point of most contributions are definitional issues.

There is not a unique definition of cultural heritage (Rizzo and Throsby, 2006) and the concept changes through time and gradually opens to new categories. In most books and articles I have come across so far, motion pictures are not likely to be included. They are not explicitly cited, but this does not mean that the analysis cannot be applied to those goods as well.

An example of a definition of heritage also applicable to films is the one included in the report *Economics and Heritage Conservation* (1999), published by the Getty Conservation Institute, that mentions ‘objects, structures, and other products of cultures and individuals that have been passed from previous generations to the present and are, at least partly, valued because of their age’ (Klamer and Zuidhof, 1999:25). This is surely pertinent at least as far as the movies from the silent era (1895-1930) and the “classics” are concerned.

To give a more clear structure to my work, I have decided to follow the framework of the first part of the ‘background paper’ (ibid., pp.25-45) prepared by Klamer and Zuidhof for a

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<sup>8</sup> <http://www.latrobe.edu.au/screeningthepast/classics/clasjul/matintro.html>

conference held at the Getty Centre in December 1998 on the economic aspects of cultural heritage conservation (Mason, 1999:2), the results of which were published in the above quoted report. The paper, after an introductory definition of the domain of the inquiry and a basic outline of the economic approach, discusses selected topics from previous work on the economics of cultural heritage (Peacock, 1978, Vaughan, 1984, Nijkamp, 1991, ICOMOS, 1993, Hutter and Rizzo, 1997, Schuster, Monchaux and Riley, 1997, Peacock, 1998, quoted in Klamer and Zuidhof, 1999:26); in keeping with the usual classification of research in this field, it is organized around the following topics:

- market failure,
- the value of cultural heritage,
- who pays, who benefits, who cares? and
- institutional solutions.

As a start, the next section will discuss the general classification of heritage; I will try to find out where the “audiovisual heritage” (that encompasses the film or cinematic heritage<sup>9</sup>) should be collocated. The cultural economic analysis will then continue in Chapter 2.

## 1.2 Domain of the inquiry

### 1.2.1 Classification of cultural heritage: the “audiovisual heritage”

Klamer and Zuidhof’s background paper for the report *Economics and Heritage Conservation* (1999) includes a general classification of cultural heritage (see Table 1, p.26, reported below as Table 1a), in which two main categories are defined: the *tangible* and the *intangible* heritage<sup>10</sup>.

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<sup>9</sup> In this thesis the terms film-, cinematic- and cinematographic heritage will be used interchangeably, to mean mainly archival motion pictures originally produced for cinematographic release. The term “audiovisual heritage” will also be used, when the discussion is more general, but sectors like broadcasting, video art and music are not included in the analysis.

<sup>10</sup> As it is specified in the first paragraphs, in line with most other (earlier and later) economic studies, Klamer and Zuidhof’s paper only considers the tangible heritage and the focus is on the immovables.

Table 1a **Classification of cultural heritage**

<p>TANGIBLE HERITAGE</p> <p>Immovable</p>	<p>Built heritage:</p> <ul style="list-style-type: none"> <li>→ monuments, buildings, sculptures, inscriptions, cave dwellings</li> <li>→ (listed) buildings: buildings in use</li> <li>→ groups of buildings: city centres</li> </ul> <p>Sites (also under water): archaeological, historical, ethnological</p> <p>Cultural landscapes</p>
<p>Movable</p>	<p>Artifacts:</p> <ul style="list-style-type: none"> <li>→ paintings</li> <li>→ sculptures</li> <li>→ objects</li> <li>→ collections</li> </ul> <p>Media:</p> <ul style="list-style-type: none"> <li>→ audiovisual media</li> <li>→ books</li> <li>→ plays</li> <li>→ scores</li> </ul> <p>Consumer and industrial goods</p>
<p>INTANGIBLE HERITAGE</p>	<ul style="list-style-type: none"> <li>→ art expressions: music, dance, literature, theatre</li> <li>→ martial arts</li> <li>→ languages</li> <li>→ living cultures</li> <li>→ (oral) traditions</li> <li>→ narratives</li> <li>→ revolutions</li> <li>→ networks</li> <li>→ folklore</li> </ul>

Source: Klamer and Zuidhof, 1999:26.

Interestingly “audiovisual media”, together with other kind of media, is included in the table. To my knowledge, this is quite unique. This category falls under the label ‘tangible’ besides the ‘artefacts’ and the ‘consumer and industrial goods’.

The classification is comprehensive, but I do not find it totally convincing in the way the different types of movable items are classified. Rather than ‘artefacts’, ‘media’ and ‘industrial goods’, I would suggest a general distinction between reproducible and non-reproducible heritage. The former category would include the products of the cultural or creative industries (like the different kinds of audiovisual and printed materials) that were originally intended for mass reproduction and for which there is essentially no unique

original copy possessing Walter Benjamin's renowned "aura" (Benjamin, 1936). In my opinion this basic differentiation would be more helpful considering that the debate concerns issues of conservation, and especially considering recent technological development and the links between preservation and digitalization of cultural goods.

In this section, I therefore reorganise the table, using the definitions formulated by UNESCO (this reference is used or quoted in many papers on heritage, for instance Benhamou, 2003, Rizzo, 2003, Rizzo and Throsby, 2006, Throsby, 2001...).

Table 1b ***Classification of cultural heritage***

TANGIBLE HEIRTAGE	Note: the underwater heritage, movable <sup>11</sup> (objects) or immovable (sites), is also included.
Immovable	<ul style="list-style-type: none"> <li>– monuments: architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features</li> <li>– groups of buildings: groups of separate or connected buildings which, valued because of their architecture, their homogeneity or their place in the landscape</li> <li>– sites: works of man or the combined works of nature and man, and areas including archaeological sites<sup>12</sup></li> <li>– cultural landscapes<sup>13</sup></li> </ul>
Movable	ancient jewellery discovered on archaeological sites, objects found in burial chambers and religious buildings, sculpted stones, all sorts of art objects, rare books and manuscripts, seals and ancient coins, textiles and fine furniture, ancient musical instruments, photographs, films,

<sup>11</sup> See [http://portal.unesco.org/culture/en/ev.php-URL\\_ID=33966&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/culture/en/ev.php-URL_ID=33966&URL_DO=DO_TOPIC&URL_SECTION=201.html)

<sup>12</sup> <http://whc.unesco.org/?cid=175>

<sup>13</sup> Mentioned in <http://whc.unesco.org/en/criteria/>

<sup>14</sup> [http://portal.unesco.org/culture/en/ev.php-URL\\_ID=35031&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/culture/en/ev.php-URL_ID=35031&URL_DO=DO_TOPIC&URL_SECTION=201.html)

	stamps, but also fossils <sup>14</sup>
INTANGIBLE HERITAGE	<ul style="list-style-type: none"> <li>– oral traditions and expressions, including languages</li> <li>– performing arts (music, dance, theatre...)</li> <li>– social practices, rituals and festive events</li> <li>– knowledge and practices concerning nature and the universe</li> <li>– traditional craftsmanship<sup>15</sup></li> </ul>

Some items that in Klamer and Zuidhof's table fell under the label 'media', like films and books, are included in the list of movable tangible items, but it is quite obvious that here we are only talking about rare objects that we need to preserve for their material value or uniqueness, rather than the content they embody.

For the reasons expressed on the previous pages, the "cinematic heritage", or, to be more general, the "audiovisual heritage", once recognized as being part of our cultural heritage, needs to find its place in the classification. The inclusion of (the objects) "films" among the movable heritage items is not sufficient.

A search in the UNESCO page dedicated to culture does not produce any result if we look for "film heritage", "audiovisual heritage" or "cinematic heritage". The audiovisual sector, however, is not forgotten or neglected by UNESCO; on the contrary, the safeguard of audiovisual documents is considered of primary importance. In order to read about this issue one has to abandon the page about culture and go to the section dedicated to 'activities in communication and information'<sup>16</sup>. This suggests that this special kind of heritage should indeed be treated separately.

Consequently, my suggestion is to include a further section in the table:

Table 1c ***Information heritage***

INFORMATION HERITAGE	
Literature <sup>17</sup> (in the broadest sense)	textual material
Audiovisual heritage	<ul style="list-style-type: none"> <li>– film</li> <li>– television</li> <li>– sound recordings</li> </ul>

<sup>15</sup> <http://www.unesco.org/culture/ich/index.php?pg=00002>

<sup>16</sup> [http://portal.unesco.org/ci/en/ev.php-URL\\_ID=1645&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/ci/en/ev.php-URL_ID=1645&URL_DO=DO_TOPIC&URL_SECTION=201.html)

<sup>17</sup> Contrary to Klamer and Zuidhof (1999) I do not include it in the intangible heritage.

There might be a more suitable term than “information”. A category called “reproducible heritage” embracing all the products of the cultural or creative industries that have been conceived in the first place for mass reproduction and distribution (as mentioned above), would certainly be intriguing and raise important questions relative to preservation: for instance, how many copies of a mass produced design item should we keep? Should we keep all books or print new ones? Can we just rely on digital versions of the different products? Films would certainly fall into this debate.

For my purposes I leave design and industrial goods out of the discussion and suggest limiting this addition in the classification of reproducible intangible content that can be recorded, printed or transferred on different tangible media, hence the output of the so called ‘content industries’<sup>18</sup>.

Preservation in this category occurs on two fronts: preservation of the content and preservation of the media. The former is the priority, while the latter can be seen as a means to assure this priority.

A characteristic printed and audiovisual documents have in common is that supports, sooner or later, perish. Difficulties related to the fragility and vulnerability of photographic negatives, especially the earliest ones (nitrate), and the consequent urgency to save and restore what has survived have lately attracted attention and concern on global scale. It is impossible to make accurate estimations, but most sources state that more than half of the audiovisual material produced in the first half of the twentieth century is irremediably lost. Looking back in history, a parallel can be found in the loss of the papyrus manuscripts of Antiquity (although libraries already existed!); only the works patiently copied (hence transferred on new media) by the monastic scribes were able to survive.

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<sup>18</sup> Following the EURLex definition, “the content industry is composed of those enterprises involved in the creation, development, packaging and distribution of content: data, text, sound, images or multimedia combination thereof, represented in analogue or digital format on a variety of carriers such as paper, microfilm, magnetic or optical storage. The content industry comprises the different segments of print publishing (newspapers, books, magazines, corporate publishing) and electronic publishing (on-line databases, audio and video text services, fax and CD-based services, Digital Versatile Disc (DVD), Internet World Wide Web, edutainment) as well as the audiovisual industries (television, video, radio, audio and cinema)’.

See: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52000AE1405:EN:HTML>

As far as literature is concerned, the preservation of original materials (like manuscripts) only occurs in exceptional cases. The objects in question are preserved because of uniqueness, special features, materials and so on; they can be included in the category “tangible-movable heritage” and can be analyzed as such.

Audiovisual material is more complex than texts: the process of copying or transferring on a new support of images and sound involves a loss in quality. As we see later, the advent of digital technologies, at present, has not yet offered a satisfactory solution to this problem; film preservation and restoration practitioners still see (whenever possible) the preservation of the original camera negatives, or at least of an original print, as the most favourable option. The audiovisual heritage shares therefore with tangible heritage goods the characteristic of ‘irreversibility’ underlined by Benhamou (2003:255).

In the next section, which provides a description of the main general characteristics of cultural heritage, the particular features of the film heritage will be outlined.

### *1.2.2 Characteristics of cultural heritage*

As Klamer and Zuidhof (1999:25) observe, heritage goods such as the cathedral of Chartres or the archaeological site of Pompei did not instantaneously become heritage when they were built or discovered, but had to be recognized as such through a process of deliberation and negotiations.

This had earlier (1994) been noticed and explained by Sir Alan Peacock, in his lecture ‘A Future for the Past: The Political Economy of Heritage’ – which is a milestone in Cultural Economics and an indispensable reference for any scholar dealing with the economics of preserving the past. While considering the supply side, Peacock highlights some unusual features of heritage production: most buildings and sites are not intentionally produced ‘with the idea of reminding us of our past’ (Peacock, *ibid.*, p.195), but are designated as heritage by authorities (the experts), who include in listings a ‘stock of “significant” heritage artefacts’ that does not respond to a demand and occurs by accumulation, rather than production (*ibid.*, p.196).

The same can certainly be said about films, especially about the oldest: Louis and Auguste Lumière – the inventors of the cinematographic projector and the ones who produced the very first movies in the history of cinema (*Sortie des ouvriers de l’usine Lumière*, 1895, or

*L'arrivée d'un train à la Gare de la Ciotat*, 1896) –, believed their invention to be without a future. Most probably they would be surprised to hear that today their work is shown all over the world as the foundational piece of an art that not only has been universally recognized, but has recently also been acknowledged as an integral part of our cultural heritage (cf. Gorini, 2004:2).

Tangible artefacts must be identified and recognized as heritage through a process of “listing” or “registering” (‘a designation of lower significance’ (Rizzo, 2003:409)), which is essentially a selection and certification process. For instance, only the items that meet certain criteria<sup>19</sup> qualify for World Heritage classification and are included in the UNESCO World Heritage List. Unlike architectural works or paintings but like printed materials, nowadays every film produced (at least in Europe) is automatically collected and stored in at least one archive through a legal mandatory or voluntary deposit system (see Gorini, 2004).

In general, we can notice that compared to other heritage items, movies are relatively easy to store; furthermore the production of motion pictures only spans one century, while the built heritage can date back to pre-historical eras. The film industry is also very well documented (De Vany, 2006:618) and easy to keep under control. Last but not least it is undeniable that the newest art forms benefit from the fact that we live now in a society (at least in the western world) that considers preservation of culture to be an imperative.

At present, the goal in the audiovisual sector is to preserve everything, rather than to ask cultural experts to select items of ‘outstanding universal value’<sup>20</sup> or ‘of historical and artistic significance’ (Towse, 2002). This reduces the problems related to the subjectivity of expert choices (like the risk of a self-referential process pointed out by Throsby (2001)), which has always been a matter of concern among cultural economists (Peacock, 1994; Throsby, 2001). Nevertheless, the audiovisual sector (like any other sector) has to deal with the fact that resources are limited and that hence priorities must be set: conservation decisions are also here the province of the experts (the so called “culturalists”).

As Throsby (2001) points out, a conservation decision is “sacred ground” considered ‘beyond the reach of economists’ (pp.74-75). Peacock has dedicated an entire section of his 1994 lecture (the Dilemma of the Cultural Economist, pp.191-194) to the rejection of

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<sup>19</sup> See: <http://whc.unesco.org/en/criteria/>

<sup>20</sup> Source: <http://whc.unesco.org/?cid=175>



economic analysis in the heritage sector, based on the ‘mistaken belief that the science has no concern with any motive except the selfish desire for wealth’ (Marshall, 1890, cited in Peacock, 1994:194) and strongly influenced by the “Ruskinian tradition” (the belief that the arts must be immunized from any economic problem (ibid.)).

On the contrary, economic analysis is intended to throw light on the assessment of resource allocation decisions and issues concerning financing and management (Throsby, 2001). Any kind of heritage conservation intervention – including the preservation, restoration and digitization of moving images – is a “heritage project”, and ‘the project is a process of investment of economic resources and conservation enterprise’ (ibid., p.77).

### **1.3 Conclusion**

The cultural value of motion pictures was recognized very late; nowadays, however, cinema and film have been universally acknowledged as part of our heritage and the urgency of their preservation has become a matter of concern at the international level (UNESCO, EU...).

This thesis proposes defining a new category of cultural heritage, the *information heritage*, which comprises the movies, together with all other products of the content industry. The information heritage differs from both the tangible and the intangible heritage and its essential attribute is *reproducibility*.

In this chapter, with the review of the main literature, the cultural economic perspective has been introduced. My belief is that the solid theoretical and empirical progress that has been achieved in cultural economics in the last twenty years suffices to remove any doubt about not just the convenience, but the necessity to employ the economist’s perspective to the heritage preservation field, including motion pictures.

In the next chapter the economics of heritage will be applied to the field of film preservation.

## **2.1 Introduction**

As stated earlier, this analysis follows the framework of Klamer and Zuidhof's "background paper" included in the report *Economics and Heritage Conservation* of the Getty Institute (1999). This document was written for different heritage conservation professionals, especially for non-economists. The language of economics is therefore "translated", in order to make the discourse clear and accessible.

The fact that mine is a "first attempt" to apply the cultural economic theory on heritage to the film sector, makes this reference suitable despite the fact that it is quite dated and not particularly analytical. For these reasons, I will make use of Klamer and Zuidhof's paper's structure, but I will base my assumptions on other references, in particular Rizzo and Throsby (2006).

## **2.2 Market failure**

Since they were invented, movies have always been treated like commodities to be traded in a market (see Moul, 2005; Sedgwick, 2000). For decades their value was considered 'not to stretch beyond the period of their commercial exploitation' (Gorini, 2004:2), after which they were abandoned or intentionally damaged or destroyed, whenever it was convenient to recycle some parts of the physical materials (like the expensive silver particles used for the emulsions). Apparently (at least in Europe), proper provision of cinematographic heritage could only occur when public policies and intervention for its preservation started to be adopted. Before that, cinematographic works survived only when passionate individuals were able to rescue and collect them (ibid.).

In simple words, Klamer and Zuidhof (1999) define market failure as 'the inability of a market to provide goods in a satisfactory way. Markets are unsatisfactory when they do not lead to efficient outcomes or when outcomes are undesirable' (p.28).

What occurred in the cinematic heritage sector, rather than a case of market failure, was that a market failed to develop (missing market).

A good explanation of this can be found in what Mossetto (1994) identifies as the “the economic dilemma of heritage preservation” (pp.81-96). The question is: ‘how can we judge the opportunity costs of investing resources in preservation of an art form which is otherwise bound to die’? (p.89), which is the same as asking ‘how can we judge the opportunity costs of investing to prevent the disappearance of objects’? (see Klamer and Zuidhof, 1999:29). Preservation decisions involve uncertainties that cannot be solved, not even by experts.

Social optima are obtained (in the market as well as out of the market) only if the good is certified as ‘artistic’ (Mossetto 1994:84), or (more in general) as ‘cultural’. Mossetto explains this with an analytical representation based on the following formula:

$$V_n - C_n + A_n = V_o + A_o^{21}$$

where  $V_n$  is the market value of the preserved good,  $C_n$  the cost of preservation,  $A_n$  the historical-aesthetic value of the good after preservation,  $V_o$  the market value of the good before preservation,  $A_o$  the historical-aesthetic value of the good before preservation (pp.83-84). For simplicity, the conditions  $A_o = 0$  and  $V_n - C_n = V_o$  are imposed. The preservation decision will be taken if  $A_n > 0$  (p. 85).

This explains that ‘preservation (...) means attributing an aesthetic/historical value to a given good’; the result is an ‘increase of social welfare’ (ibid.).

Because of the late recognition of films’ cultural value our cinematographic heritage has suffered irreversible ‘waves of destruction’ (Gorini, 2004:2), that we now enormously regret. Mossetto’s conclusions (1994:93) that ‘non-market decision-making processes are needed to reach optimum solutions on preservation’ and that preservation has to be ‘a matter of public policies’ seem to be proved. Nevertheless the underlying economic dilemmas remain unsolved, because preservation decisions are of ideological nature and based on arbitrary principles (ibid., see p.95).

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<sup>21</sup> Further (more accurate) elaborations of this formula, which include a discount factor, are to be found in Mossetto’s paper itself (ibid.) and in other studies, like Rizzo and Throsby (2006), quoted in the next section.

Decision-makers in the beginning of the 20<sup>th</sup> Century failed to consider the interest of future generations, the individuals who could not express their willingness to pay (their demand) because they were not born at that time (see Mossetto, *ibid.* and Towse, 2002). To avoid those problems, today people and institutions responsible for cinematic heritage preservation tend to be risk-averse. The tendency is to preserve *everything*, especially in the countries that have adopted a mandatory deposit system (see Chapter 3), France being perhaps the most extreme example (cf. Benhamou, 1996).

### *2.2.1 Public goods and externalities*

As far as heritage goods are concerned, the other main sources of market failure are public goods characteristics – non-rivalry, except the occurrence of congestion, and non-excludability – and externalities. Those considerations are particularly appropriate for monuments and buildings (at least their facades), while films do not share the attribute of non-excludability. The advent of the digital age and the (although slowly) growing number of movies that enter the so called “public domain” are gradually bringing a change by lowering the barriers for consumption. Digitalization has brought a revolutionary change in the heritage category that we have defined “information heritage” (see 1.2.1). For the first time in history we have the choice whether we want cultural goods that fall into this category to be public goods or not.

Movies might produce externalities, especially externalities of consumption (they can generate for instance external benefits in terms of national identities). Externalities can also be pecuniary: there have been studies about the impact of movies on tourism destinations (see for instance Kim and Richardson, 2003). Whether or not those external effects are generated, there are doubts about their significance and in any case they do not seem to represent a convincing argument for public support to film preservation (cf. Frey, 2003).

## **2.3 Value of cultural heritage**

As Throsby (2001) suggests, value is a starting point, a foundation stone upon which we can build the process of linking together the field of economics and the field of culture.

### 2.3.1 Costs and benefits

Public decision-makers should allocate resources trying to maximize social welfare (Cuccia and Signorello, 2002a). As Navrud and Ready (2002) emphasize, heritage conservation projects always have to compete for financial means with other social policies (health, security...); resources are scarce and it is necessary to set priorities.

Cuccia and Signorello (2002a) highlight the fact that to estimate which project among alternatives generates 'the highest net social benefits' (p.120), decision-makers adopt the cost-benefit analysis. The latter is referred to by Klamer and Zuidhof (1999:31) as 'the basic technique for economic valuation'.

Conservation costs are the resources expended for the project: to give an example, in the restoration of an old film costs of materials and costs of labour of experts and technicians are involved. Those costs are high, since the materials needed are in most cases rare and expensive, and the workers hired must be highly skilled (this point has been particularly stressed by Benhamou, 2003).

If the conservation project is considered unquestionably justified, a "cost-effectiveness analysis" (Throsby, 2001:78), which means to find the most efficient and effective way of intervention (leaving out the assessment of benefits)<sup>22</sup>, will be sufficient. More commonly, however, the benefits cannot be taken as given. According to Throsby (ibid.) the benefits arise from the project over time and include use values, non-use values – that can be of three types: existence, option and bequest value – and externalities. To represent the final outcome of a cost-benefit assessment, Throsby (ibid., p.80) mentions some alternative methods: 'the payback method – how long does it take for the asset's earnings to repay its initial capital costs?; the benefit-cost ratio and NPV (net present value) method – do aggregate net benefits, suitably discounted, exceed the capital cost?; the internal rate of return (IRR) method – what discount rate just matches aggregate discounted net benefits with the initial capital cost?'

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<sup>22</sup> Throsby adopts the generally accepted definition of cost-effectiveness analysis, which is: 'the cheapest means of accomplishing a defined objective' (H.M. Treasury Glossary of Management Techniques, London H.M. Stationery Office, 1967, quoted in Blaug, 1976:147). For a more sophisticated definition of this evaluation technique, in which its capability to yield 'as many choice criteria as there are objectives' is highlighted, see Blaug, 1976:133 – the chapter in question explains how cost-effectiveness analysis is to be favoured over cost-benefit analysis to evaluate decision making on public expenditure.

Rizzo and Throsby (2006:995) explain that a project is economically viable if the 'future time stream' of benefits and costs that are generated, discounted to the present, exceeds the project's investment costs.

$$\sum (b_{mt} + b_{nt} - c_t) / (1+i)^t > I$$

The calculus presupposes an accurate estimation of both market and non-market benefits. The latter are not easy to assess.

Lately, a lot of progress has been made in non-market valuation techniques, thanks to theoretical and empirical studies. Methods for measuring non-market demands can be divided into two wide categories: 'revealed preference techniques' – hedonic pricing, travel cost – and 'stated preference techniques' – contingent valuation methodology (Navrud and Ready, 2002:12).

While the general considerations regarding the cost-benefit analysis (that normally refer to the built heritage) can be extended to the cinematic heritage, some complications arise in the cinematographic sector as far as non-market valuation techniques are concerned. Films differ from both immovable heritage and movable heritage items (see Table 1b) collected in museums because they are not bound to a location<sup>23</sup>. This limits the scope of revealed preference valuation techniques. Although original negatives *do* have a fixed location and there might be highly specialized consumers who would like to access an archive to see with their own eyes this kind of material, travel cost analysis or hedonic pricing methods would be of little or no help to assess the value of cinematic heritage.

All valuation methods present limitations. As a valid alternative, Frey (1997, quoted in Cuccia and Signorello, 2002a:134-135) suggests to use direct democracy instruments. Unfortunately, referenda are not feasible in most countries (Mazza, 2003). Moreover, even with this instrument results can be biased because of strategic behaviour of the "agenda setter" and/or lack of information among the voters (see Mignosa, 2005).

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<sup>23</sup> 'Fixed location' is indicated by Peacock (1994:194-195) as a probable 'common characteristic of heritage' (ibid.). We argue that "Information (reproducible) heritage" differs from tangible heritage also by not sharing this characteristic.

### 2.3.2 Cultural value

Further complications arise because heritage – no matter which of its different categories – is regarded as ‘an item of cultural capital yielding both economic and cultural value’ (Throsby, 2001:77). Throsby (2001 and 2003) highlights the fact that, given its multi-dimensional nature, it is difficult to specify a measure or a unit of account of cultural value. The cultural value of a site might include its aesthetic qualities, its spiritual significance, social and historic importance, symbolic value, authenticity, uniqueness and so on (Throsby, 2003); a multi-criteria analysis and the involvement of different disciplines have been suggested (Throsby, 2001).

A comprehensive method to determine cultural value still needs to be developed; however, much insight can be provided by the application of procedures derived from the economic theory (Rizzo and Throsby, 2006). The results of those evaluations of cultural heritage projects ‘can assist decision-makers enormously in their task’ (Throsby, 2001:91).

## 2.4 Who pays, who benefits and who cares?

Those who pay, those who benefit and those who care are the three groups of players that can be distinguished following Throsby and Klamer and Zuidhof (1997 and 1999, quoted in Mignosa, 2005:24).

When markets work properly, people who pay express the benefit from a certain good.

A market for cinematic heritage does exist and this makes easy to identify who demands and who supplies those goods (cf. Mignosa, *ibid.*). The most straightforward cases are the Hollywood studios, whose archives are responsible for the preservation of all the movies of which they own the rights – which because of mergers and acquisitions can include more movies than those originally produced by the studio<sup>24</sup>. The studios invest resources in restoration, maintenance and management of their films. Subsequently they can produce and sell DVDs, so the final consumers are those who directly pay and directly benefit from these heritage goods.

This is the kind of outcome economists typically prefer, because they guarantee the proper incentives and because people are able to express their preference through the market

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<sup>24</sup> This is the case with Paramount. See: <http://www.paramount.com/filmpreservation/projects.html>

rather than have consumer sovereignty replaced by expert decision-makers or bureaucrats. However, those cases represent the exception and not the rule in the field of film preservation as in any other heritage sector.

In most countries institutions dealing with heritage are publicly subsidised, thus taxpayers bear the costs. The caretakers, those who have ‘the responsibility of making decisions relating to particular heritage items or to cultural heritage matters (...) more generally’ (Throsby, 1997, quoted in Mignosa, 2005:25), are not “those who pay”. This makes economists suspicious because the “experts” in heritage institutions can make choices and allocate resources according to their own interests and ignore the preferences of the people who actually provide those resources. This is why economists consider it necessary to assess the value that individuals attach to heritage. What they fear is that the underlying force of heritage organizations can be ‘rent seeking’. There can be conflicts among the different stakeholders, because different values often clash (Mignosa, *ibid.*).

In the field of film preservation, for instance, archives have very often shown a conservative attitude and have considered protection of the fragile supports of moving images a priority over the public interest to access the cinematographic content.

Other paradoxes come about because the archives in most cases do not retain ownership (the rights) of the movies (see Chapter 3). The case is the opposite, but equally unjust, as the case of a building’s facade for whose restoration the owner alone has to pay, while everybody benefits (free-riding): for the restoration of a movie the public pays (through tax money received by the archive) and the rights owner benefits without giving anything in return. Restoration at the expense of the tax payers is justified if it gives the rights owners the incentive to give their permission to the public archive to make preservation and access copies. In that case *everybody* benefits from the maintaining of a film’s availability, which restoration allows.

## **2.5 Institutional solutions**

As explained earlier, in the first decades of the 20<sup>th</sup> Century there was total absence of a market for cinematic heritage goods, a situation that only changed when films were finally recognized as a form of art and as part of our cultural heritage. In recent times more people – more than the few, passionate individuals who already in the 1930s had



conducted the (unofficial) work of rescue of old movies (Gorini, 2004:2) – have started to care, but hardly anyone cares enough to assume the role of organizing and financing heritage projects.

Besides the objective forms of market failure due to the specific features on the demand side – such as the demand of future generations, the ‘option’ demand and the ‘existence’ demand (see Towse, 2002) – “normative” instances of market failure can be identified (Klamer and Zuidhof, 1999:30). When commercial parties (like the Hollywood studios) take the responsibility, markets may work, but their outcomes can be considered inappropriate by culturalists (ibid.), for instance if commercial purposes make a studio archive give priority for preservation to movies with a lower artistic quality (cf. Chapter 3).

Especially in Europe, governments intervene to correct market failure or the absence of a market in the cultural heritage sector. Following (partly) Klamer and Zuidhof (ibid., quoting Schuster, Monchaux and Riley on p.40) we will now briefly discuss some tools that are at governments’ disposal.

### 2.5.1 Regulation and incentives

Rizzo and Throsby (2006) summarize the tools for public intervention in the following table:

Table 2a ***Tools for public intervention***

	MONETARY	NON-MONETARY
DIRECT	Public expenditure	Hard regulation
INDIRECT	Tax expenditure	Soft regulation

Source: Rizzo and Throsby, 2006:999.

Regulation, they argue (ibid.), ‘refers to restrictions or modifications imposed on the activities of economic agents in line with government policy objectives’; following Throsby (1997, quoted in ibid., p.1000), it can be “hard”, if actions are enforced, or “soft”, if it only guides behaviours through directives and covenants. The most important forms regulation can take are ‘legal’ (Klamer and Zuidhof, ibid.).

To ensure long-term preservation of cinematographic works, many countries have adopted specific public policies. In Europe, all EU Member States have introduced in their national

law systems for collecting and assuring protection of their cinematic heritage. Some initiatives have also been taken at the supranational level (Gorini, 2004).

Whether they are public or private non-profit institutions, film archives are for the most part publicly funded.

### *2.5.2 Direct ownership*

To protect public interest, governments sometimes acquire possession of heritage goods. This can be justified when there is no better (more efficient) alternative and if no other organization has enough knowledge, funds or expertise to assure heritage preservation. A further argument in favour of state control are equity issues – e.g. by lowering barriers for consumption and guaranteeing access to everyone.

There are cases in which films are deposited in national designated archives (further details about the different deposit systems will be added in Chapter 2) and the physical ownership of the films in question is transferred to the State; this is what happens for instance at the Danish Film Institute of Copenhagen.

### *2.5.3 Redefinition of property rights*

Regulation normally places restrictions on the owners of heritage goods, prohibiting or limiting their freedom to perform certain acts (development or modification) on their properties. To avoid conflicts, redefinitions of traditional property rights are implemented by splitting rights into “property” and “development” rights or by introducing new types of rights (Klamer and Zuidhof, 1999:42)

In the cinematographic sector, property rights must be reconciled with the public interest associated with preserving films and making them accessible; this can occur by law or by negotiations between the parties (Nikoltchev, in Gorini, 2004). This point will be discussed more in detail in the next chapters.

#### *2.5.4 Information*

Informing the public is a wider tool for heritage protection that can be used to improve people's awareness (Rizzo and Throsby, 2006). Information plays many roles in the conservation process of all kind of heritage goods, among which identification and documentation, promotion and education (ibid., see p.42).

This tool is often underestimated, but in many cases it is the only possibility of intervention available (Klamer and Zuidhof, 1999).

### **2.6 Conclusion**

The purpose of this chapter, in which the usual classification of research in the economics of cultural heritage – organized around the topics market failure, value of cultural heritage, who pays, who benefits, who cares? and institutional solutions – has been adopted, was to try to understand if the economic theory is applicable to the cinematographic heritage sector as well and with what results.

Cultural economists who study issues related to heritage preservation normally focus on the tangible heritage (especially on the immovables), but their overall analyses, in each of the four topics, show to be extendable to motion pictures.

The notable exception are the so called “revealed preferences non-market valuation techniques”, which can hardly be applied to films, since unlike other heritage items are not bound to a location.

### **3.1 Introduction**

Having outlined the theoretical framework of cultural economics, the next step is to explore more closely the world of film preservation: how is the sector organized? Who is responsible for the cinematographic heritage? How do institutions operate and what is the outcome of their activities?

To address those questions, besides searching recent publications from theory and policy and studying the official documents and law regulating the sector, I have contacted a person currently working in the field: Giovanna Fossati<sup>25</sup>, curator at the *Nederlands Filmmuseum* of Amsterdam.

The information included in the following two chapter comes therefore not only from written sources, but also from the outcome of a long ‘conversation with a purpose’ (see Burgess, quoted in Byrne, in Seale, 2004:181) we had on 12 March 2008.

### **3.2 The origin of film archives and the FIAF**

The first institutions that were founded in the 1930s with the purpose of rescuing, collecting and preserving moving images ‘valued both as works of art and culture and as historical documents’<sup>26</sup> were the British Film Institute, the Museum of Modern Art (New York), the *Cinémathèque Française* and the *Reichsfilmarchiv* (Berlin). Those became the founding members of the FIAF, International Federation of Film Archives (*Fédération Internationale des Archives du Film*), established in Paris in 1938.

Today FIAF brings together more than 120 leading institutions around the world, among which government archives, non-profit institutions, independent foundations and trusts,

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<sup>25</sup> See Note 5.

<sup>26</sup> Source: <http://www.fiafnet.org/uk/whatis.cfm>

cinémathèques, museum and university departments dedicated to film preservation. Film heritage institutions work as a world network and cooperate on different activities, including restoration projects, publications and an annual Congress<sup>27</sup>.

The federation played an important role when UNESCO adopted the *Recommendation for the Safeguarding and Preservation of Moving Images*, in October 1980, an event that gave universal recognition to films' status of cultural heritage<sup>28</sup> and represents the first step towards global awareness of the urgent need to adopt legislative and administrative measures to protect moving images for future generations (Gorini, 2004).

In 2005 the European Parliament and Council adopted the *Recommendation on film heritage and the competitiveness of related industrial activities* (2005/865/CE), which highlights the importance of cinematographic works as cultural heritage and as a 'comprehensive witness to the history of the richness of Europe's cultural identities and the diversity of its people' (2005: L 232/57). The document also underlines that film heritage is an important part of the film industry, whose development is essential in view of its 'potential in the fields of access to culture, economic development and job creation'. Comprehensive guidelines are outlined on how the European cinematic heritage should be systematically collected, catalogued (creation of databases), preserved, restored and made accessible for non-commercial uses.

One year later (November 2006), the *Official Journal of the European Union* published another important document, the *Decision* (No 1718/2006/EC) *concerning the implementation of the programme of support for the European audiovisual sector* (MEDIA 2007), where it is stated that the audiovisual sector in Europe 'has a key role to play in the emergence of European citizenship because it is one of the principal vectors for conveying the Union's common and shared fundamental social and cultural values to Europeans and especially young people' (2006:L327/12).

### **3.2 Deposit systems in Europe**

As Gorini (2004) has noted, while no European country would nowadays have reservations about the importance of ensuring long-term preservation of its national

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<sup>27</sup> Ibid. (Note 26).

<sup>28</sup> [http://portal.unesco.org/ci/en/ev.php-URL\\_ID=1988&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/ci/en/ev.php-URL_ID=1988&URL_DO=DO_TOPIC&URL_SECTION=201.html)

cinematic heritage, there is no agreement about how this goal should be achieved. Fundamental differences can be found that are often consistent to the state's approach to preservation and cultural matters in general. Countries like France, Italy, Norway, Denmark and many others (including a number of Central and Eastern European countries) have adopted a "mandatory deposit" system, prescribed by their national law, while countries in which governments have a less interventionist tradition in the cultural sphere, like the United Kingdom and the Netherlands, prefer systems of "voluntary deposit", based on agreements between the archives and the producers (ibid.).

Both systems have their pros and their cons. On one hand, the legal deposit enables the collection and storage of all works right after they have been produced, avoiding costs for rescue operations. Furthermore, 'exhaustiveness' is considered a guarantee of neutrality, since processes of selection, unavoidable within voluntary deposit systems, can be invidious (ibid., p.4). On the other hand, preserving everything is simply not feasible (practically or financially) and choices on economic grounds are inevitable.

For a correct appraisal of the different systems it is necessary to consider that besides the central objective of preservation film archives have another essential aim: deposited works have to be made accessible to the public. Voluntary deposit systems enable contractual agreements for presentation and promotion of the collections to be obtained more easily. Legal deposit is on the contrary more focused on protection of the materials; films are generally only made available for consultation to restricted audiences of students and researchers (ibid.).

### **3.3 Priorities and selection criteria**

As noted in Chapter 1, a major issue cultural economists (in particular those who study heritage preservation) deal with is the decision-making process. Traditionally, decisions about what is heritage and how it should be preserved are the province of the 'experts' (Rizzo and Throsby, 2006). Because of the general tendency of preserving everything in archiving policy, the field of film preservation is less controversial than for instance the built heritage sector (see 1.1.2). Nevertheless, cinema archivists and other "cinema experts" are also constantly confronted with choices: what movies are preserved in each archive (how are tasks divided among different institutions)? What films get priority for restoration? What are the criteria they follow?

In general, each archive has its own mission statement and that determines the selection of which films will be collected.

In addition, there are many different kinds of archives: they can be public or private, they can be foundations. Besides the institutions that are purely archives, there are the so called cinémathèques (which can, but do not necessarily need to possess an archive).

There are commercial practices, the main example of which are the Hollywood studio archives. The studios concentrate their conservation efforts on the movies they have produced and of which they hold the rights. Criteria are most commonly of a commercial nature: what are the movies that can still attract audiences' interest and bring a profit to the studio? Films like *Roman Holiday* (produced by Paramount in 1953), with Audrey Hepburn and Gregory Peck, are worth an investment in restoration because they can be redistributed and DVDs can be produced and sold. If on the contrary the existence of a movie is barely known and there are no famous actors in it, most probably the studio will only operate a "passive conservation", which means keeping the reels in the best possible climatic conditions, and just wait to see if anyone becomes interested in the film in question.

A completely opposite example are the public national cinémathèques, like the French *Centre National de la Cinématographie* (CNC) or the German *Bundesarchiv*, the missions of which are straightforward: they intend to preserve, restore and make accessible *all* movies produced or co-produced in the country. They do not own any theatres; cinemas, television stations or other companies can turn to them to request a copy of a movie they want to re-release or if they intend to make a DVD. Agreements of course must be arranged with the right holders.

Archives can also be private foundations in receipt of public funds. An example is the *Nederlands Filmmuseum*, the Dutch national film archive, which is a *stichting* (foundation) that gets most of its financial resources from the central government. Differently from what happens in other countries, the Film Museum of Amsterdam also owns a collection of foreign pictures. This is due to a cinematographic tradition that has always been a tradition of movie import (about 70 percent of the movies released in the Netherlands have always come from other countries). In order to represent this peculiar practice, the Filmmuseum collects all the national and foreign works that have had some importance for the Dutch

cinematographic culture in a broader sense. Nevertheless, national productions are given priority, especially since the collection has been adopted as national patrimony.

There are also archives that are responsible for very specific collections and whose focus is more narrow. A good example is the Film & Video division of the *Imperial War Museum* (UK), which only collects war-related films.

The selection process for active conservation obviously takes into full consideration the state of decay of the material (especially if it is irreplaceable). Besides the technical condition, cultural, social and economic motives can enter the decision, depending on the policy of the archive.

Generally speaking, as far as all films that fall outside the scope of commercial preservation programs are concerned, criteria establishing what works must be given priority are cultural ones.

What often happens (in all kind of archives) is that managers concentrate the efforts following special occasions, days or happenings that attract public attention: for instance, the anniversary of death of a director can be a reason to decide to restore all his works.

Different stakeholders or interest groups, especially researchers, can forward special requests to audiovisual archives. What happens in those cases in general is that agreements are made between the parties: the researcher has to make the results of his study at the archive's disposal. Archivists may then acquire better awareness of certain films in their collections and eventually decide to restore them. Special requests can also come from commercial parties, especially broadcasting services.

### **3.4 Preservation practice**

Motion pictures films exist in different gauges (35mm, 16mm, 8mm are the most common) and have a basic structure that consists of two layers, the *base* – a thicker, transparent plastic support – and the *emulsion* – a thinner layer of photosensitive material in a gelatine binder. Over the years, different support materials have been used. In the first decades of film history, highly flammable cellulose nitrate was the only possibility, until a suitable more



safe substitute, cellulose acetate, was discovered; in the 1950s, manufacturers introduced polyester, which is the most resistant and chemically stable support available still today<sup>29</sup>.

There are several types of decay and damage of films, which can be mechanical – scratches, tears, broken perforations or broken splices, caused not only by mishandling, but also by simple projection –, biological – organisms like mould and fungus can attack the film and eat the emulsion – or chemical – the most common case is the so called “vinegar syndrome” that affects acetate. For some of them there are remedies (physical repair, cleaning, restoration techniques), and some can be prevented by assuring storage in cool, dry and well ventilated spaces. More often the only way to avoid irreversible loss is to copy the content on a new support, before degradation affects the image. For this reason, reproduction is ‘an integral part of the preservation process’ (Gorini, 2004:5).

### 3.5 Original vs. copies

For any movie, in any archive, the ideal situation is to preserve the original camera negative (OCN) film. The negative is the element that captures the image in the camera; for the film to be projected, the negative has first to be developed and printed<sup>30</sup>.

The reason why original negatives are given priority in the preservation practice is that they are the films with the highest number of grains per frame, which means the highest amount of detail (definition). Any photochemical reproduction process inevitably involves some loss of information (Fossati, 2001).

As far as old movies are concerned, in most cases it is not possible to find the OCN, particularly for the earliest ones of most of which not even one single original print was saved from abandonment or destruction by producers or laboratories, as it happened especially in the (frequent) cases of failure.

In Chapter 1, a case has been made for the inclusion of films into a special and separated category of heritage, labelled ‘information heritage’, which is neither tangible nor intangible and of which *reproducibility* is an essential attribute. In a chapter in which the economic characteristic of the cultural product “film” are analysed, Perretti (2003:65-77, quoting

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<sup>29</sup> Source: <http://www.filmpreservation.org/preservation/fpg.pdf>

<sup>30</sup> Ibid. (Note 29).

Benhamou, 1996, on p.65) distinguishes two kinds of goods relevant to the field of cultural economics: the 'artistic goods' – the visual and the performing arts, in which the product of artistic creativity is unique and authentic – and the 'products of the cultural industry' – originally conceived to be reproduced. The former can also be re-produced by the artists, but the outcomes are to be considered 'new originals', rather than 'copies of the original'; the latter do not require the artist's intervention for the production copies (ibid., p.66). In the case of films, the original negative is *meant to be* developed into copies (ibid.) and the number of copies that can be made and distributed is virtually unlimited. Nevertheless, cinematographic goods (meaning *sensu stricto* films originally produced to be shown in a cinema) share with the first category of cultural goods the "performance" characteristic: movies can only be brought to life by 'projection' (Meyer, 2005:17).

The whole issue of duplication is far more complex than it seems and it brings about ethical complications related to the ontology of film. As denounced by Mark-Paul Meyer (ibid., p.18), considering film and photography reproducible arts is 'one of the biggest misconceptions of the 20<sup>th</sup> Century': while it is easy to copy and transfer the 'content' of a film, its 'narrative' is not possible to duplicate. For this reason he emphasizes that the 'respect for the original' is one of the most important (recent) achievements of the archive community (ibid.).

The urgent need to introduce the notion of 'authenticity' and to elaborate the concept of the 'original' in film preservation, had been evoked by Meyer himself also in an earlier work (1996). Archivists, he argued, necessitate referring to a well developed 'theory of reproduction' (p.15) in which not just technical but also ethical matters are involved.

We will return to this fundamental topic while discussing archival practice in the digital age and the new challenges presented by the digital duplication process.

### **3.6 Access**

Alongside preservation, film archives have another fundamental task: access, which 'represents the link between collection and user' (Goldman, 1992, quoted in FIAF, 1997:6). Making works available and facilitate access to the highest possible degree are goals explicitly and officially underlined by UNESCO (*Recommendation for the Safeguarding and Preservation of Moving Images*, 27 October 1980) and FIAF (statutes of FIAF). The aim is

to promote film culture to assure that the true meaning of cinema is not forgotten (FIAF, 1997).

In general, access to collections is ruled by 'complex and often contradictory rules' (Claes, in FIAF, 1997:3), which vary significantly from country to country, depending on the individual character of the archive. As noted in 3.3, as far as accessibility is concerned legal deposit and voluntary deposit schemes differ essentially in their philosophy. While the former, considered (especially by producers) instruments of protection, only make deposited works available for cultural, educational or research purposes, voluntary deposit systems enjoy more freedom to show the films to the general public (Gorini, 2004). Major differences also depend on what types of limitations to copyright have been adopted in the national law (see next section).

Today, the majority of film archives offer two main kinds of access possibilities: 'active' and 'passive' (FIAF, 1997:6). 'Active access' (programming) occurs when the archive decides to exhibit a selection of movies according to its preferences and agenda. 'Passive access' means that the user or the group of users have to forward a list of requests and the archive will then (eventually) make the films available on condition that the rules of the institution are observed (ibid.).

Every time a film is projected, it inevitably gets damaged. It is therefore necessary to make consultation copies of each work. Reproduction is again demonstrated to be an indispensable practice in the field of film preservation.

### **3.7 Legal context and copyright**

In spite of the preservation purposes, making copies of films without permission in principle implies a copyright infringement.

Copyright, in fact, grants creators or subsequent owners of films (as well as other creative works) the following exclusive rights:

- Reproduction
- Distribution (disseminate and sell the copies)
- Public performance, transmission or display (also online)

- Create derivative works (for films, typically remakes and adaptations)
- Sell or assign these rights to other.

Sources: Schwartz (2004:77) and Wikipedia<sup>31</sup>.

The deposit system only enforces a transfer of possession of the tangible object to the preservation institute (physical property), while ownership (all rights) is retained by the holder(s) of the copyright.

To accomplish their mission, film archives need therefore to arrange contractual (written) agreements with the depositors and/or with the copyright holders – the two do not always correspond. Obviously, the ideal situation for depositories is to have all rights transferred to the institution. Although this is unlikely to happen (because copyright holders want to keep the rights to protect their interest), archives are allowed to copy films to assure their preservation – donor agreements usually even specify this as a duty of the depository, rather than a concession.

Unless explicitly forbidden in the agreements, archives can make access or consultation copies of films and make them available for on-site study. Access on a one-to-one basis is more likely to be permitted under exceptions to copyright (for the purpose of research and private study), because it is usually not considered “public performance” and therefore causes less struggle with the copyright law. For any kind of exhibition to the public, including uploading films on the Internet, permission from the rights holders must be obtained.

Many countries have adopted copyright limitations in their national law (Gorini, 2004). This is consistent with the Berne “three-step test”, which allows exceptions to copyright law

1. in certain special cases,
2. that do not conflict with the normal commercial exploitation of the work,
3. and do not unreasonably prejudice the legitimate interests of the author.

The Berne Convention was firstly intended to limit the scope of the reproduction right; the three steps were then applied for other limitations and exceptions, including public

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<sup>31</sup> [http://en.wikipedia.org/wiki/Copyright#Exclusive\\_rights](http://en.wikipedia.org/wiki/Copyright#Exclusive_rights)

performance, in several treaties and agreements – among which the TRIPS Agreement and the WIPO Copyright Treaty (Gervais, 2005).

The overall legal situation in relation to film archives is termed by Giovanna Fossati as a “jungle”. Differences among countries make any attempt of generalization really tough. A further complication is due to the fact that the laws underwent changes over the years (Schwartz, 2004).

In the United States the situation is slightly more clear than in Europe: all films published before 1923 – to which the extension of the copyright term from 75 to 95 years from the first day of release (introduced in 1998) does not apply – are in the public domain. Via the U.S. Copyright Office it is possible to check the copyright status of published works<sup>32</sup>, but unlike films created after 1977 for which all information is available online, earlier ones must be searched in person or through specialized research firms (ibid., p.78).

In Europe films are more likely to be subject to author’s rights, which last up to 70 years after the death of the last person creatively involved in the making of the work. The number of movies that fall into the public domain here is therefore very limited (FIAF, 1997).

As stated earlier, unless special contractual agreements are signed, public performance requires permission from the copyright owners. Sometimes the use of moving images can be claimed to be “fair use”, but by and large there are not explicit rules in this respect. The good news is that, in practice, quite often authors or producers *do* give permission to screen their films (usually in special conditions and on a non-profit basis) or to include them in DVD sets and the like. Rights can often be negotiated on a friendly basis. The biggest difficulty is that it is far too often the case that the copyright owners are unknown, especially in Europe, where small studios and film companies were continuously founded and quickly brought to failure, sometimes having produced only one movie. Research to find this kind of information is tremendously costly and time consuming.

To give an example (mentioned by Fossati during our interview<sup>33</sup>), the television company ARTE Germany in recent times had the intention to broadcast the 1925 version of the

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<sup>32</sup> Until the 1976 Copyright Act in the US, copyright had to be registered to be valid. After, registration became voluntary.

<sup>33</sup> See 3.1.

movie *Quo Vadis?*, co-produced by Italy and Germany and recently restored by an international team of archivists. When it was understood that it was not clear who were the rights holders, ARTE decided to suspend the request, because what is currently happening is that there are lawyers who specialize in detecting situations of copyright infringements to obtain consistent refunding for right holders they find themselves and convince to proceed a lawsuit against broadcasters.

The situation is complicated and the need for regulation to overcome those evident inefficiencies is currently timidly being brought into the policy makers' agenda, but the discussion has so far been blocked by producers united in the FIAPF – International Federation of Film Producers Associations (Fossati<sup>34</sup> in the interview).

### **3.8 Conclusion**

The institutions responsible for film preservation are film archives, which can be commercial entities, public bodies or independent foundations. The leading institutions cooperate as a network under the international federation FIAF. In general, the archives' goal is to preserve all movies in their collections; nevertheless, resources are limited and choices must be made to establish what movies will get priority for restoration or re-release. Selection criteria depend on each institution's mission statement.

Film archives have two fundamental tasks: preservation and making the material accessible. The transfer of content on new media (reproduction) is an integral part of both processes. In recent times, however, the notion of "authenticity" has been brought up.

While there is substantial agreement on preservation policies, access to collections follows no consistent rules. It basically depends on the deposit system adopted by the country (mandatory or voluntary) and on the contractual agreements arranged with the copyright holders.

As it will be discussed in the next chapter, the advent of digitalization has brought revolutionary changes in the field of film preservation, but despite the great potential possibilities opened by new technologies, accessibility has not improved that much, mostly

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<sup>34</sup> She reported witnessing this blocking personally, while participating in a technical advisory group in Brussels that was put together to discuss this specific problem.

because of problems related to copyright. Producers fear that more regulation in the sector would harm their interests.

### **4.1 Introduction**

Digitalization started to have some influence on the business world already in the 1960s, but it was not until the early 1980s that its effects on the cultural industries became tangible. At that time, technological changes mainly affected the way cultural goods were *produced* (Hesmondhalgh, 2007). With the spread of the Internet and the World Wide Web during the 1990s, the impact of digitalization and broadband networks became increasingly important within the cultural sector in terms of distribution as well, in both a positive (dissemination and accessibility of content) and a negative (copyright infringements and piracy) way.

The effects of these fast-moving technological improvements have been the focus of much research at the academic level, including the field of cultural economics. Most of the literature focuses on the music industry, but more recently the results of those studies have started to prove to be applicable (at least to a certain extent) also to the movie industry. The major question researchers try to answer is whether or not the industries are at risk from fatal damage due to copyright infringements.

Digitalization has entered the world of film preservation as well. The impact of digital technology on archival practices is today a matter of great concern, but the problems that are under discussion are mainly related to ethics, aesthetics, to archives' identity, or to strictly procedural questions; piracy is not (yet) seen as a worry as it is for film producers. As described in Chapter 3, with the exception of the studio archives, film heritage institutions in most cases do not own the rights of the movies they collect and preserve. Most archives do not (or cannot) follow commercial purposes, hence even when they do acquire the rights through contractual agreements, movie piracy is not a foremost worry because it does not threaten their survival.



Generally speaking, film archives are looking with enthusiasm at the tremendous changes these new technologies bring. Nevertheless expectancies are accompanied with frustration (Fossati, 2001), mainly due to the unpredictability of incoming developments.

In this chapter I will first discuss the impact of digitalization on the movie industry as a whole – of which film heritage is ‘an important component’ (as stated in 2005/865/CE, L 323/57). A second section will be more focused on how the cinematic heritage sector is dealing with the challenges of the digital age, trying to look at both economic and cultural effects.

## **4.2 The impact of digitalization on the film industry**

### *4.2.1 Copying and piracy*

The availability of a digital version of any kind of information makes the process of copying much easier, especially since PCs and software have become more accessible, both in terms of cost and in terms of use.

To explain what effects the continuing advancement of technology can bring to the movie industry, it is useful to look at what has happened until now in the music sector. Music is arguably the business that has so far suffered the most from fall in sales because of copyright infringements. Coherently, most studies facing the issue give priority to music. For instance Legros (2006), in a chapter about ‘Copyright, Art and Internet’, chooses the example of music for his analysis, although he makes clear that his considerations would also apply to digital painting, poetry, photography and video. By the time the first comprehensive analyses of the effects of Internet piracy were conducted, the film industry was still ‘taking a backseat to the record industry’ (Liebowitz, 2003:1), thanks to the bigger size of the files, which made the transfers of digital movies ‘prohibitively time consuming at current connection speeds’ (ibid.). Furthermore, at that time, several households owned a CD burner, but not the equipment to write DVDs. A major problem we face while observing those phenomena is that all the information and literature available quickly becomes out-of-date. The latter quotation that dates back to 2003 is a clear example: today (just few years later, 2008), besides an increase in the number of individuals who get access to the Internet, we witness that a DVD burner is incorporated in every laptop sold since last year. Liebowitz himself in a later contribution (2006) notes that ‘as Internet transmission speeds

increase, file-sharing is likely to focus more on full length movies and computer programs' (p.5).

As a matter of fact, quite some time before the spread of the Internet, consumers could already duplicate tapes and CDs as well as video cassettes instead of purchasing the legal versions. Nevertheless, those were laborious procedures and the quality of the duplications was not equivalent to the originals (Chiang and Assane, 2007). On the contrary today's advanced compression techniques allow to include big amounts of information into easily manageable files (MP3 for audio, AVI and DivX for video files are common examples) that can be transferred and copied on blank CDs or DVDs (Hesmondhalgh, 2007). Although distortions are likely to occur during compression and decompression, quality standards are generally maintained in the reproductions.

#### *4.2.2 File sharing and p2p networks*

A peer-to-peer (p2p) network is a software that allows individuals to share and exchange freely MP3, videos (including full length films) or other files through the Internet.

The first person to develop this system was Shawn Fanning, the creator of the famous *Napster*. It was the first program that enabled subscribers to look for their desired files in other users' computers through a search engine, and subsequently obtain a copy downloading directly from the host (Fisher, 2004). The system, launched in 1999, soon became enormously popular: at the beginning of 2001, it claimed to have 80 million subscriptions (ibid.).

Around the same time, other similar peer-to-peer file sharing services were developed and spread worldwide, while music and film companies watched this growth with increasing apprehension. The measures usually taken by the right holders are fights for strict laws by which consumers are not allowed to replicate, distribute or modify works (Legros, 2006). The cultural industries 'lobby for increased global copyright protection' also at the international level – through the WIPO and the WTO – (Towse, 2001:6).

Lately, there have been several lawsuits and legal battles against p2p networks. In 2002 Napster ceased to exist after a long struggle with the major record companies that accused it of "facilitating others in copying, downloading, uploading, transmitting, or

distributing plaintiffs' copyrighted musical compositions and sound recordings" (Judge Patel, in U.S. Court, June 2000, quoted in Fisher, 2004:113).

Many other court cases condemned file-sharing programs (see Legros, 2006) and enforced the payment of millions of dollars for copyright infringements. Nevertheless, those fights seem to be hopeless. Proceedings against the users – for instance through the intrusion and sabotage of computers – are harmful and can imply social costs that actually exceed the damages to the music industry (ibid.).

Despite the various caveats they face peer-to-peer networks are still surviving (Chiang and Assane, 2007) and the number of users is growing.

#### *4.2.3 Distribution and dissemination of culture*

The considerable possibilities opened up by broadband networks to help the dispersal of cultural goods is highlighted by Einhorn (2003), who gives several examples that describe the (at least at the time potential) advantages of the digital world. He mentions various sectors and consumer categories that could benefit from this progress, which range from art lovers to tourism business operators. The one described is a 'joyful world' (p.214) in which nothing will ever again be unavailable, regardless of the product's commercial success or failure (Mann, 2000, quoted in Einhorn, ibid.). The main problem remains how to find an appropriate balance between accessibility and limitations to protect the people who provide the creative output. The importance of ensuring the availability of digital content is underlined in the Directive 2001/29 EC of the European Union, but this has to occur 'under the appropriate conditions, which meet the interests of both right holders and users<sup>35</sup>'.

The value of the Internet as a powerful medium to disseminate artistic content has been acknowledged also by the Recording Industry Association of America (see Chiang and Assane, 2007), on the condition that consumers use fee-based and legal online services.

Besides file-sharing and downloading, another technology that has been developed is *streaming* (interactive and non-interactive) that allows real time reception of digitally

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<sup>35</sup> Source: [http://ec.europa.eu/information\\_society/eeurope/2005/all\\_about/digital\\_rights\\_man/index\\_en.htm](http://ec.europa.eu/information_society/eeurope/2005/all_about/digital_rights_man/index_en.htm)

transmitted content (Einhorn, 2003). Although enabling software *does* exist, it is normally not possible to capture and burn that content (ibid.).

Looking more closely at the movie industry, digitization, compression and transmission via the Internet in DVD format have made film distribution easier and cheaper. It is now possible to instantaneously reach a broad international audience (Acheson, 2003). It is not the purpose of this thesis to discuss topics like globalization or cultural diversity. It is however worth mentioning that even with this virtually unlimited content at one's disposal, as Hesmondhalgh (2007) points out, most consumers mainly watch either USA productions or movies made in their own country of residence. As a major reason for this 'narrowness of consumption' (p.272) he observes problems concerning promotion and the lack of an adequate spread of information. Despite this evidence that 'proliferation does not necessarily equate with diversity' (ibid.), the greater availability of films online – whether via rental sites or download – gives everybody the opportunity to broaden their consumption spectrum.

In this respect, recent observations have shown that in certain contexts movie piracy has actually helped increasing consumption of non-Hollywood pictures. In South East Asia, for instance, there are highly sophisticated pirate networks that besides offering movies at affordable prices, often provide more variety than the regular stores, including entire collections of art movies, also of great European directors (said by Tilman Baumgärtel at the Video Vortex Conference, on 19 January 2008).

### **4.3 Digital technology and film archives**

In every sector of the motion picture industry, from image capture to restoration, from post-production to storage, 'the digital era is not approaching – it's here' (Shefter and Maltz, in A.A.V.V., 2007). To date, individuals and organizations involved in the preservation of the audiovisual heritage have responded with ambivalent feelings to those revolutionary changes.

### 4.3.1 Restoration and preservation

There are many good reasons to be enthusiastic about technological improvements in the field of film preservation (Meyer, 1996). First of all, digitization allows one to overcome the limits of photochemical reproduction (see 2.5): digital duplication, in fact, unlike the latter, occurs without any loss of information. Furthermore, great possibilities are offered to film restorers by the new hardware and software produced and marketed today – although only a relatively small number of them is specifically designed for restoration<sup>36</sup>. Those instruments allow one to do things that were simply impossible with analogue techniques. Digital software enables the removal of scratches or ‘dust’, the stabilization of the image or de-flickering (i.e. to fix defects usually caused by clumsy duplications), restoration of colour, the repair and even reconstruction of the image in case deterioration has made it illegible (Fossati, 2001:135-139).

Nevertheless, as Palm (2006, quoted in A.A.V.V., 2007:4) has pointed out, excitement about digitization is risky, because ‘the right questions about costs are often not asked’. At present, the quality of digital images can still not compete with the standards of photochemical ones. For the richness of detail in grains to be reached in digital technology, 4K (K=1000) pixels are needed<sup>37</sup>. Digitization at such a high definition is a costly procedure, which is followed by even greater costs for storage and preservation. The annual cost of preserving a 4K digital master (\$12,514), in fact, is about eleven times higher than the annual cost of preserving film archival master material per title (\$1,059)<sup>38</sup>.

Investments in digitization projects need sensitive long-term planning for the future and secure funding for maintenance, or they risk to ‘come to behave like black holes in the sky’ (Palm, *ibid.*).

Other factors like the lack of worldwide standards – file formats are far too many and continue to change –, the rapid obsolescence of storage media that force constant (costly and risky) migration of data, as well as substantial uncertainty about the future, make

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<sup>36</sup> Most commonly they are meant for the editing process, for the creation of special effects and the like.

<sup>37</sup> The number of pixels is counted in an horizontal line of the image.

<sup>38</sup> Those calculations were made by the Science and Technology Council of the Academy of Motion Picture Arts and Sciences, and are based, respectively, on an annual cost of \$500 per terabyte of fully managed storage of 3 copies of an 8.3 terabyte 4K digital master and a monthly cost of 40 cents per 1,000 foot film reel in preservation conditions plus the amortized cost of film archive element manufacture (see A.A.V.V., 2007:1-2).

digital data an inadequate alternative to traditional film as a long-term preservation medium for film archives (Fossati, 2004; 2005).

#### 4.3.2 Access

As we just saw, it is still more appropriate (both technically and economically) to rely on film reels to assure that movies are safe for 100 years or more, than to convert the material into digital format. On the other hand, it does not make much sense to invest in film preservation, if the prints remain in more or less inaccessible cold-temperature underground “crypts of celluloid” (Meyer, 2005:15) where the content remains out of sight.

Although high definition is not yet economically viable, digitization at low resolution (2K) represents a great possibility to improve availability, accessibility and diffusion of cinematic heritage. Digital systems are non-linear and this enables one to search faster and consult the material more easily (Fossati, 2001).

Copying and projection can occur at an unlimited scale, without causing any harm to the work.

#### 4.3.3 From a “push” to a “pull” distribution model

In the past most archives did not consider the distribution of archive films to be their responsibility. Making the content available to more people than the selected (individual) scholars and researchers who were given permission to access the reels, depended on special occasions or programs organized by the institutions. This conservative attitude was justified by the necessity to protect the materials, which as we know are extremely fragile. Archivists saw themselves only as ‘collectors and guardians of forgotten films’ (Fossati and Verhoeff, 2007:332).

As noted earlier, most commonly archives are publicly financed, but taxpayers in this scenario are not ‘those who benefit’ (cf. Chapter 2.1) for the heritage services in question.

In recent years distribution of early cinema has improved a lot, thanks to an upsurge of archives’ recognition and visibility, the growing network of cooperating institutions belonging to FIAF and no less a general increase in technological and (sometimes)

financial means. Specialized festivals like *Il Cinema Ritrovato* of Bologna or the *British Silent Film Festival*, are gaining in popularity. Nevertheless, the works shown are in any case really limited in number and always selected by 'experts'. Fossati and Verhoeff (ibid., p.331) wittily refer to this distribution system as a 'push model'. To give an example of this model, the two authors mention the interesting case of Sam Wood's movie *Beyond the Rocks* (produced by Paramount in 1922). The film, starring Gloria Swanson and Rudolph Valentino, was considered irremediably lost until one copy was found in the *Nederlands Filmmuseum* of Amsterdam and consequently restored between 2000 and 2004. The movie was then newly distributed in its original version and also in a new, alternative one, both in 35mm prints and in digital format; in some countries it was broadcast on television and released on DVD.

In contrast to this system of making selected content available, with expert judgements keeping control of the process step by step, digital distribution through the Internet has opened a transition towards a 'pull model' in which the content is 'grabbed by the user', rather than distributed (ibid.). In cultural-economic terms, the trend is a shift from a supply induced demand to direct, immediate and ubiquitous on-demand access of content, where the consumer selects the items according to his or her own preferences.

#### **4.4 Conclusion**

Digitalization has brought tremendous changes to every sector of the film industry – production, distribution, restoration, storage et cetera. While the film industry as a whole is dealing with copyright infringements (movie piracy) and with what Liebowitz (2006:1) refers to as 'the file sharing saga' (which remains unsolved despite all the lawsuits against p2p networks), within film archives the discussion is mainly related to those institutions' identity in the Digital Age.

Once the cinematic content is digitized, an infinite number of copies can be made without any loss in quality. Furthermore, the content can be distributed and consumed without any rivalry and risk of overexploitation. This could be an argument for free availability of digitized movies online, at least within the country that has provided through taxation the financial resources for digitalization. Unfortunately, the issue is not as simple as that. The situation just described is what at present *could* (technically) take place, but in reality the

number of movies actually available online for (legal) streaming or download is terribly limited.

In the next Chapter a case study is presented of a large audiovisual heritage preservation and digitalization project, aimed to overcome those limitations. For the analysis of this innovative case (*Beelden voor de Toekomst*, the Netherlands) we will make use of the theoretical framework of cultural economics outlined in Chapter 2.



### 5.1 Introduction: the Netherlands Filmmuseum and *Beelden for the Toekomst*

Compared to other archives, the *Nederlands Filmmuseum* of Amsterdam was a pioneer in planning the digitization of a significant part of its collection. A first, ambitious project was organized already in 1996-1997, the goal of which was to digitize 100 selected hours, store them in Digital Betacam (*Digi Beta*) videotapes and also put them online. Only the first part of the task was accomplished, because the collaborator who was responsible for making the movies available on the Internet could not make his contribution for problems related to copyright law and that part of the scheme failed.

Today in the *Nederlands Filmmuseum*, as in any other archive or cinémathèque in the world, in spite of the great technological possibilities, access of cinematic heritage is still terribly (and somewhat ridiculously) poor.

In response to this anomalous limitation, in the last years the Dutch government has initiated a huge project, called *Beelden voor de Toekomst*<sup>39</sup> (Images for the Future), the declared starting point of which is ‘a broad availability of audio-visual material for everyone’ (Project plan, 2006:3); this is seen as unquestionably essential, once it is acknowledged that we live in a “medialising” society (ibid., p.1).

Images for the Future is a large-scale rescue-operation that requires the FES (Economic Structure Fund) 173 million Euro for its complete implementation. An investment of those proportions is unique worldwide. As Fossati states: ‘literally archives and cinémathèques all over the world are looking at us to see what we do!’; ‘I was at a congress in which I was

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<sup>39</sup> *Beelden voor de Toekomst* is a consortium that brings together six partner organizations: the Film Museum (FM), the Netherlands Institute for Sound and Vision (Sound and Vision), the Rotterdam Central Music Library (CDR), the National Archive (NA), the Netherlands Knowledge Foundation (KL) and Association of Public Libraries (VOB).

asked to present our work [she continues] and I have to say it was even embarrassing to show those figures’.

The project’s goal is not only to contrast the quick process of the loss of material due to the decay of film supports (preservation) but also to make considerable use of digitization to increase the accessibility of the collections. Digitization is seen as the only way to make the audio-visual content available for consultation independently of place and time (Project plan, 2006:4). The final output expected to be completed by the end of 2013 is the preservation, digitization and opening up of 137,200 hours of video, 22,510 hours of film, 123,900 hours of audio, and 2.9 million photos (ibid., p.3).

In this chapter we will go back to the economics of heritage preservation (Chapter 1) and we will this time apply the theory to an actual film heritage project that has its focus on digitization. We will again follow the four topics on which the usual classification of research in this field is based – market failure, value of cultural heritage, who pays, who benefits, who cares?, and institutional solutions (cf. Chapter 2).

## 5.1 Market failure

As pointed out in the ‘Summary and Introduction’ (p.2) of the project plan *Beelden voor de Toekomst*, because of ‘market imperfections’, the market cannot provide a suitable solution for the preservation and digitisation of the film heritage: commercial parties would encounter difficulties in bringing together the collections and they would be discouraged by copyright issues.

These difficulties do not take into account market failure caused by public goods characteristics or externalities; as reasons for not relying on market forces, they underline the lack of proper incentives and high transaction costs<sup>40</sup>.

Normative instances of market failure are also mentioned: private parties are considered ‘detrimental’ to the social and educational value of the material. Government financial intervention in support to one big project is seen as necessary to ‘level the obstacle’ (as

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<sup>40</sup> Following the definition of Trimarchi (2003), who takes into consideration cultural goods with a high degree of information content, transaction costs are mainly costs generated by difficulties in monitoring the production process and in valuing the output and its quality.

they express it) and assure preservation, digitization and accessibility of the audio-visual heritage to all users (ibid.).

## **5.2 Value of cultural heritage**

### *5.2.1 Costs and benefits*

To assist decision-makers, on behalf of the consortium *Beelden voor de Toekomst*, the Foundation for Economic Research (SEO, Amsterdam) has carried out applied economic research on the project, making use of the conceptual framework of a cost-benefit analysis. The objective is evaluating the Dutch government's investment decision, trying to take into account both the economic, the cultural and the social values of the project. The results of the study have been published in a report named *Images for the Future, Outline of Benefits* (Hof et al., 2006).

Costs and benefits of restoration, conservation and digitization are divided into three categories: direct effects, indirect effects and external effects. This reasoning is essentially in line with the different categories of (economic) value cultural economists (see among others Cuccia and Signorello, 2002a, Frey and Meier, 2006, Mazzanti, 2002, Throsby, 2002) generally ascribe to cultural heritage – e.g. direct use values, indirect use value, non-use values and externalities. In this example, however, we witness a certain degree of overlap among categories, showing that the distinction is not clear-cut.

In the SEO Research, direct effects correspond to market effects relative to the market for culture and heritage and the market for information. The benefits generated are private and include the income from sales and provision of audiovisual material and user benefits, including copyright. Indirect effects are the ones that take place in other sectors of the economy. Product markets and the labour market are mentioned, as well as the effects determined by taxation. External effects are those that are not taken into account in market transactions – i.e. through prices. They include heritage conservation for future generations (estimation of the bequest value of the goods), positive externalities like the reinforcement of people's cultural and historical awareness, the reinforcement of democracy, knowledge spillovers consistent with the Lisbon Strategy and an increase in multi-media literacy (Hof et al., 2006:33).

For the above described effects to be put into numbers, assumptions and approximations have to be made, which show that the picture is far from being as straightforward as it seems in theory. It is not only non-market benefits that give rise to complications: our example shows that also direct use values can be difficult to measure, when they are surrounded by uncertainty as it is the case with television theme channels – because of lack of information, SEO dropped the effects of their potential use of digitized content from the cost-benefit analysis.

For the economic calculation to be valid, costs and benefits encompassed in these three effects categories must be discounted to the present (cf. Rizzo and Throsby, 2006 also quoted in Chapter 1). As Throsby (1999:10) has observed, choosing appropriate discount rates is a particularly critical issue. The analyst can do that arbitrarily and affect the output according to her own assumptions<sup>41</sup>.

What SEO does is to follow the national guideline for cost-benefit analysis – OEI, *Onderzoek Effecten Infrastructuur*, Research into Effects on Infrastructure, Den Haag, 2000, quoted in Hof et al., 2006:3<sup>42</sup> –, which in the Netherlands is compulsory for large-scale infrastructure investments<sup>43</sup>.

As indicated by OEI, SEO discounts the costs with a rate of 4%. The net cash value of the costs of the project results 148 million euro. As far as benefits are concerned, which are likely to be uncertain and subject to macro-economic risks (Hof et al., *ibid.*, p.26), a discount rate of 7% is applied.

While the rate of discount for the costs is straightforwardly determined by looking a realistic interest percentage, a discount rate suitable for the benefits is more difficult to calculate. Careful sensitivity analysis is therefore highly recommended to test the effect of different percentages. SEO did this applying a lower rate (of 5%<sup>44</sup>), based on the assumption that in this specific case the benefits, being mostly educational ones, are actually not deeply subject to risks or affected by macro-economic fluctuations (*ibid.*).

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<sup>41</sup> Higher or lower discount rates favour respectively short- or long-term projects.

<sup>42</sup> The link provided, [www.minvenw.nl/oei](http://www.minvenw.nl/oei), is no longer working or it is incorrect.

<sup>43</sup> The OEI guideline was originally written for transport infrastructure, in particular roads and railways, but it is now widely used in other sectors as well. Source: Ruijgrok and Kirchholtes (2006).

<sup>44</sup> If calculations are made with a discount rate of 5% instead of 7% the cost-benefit balance rises by 83 million Euro (Hof et al., 2006:26).

The SEO research comes to the conclusion that *Beelden voor de Toekomst* has a total cost-benefit balance that lies between 20+ and 60+ million euro (ibid., p.ii), excluding costs of taxation. If the latter are brought into the calculations, those optimistic figures are sensibly downsized. Nevertheless, it is important to consider that the external benefits were left out of the analysis and just indicated as the extra “plus” (+) in the final balance. Those benefits can hardly or cannot be quantified in monetary terms but have to be taken into full account.

### 5.2.2 Cultural value

Hof et al. (ibid.) conclude the SEO report with a recommendation to undertake quantitative and qualitative research into external effects and in particular into external effects on culture, which remain a question mark. As noted in Chapter 2, a comprehensive method to assess cultural value independently of market or economic value still has to be developed and what for now is suggested is the involvement of different disciplines.

The project plan *Images for the Future* (2006) includes a section dedicated to ‘Further Justification’ (part 3, pp.31-40), in which the project’s cultural benefits are presented, together with other non-market benefits. This information has to be added to the results of the cost benefit analysis to establish whether or not there are sufficient arguments in support of this enormous government investment.

### 5.3 Who pays, who benefits, who cares?

*Images for the Future* recognizes three main groups of beneficiaries of the work of rescue and digitization of audiovisual content (see Project plan, 2006:4). The first one, which is also the main target of the project, are educational institutions, students, researchers as well as educational publishers. Widespread availability of digital content is seen as essential because of its educational value and the possibilities offered to develop new teaching material and consequently integrate audiovisual documents in lectures and classes. A second target group that benefits greatly from digitization of cinematic and other kind of audiovisual material are the creative industries: publishers, broadcasters, film companies, public media, game developers, cable exploiters and Internet service

providers. The third group considered are the cultural institutions – heritage institutions, archives, libraries and museums.

Besides those target groups that are also identified as ‘partners’ (ibid.), the project is also addressed to the general public: the digital release of content is expected to bring about more interest in the audiovisual heritage within the citizens. The aim is to increase participation (defined in number of visitors to the archive institutions, including both physical and digital visits) from 20% to 28% of the Dutch population aged 18 and up. To reach this goal they intend to guide the public through the digital collection ‘in an attractive and inviting way’ (ibid., p.27).

As noted earlier, the body that provides the (considerable) financial means for *Beelden voor de Toekomst* is the government, through the FES Economic Structure Fund. Taxpayers who therefore are “those who pay” will be also “those who benefit” from the disclosure of images and sound. The idea, in fact, is to put as many movies as possible available online, all accompanied by an appropriate ‘contextualization’ – all information, also about the original negative or print, explanations and reviews, photos and other digitized archival material, accurately selected by experts.

What is still unclear and undecided is under what conditions and in particular at what price the content will be made accessible to the different target users. As stated by Giovanna Fossati (in the interview), the idea is to charge a fee only to the target groups that are able to exploit the material commercially (for instance television stations and theme channels), while accessibility for the general public who provides the funds and especially for students and researchers should be for free.

The government expects a return of investment. Fees eventually paid by consumers will never be able to cover all costs (see Project plan, 2006:3) but they can contribute somewhat to limit the demand on public funds. Setting a price can appear to struggle with the main aspiration to make the content available ‘as broadly and easily as possible’ (ibid.), but it represents a more equitable solution: who benefits (directly) pays more than the average taxpayer, who benefits only indirectly from the outcome of this project.

As argued by many cultural economists (especially Peacock, 1994; Peacock and Godfrey, 1974), charging a fee does not deter people from consumption of cultural goods – evidence shows that demand is relatively inelastic with respect to price and WTP rises with income. In the case of digital material however, an argument for access for free is that

there is no congestion point to be reached and marginal costs equal to zero if the content is online.

#### 5.4 Institutional solutions

As noted in 5.1, government intervention is considered necessary to correct “market imperfections” (Project plan, 2006:2). It is the government that finances this big heritage project, although the organization is delegated to the consortium partners and the conservation and digitization will as far as possible take place through private parties, on the base of contracting (ibid., p.17).

The government will intervene also with non monetary tools, like regulation, especially in relation to agreements that must be concluded with copyright holders in order to get permission to use the digitized material. Those include collective agreements based on the law – copyright limitations and exceptions like the ‘education exception’ included in the Copyright Act, Article 16 (cited in ibid., p.19) –, collective voluntary agreements with a clear set of rules and individual agreements.

As explained in Chapter 3, a major problem is that it is very often unknown who holds the copyright, especially for old titles. *Beelden voor de Toekomst* has the intention to carry large-scale research in this respect, but this involves high transaction costs (see Landes and Posner, 2003:16). A possible solution which is currently being discussed (though not officially) is the creation of a fund – financed by the project’s revenues coming from sales and provisions to broadcasting services – to compensate ex post unidentified right holders that would eventually show up after that the copyrighted material has been used (said by Fossati in the interview<sup>45</sup>).

Another, more sensible possibility is to make use of Creative Commons licenses, the purpose of which is to find a balance between full copyright (all rights reserved) and the public domain (no rights reserved)<sup>46</sup>. Creative Commons was founded in 2001 in the United States and it has been in existence in the Netherlands since 2004 (Project plan, 2006:20). There are different kinds of CC licenses to choose among that range from ‘Attribution-Noncommercial-No Derivative Works’ – the most restrictive, which only allow to

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<sup>45</sup> See Note 5.

<sup>46</sup> <http://creativecommons.org/about/>

copy, distribute and transmit the work – to ‘Attribution’ licenses, which allow one to remix, tweak and build upon the work, even commercially. Through Creative Commons licenses movies can be uploaded on the Internet in compliance with the legal framework<sup>47</sup>.

## 5.5 Concluding remarks

Contrary to Peacock (1994) and Mossetto (1992), *Beelden voor de Toekomst* is an example in which the economist’s perspective was not rejected, despite the cultural nature of the project in question. Economic research was commissioned to obtain an important contribution to the decision-making process. However, to assume that this is a sign that the role of the economist in cultural projects is starting to get recognition, would probably be hazardous. We have to take into account that cinema was always meant to be a business (see Moul, 2005) – while, as discussed before, its artistic or cultural aspects were acknowledged much later. Compared to other heritage authorities, people operating in the field are less disturbed by the commercial environment and economic values. Furthermore, this achievement does not come too unexpected considering the national context of the Netherlands, which is a country with a relatively long tradition in Cultural Economics.

The applications to cultural heritage of the economic approach proves concretely to be extendable to the audiovisual sector (cf. Chapter 2). Like other heritage items, in fact, films have an asset value, need real resources for their preservation and ‘yield flows of benefits into the future’ (Rizzo and Throsby, 2006:995), therefore methods for evaluating capital investment decisions find their appliance to projects like *Beelden voor de Toekomst*.

As for any other heritage project, the economic tools show also in this example their strengths – concrete figures on which the investment decision can be pondered – and their limitations – impossibility to express all relevant factors in monetary terms; difficulty to assess cultural values and the benefits associated to them.

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<sup>47</sup> An existing, well working example is The Internet Archive (<http://www.archive.org>).



**PART II**

**EMPIRICAL RESEARCH**

### 6.1 Defining the research aims and objectives

As stated in the Introduction, the general (broad) research question this thesis intends to address is:

What is the impact of digitalization and the Internet on the cinematic heritage sector?

In Part I many recent contributions relevant to the field of film preservation have been reviewed and discussed. The cultural economic analysis of a concrete example of a large, forward-looking film heritage digitization project (*Beelden voor de Toekomst*) has also been included. One certain conclusion to which we can come at this point is that digitalization has revolutionized the entire world of film preservation. From Edison's invention of the Kinetoscope to the spread of the World Wide Web, technological changes have accompanied all phases of cinema history, affecting its developments both economically and aesthetically. Among all those changes, those which digitalization has brought about are probably the most radical of all. Besides the tremendous impact on film production (editing, special effects, post-production and so on) and restoration practice (image reconstruction), digital technologies are presenting great opportunities in terms of distribution and access to archival films.

The purpose of my research is to investigate how the potential power of digitization – in terms of accessibility of content – is currently used (or not used) in the cinematographic heritage field, and how the audiences perceive this new reality.

To address those objectives, I have designed a survey<sup>48</sup>, organized around a central willingness to pay question (see 6.6.2 and Appendix 2).

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<sup>48</sup> The design of the survey, in terms of size and basic structure, has been inspired by the work of my colleague (and friend) Juliana Salazar, who graduated at the EUR last year (2007) with the thesis 'Valuing Congestion Costs in Small Museums', which will be the main reference also for the data analysis.

## 6.2 Data collection

### 6.2.1 Selection of the sample: YouTubers

As Fossati and Verhoeff (2007:334) have pointed out, the demand for archival films (film heritage) comes from researchers, students of different disciplines (not only cinema and media related studies), found footage<sup>49</sup> film-makers and artists, and also ‘anonymous users everywhere on the Internet’ (ibid., pp.334-335). The latter represent my target and I will refer to them as the *online audience, users, or online consumers* of cinematographic heritage.

As discussed in the Introduction, the most popular way to access video content online is to search on YouTube, which is the world’s largest UGC and VoD (User Generated Content and Video on Demand) system (Cha et al., 2007:1).

To select the sample, I used the range of titles closest to a list of movies of “outstanding universal value” and of “historical and cultural significance” (world heritage) that I have at my disposal. The list in question (Appendix 3) is an accurate selection made by an expert, Professor Alessandro Tedeschi Turco, who was my film analysis teacher at the University of Venice (cf. Introduction). The list is long and varied and covers three big periods in the history of cinema: “the silent era”, “from classic to the crisis” and “from the crisis to contemporary”. I decided to consider only the movies released in 1950 or earlier, to be sure to deal with works that are also ‘valued because of their age’ (cf. Klamer and Zuidhof, 1999, quoted in Chapter 1). As Tedeschi Turco states himself, this list of movies – among which students are expected to choose the four they want to study for the exam – is not to be considered a paradigm or a ranking, but rather “an invitation to take a view”. However, those are surely all important works to discuss in an academic context.

Following the order of the list, which starts from Griffith’s *Birth of a Nation* (USA, 1915), the procedure I used was to type into the search engine of YouTube the original title words and the name of the director, in order to make sure I (almost only) reached the right videos, posted with the appropriate tags. In this example the words to be typed were: “birth

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<sup>49</sup> Following the definition provided on Wikipedia, ‘*found footage* is a filmmaking term which describes a method of compiling films partly or entirely of footage which has not been created by the filmmaker, and changing its meaning by placing it in a new context’.

Source: [http://en.wikipedia.org/wiki/Found\\_footage](http://en.wikipedia.org/wiki/Found_footage)

nation griffith”. Among the (in this case 70) results, I only chose videos containing one way or the other fragments of the original movie.

For every title and every post I could choose to contact two categories of YouTube users:

- content providers (those who upload the videos);
- content consumers (those who make a comment about the videos).

I assume that people who comment have watched the posted video entirely – they did not only accidentally click on it, as it is often the case. Among those commenting users, a further degree of selection is needed, because the remarks often do not refer to the movie itself but to other implications of the selected images. In the case of *Birth of a Nation*, for example, the movie in question is a controversial one: although its importance in cinema history and its outstanding quality have been universally recognized, Griffith’s masterpiece is explicitly racist, and was also accused for celebrating white supremacy and even the Ku Klux Klan. As can be expected, bitter discussions arise among the viewers, which exclusively refer to this aspect of the movie. In those cases I therefore only selected comments that showed consciousness of the cinematographic value of the movie. I am aware of the fact that this might have introduced researcher’s bias, but it was inevitable to be sure to deal with “cultural consumers” interested in cinema and aware of the picture’s quality. Luckily, not all movies lead to this kind of complication. In most cases I could limit myself to exclude inappropriate comments such as those referring to the physical appearances of the actors and actresses.

In total, I searched a list of 70 movies, many of which are not as popular as *Birth of a Nation*. Nevertheless I was able to select an average of at least 15 accounts per title that met my standards. By entering those users’ account page, YouTube allows one to send them a message, for which they also receive a notice on their email address. The software does not enable one to put attachments on the messages, but fortunately the service I used to design and manage the survey ([www.createsurvey.com](http://www.createsurvey.com)) allowed me to make a link to the questionnaire that was simply copied and pasted on the invitation to take part to the research (Appendix 4).

Unfortunately, as mentioned by Gomes (2006), YouTube messaging software is rudimentary and it does not always work. A further difficulty I did not expect at first was that the number of messages that it is possible to send at one time is limited. To (partly)

overcome this problem I have created two different YouTube accounts – named researchCH and research CCH. Compared to normal emailing, the process was slow because messages had to be sent one by one and it was always necessary to enter a subject.

In total the survey was sent to circa 1,000 YouTubers. There is no way to know how many of them actually received the message. Only 132 took part in the survey, for a response rate lower than 15%. This poor result was not too unexpected: as a term of comparison, we can look at Thompson et al. (2002), who used mail surveys for their contingent valuation study and had a return rate of barely 30%. Email surveys have even more complications than postal ones, due to the fact that people often do not trust links. Furthermore, the use of YouTube might have affected the credibility of the research.

### *6.2.2 Design of the survey*

As Bloch (in Seale, 2004:166) has observed, self-completion surveys need to be very short and simple to be manageable. For this reason, I constrained myself to basic personal information – gender, age, nationality, education, occupation, number of owned old movies in different formats and use of YouTube – and five questions – although three of those comprised a matrix with several sub-questions.

#### Availability and accessibility of cinematic heritage

Question 1 and Question 2 asked the respondents to evaluate the availability and accessibility of cinematographic content on different distribution channels, with the aim to obtain information about: what channels those people use or do not use when looking for cinematographic heritage, how they evaluate both availability (do I find the items I am looking for?) and accessibility (is it possible/easy to actually access the content?) of film heritage through the traditional (record stores, television, libraries...) and new ways of delivery (p2p, online platforms...), and what channels are considered the best.

### Contingent valuation: WTP for digitized movies

Question 3 was the core question of my empirical research and it was used for a contingent valuation/willingness to pay (WTP) study. Contingent valuation is a survey technique that helps gathering 'information about exchange values in imaginary markets' (Hutter and Shusterman, 2006:196). Movies are characteristically exchanged in real markets, hence we usually have at our disposal a market price that can help us assessing the value of those goods. Motion pictures, in fact, are not typically public goods, because they are non-rival, but excludable. The advent of digitalization, however, is threatening the latter characteristic (see Part I). As the interview with Giovanna Fossati<sup>50</sup> has shown, it is currently a pressing issue whether or not, under what circumstances and on what conditions movies should *become* public goods, accessible through the Internet. Efforts are being made by many film archives to make sure that at least the films that are in the public domain are freely available for streaming and/or downloading. The market situation outlined in Question 3, is partly imaginary, partly real. In the Netherlands, with the project *Beelden voor de Toekomst* (Chapter 5), the hypothetical database presented in the questionnaire is something hopefully likely to become a reality in the near future. The question (which intentionally comes after the general evaluation of both 'availability' and 'accessibility') is formulated to get information about how people value the availability of digitized movies by asking them to state how much they would be willing to pay to access them in different ways.

Youtubers were not asked directly if they download copyrighted content or not. This is a question that unavoidably leads to distorted (under-reported) responses (cf. Bloch, in Seale, 2004). I assume that for online consumers, who are surely quite confident with technology, streaming and downloading are common practices, regardless of copyright infringements. This assumption (based, among others, on Fisher, 2004, and Liebowitz, 2006) was not discredited by the number of "never used/don't know" answers in Question 1 and Question 2.

The reason for listing all the options – including the purchase of the DVD and the possibility to view the original print – was to measure variations and estimate if and how people perceive the differences between different services.

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<sup>50</sup> See Note 5.

As noted in Part I, contingent valuation methods are very popular among cultural economists (see Noonan, 2003) and despite their (many) critics and all their cons are still seen as the best alternative available to estimate non-market benefits of heritage goods (cf. Epstein, 2003). It is important to be aware of the biases to which this methodology is subjected. Since the scenario is only hypothetical, people can overstate their WTP. Within our specific scenario respondents could also act strategically by *understating* their WTP, as a sign of protest – ‘old movies should be freely available online’; ‘DVDs are too expensive’, and the like. In the case of movies, in fact, especially if a digital version is already spread, it is even more difficult than for, say, a monument for the person interviewed to perceive a cost that has to be covered. Furthermore there might be no perception that the good is at risk of survival. Common sense can suggest that since most individuals are aware that they can quite easily access films for free with very little or no risk through illegal channels, their WTP will be likely to be very close to zero. Nevertheless, the questionnaire informed the recipient about the reasons to charge a fee (the need to cover the costs of digitization and to compensate copyright holders); people were expected to value the possibility of a legal alternative to online piracy that would assure wide availability of content.

#### Original print vs. digital copy

The survey included two more questions (Question 4 and Question 5), which investigated the problem: original vs. (digital) copy (cf. Chapter 3). This issue was partly addressed also in the last sub-question of Question 3 (how much they would pay to watch a silent or classic movie in its original format). More than to see how much they are willing to spend for this service, it is interesting to look at how the amount differs from the WTP stated for the other options.

Do people care about the original prints of the movies and their preservation, or are they satisfied with the availability of digital versions? Can we argue that (free) availability of a (low definition) digital version can generate a spread of interest, including the interest in experiencing the projection of the original print?

### 7.1 Socio-demographic characteristics

The first part of the questionnaire investigated the respondents' socio-demographic characteristics, with the aim to find some information about the individuals Fossati and Verhoeff (2007:334-335) refer to as 'anonymous users everywhere on the Internet' who express a demand for archival films.

It would be interesting to contrast our results with relevant statistics in cultural participation. Unfortunately, the only useful figures to be found are those about cinema attendance – which show wider participation for men and for students (eurostat, 2007). Those data, however, can be misleading because they are probably unlikely to take consumption of cinematographic heritage into account. The results of the survey will therefore only be compared (whenever possible) with research about Internet usage (Bakker and Sádaba, 2008) and the few data available about the profile of YouTube subscribers.

The results regarding gender, age, education and nationality are summarized in the following table:

Table 7a *Socio-demographic characteristics*

<b>GENDER</b>	Male	Female				
	<b>60.61 %</b>	<b>39.39 %</b>				
<b>AGE</b>	[10-19]	[20-29]	[30-39]	[40-49]	[50-59]	[60-69]
	<b>25.75 %</b>	<b>38.63 %</b>	<b>18.93 %</b>	<b>8.33 %</b>	<b>6.81 %</b>	<b>1.51 %</b>
<b>EDUCATION</b>	High school or lower		Bachelor		Master or higher	
	<b>37.88 %</b>		<b>39.39 %</b>		<b>22.73 %</b>	
<b>NATIONALITY</b>						
<b>Per country</b>			<b>Per continent</b>			
United States	<b>31.82 %</b>		Europe	<b>47.72 %</b>		



United Kingdom	<b>7.58 %</b>	North America	<b>37.87 %</b>
Italy	<b>6.81 %</b>	South America	<b>5.30 %</b>
France	<b>4.55 %</b>	Asia	<b>5.30 %</b>
Spain	<b>4.55 %</b>	Oceania	<b>1.52 %</b>
Germany	<b>3.79 %</b>	Africa	<b>0.76 %</b>
Netherlands	<b>3.79 %</b>		
Canada	<b>3.03 %</b>		
Mexico	<b>3.03 %</b>		
Belgium	<b>2.27 %</b>		
Finland	<b>2.27 %</b>		
India	<b>2.27 %</b>		
Russia	<b>2.27 %</b>		
Argentina	<b>1.52 %</b>		
Australia	<b>1.52 %</b>		
Brazil	<b>1.52 %</b>		
Norway	<b>1.52 %</b>		
Portugal	<b>1.52 %</b>		
Romania	<b>1.52 %</b>		
Switzerland	<b>1.52 %</b>		
Bulgaria	<b>0.76 %</b>		
Chile	<b>0.76 %</b>		
Colombia	<b>0.76 %</b>		
Denmark	<b>0.76 %</b>		
Egypt	<b>0.76 %</b>		
Estonia	<b>0.76 %</b>		
Greece	<b>0.76 %</b>		
Ireland	<b>0.76 %</b>		
Jordan	<b>0.76 %</b>		
Lebanon	<b>0.76 %</b>		
Philippines	<b>0.76 %</b>		
Puerto Rico	<b>0.76 %</b>		
Singapore	<b>0.76 %</b>		

Source: own calculations.

The majority of our respondents were male (60.61%). This figure is consistent with the 'digital gender divide' (Bakker and Sádaba, 2008:122) that sees wider Internet usage by men – although women have been taking up in the last years (ibid.). Most of the people in the sample were teenagers (25.75%) or in their twenties (38.63%). Percentages then decrease with the rise of the age. This result does not come unexpected, since research about Internet use shows a distinct age gap (ibid., pp.121-122). Some research about the audience of YouTube has been conducted by the TU Delft University of Technology (The Netherlands) that thanks to its powerful means could explore subscribers' profiles – in which at least age and country are usually indicated. Professor Johan Pouwelse (quoted in Gomes, 2006) reports that roughly half of YouTubers are under 20 years of age and that 70% of them are from the United States. Our survey's respondents are therefore older than the average YouTube audience and far more international, although the United States are the most well represented country here too (32%). It is interesting to observe that nearly half of the respondents were Europeans and that most European nationalities are present. Figures relative to nationality are quite consistent with what I could monitor while sending the link to the survey to the accounts (although I did not keep a precise record, I have an overview of the countries indicated in the selected profiles), with the notable exception of South Americans, who were very frequent to encounter, but have shown the lowest rate of response. A possible explanation for this is the language problem: the questionnaire was in English and some Spanish-speaking people even contacted me asking for a translation<sup>51</sup>. As far as Asians are concerned, besides Internet penetration issues (certainly extendable to Africa) and the fact that apart from Kurosawa's *Rashomon* (Japan) all movies in the list were western productions, their low presence could also be attributable to the use of different alphabets.

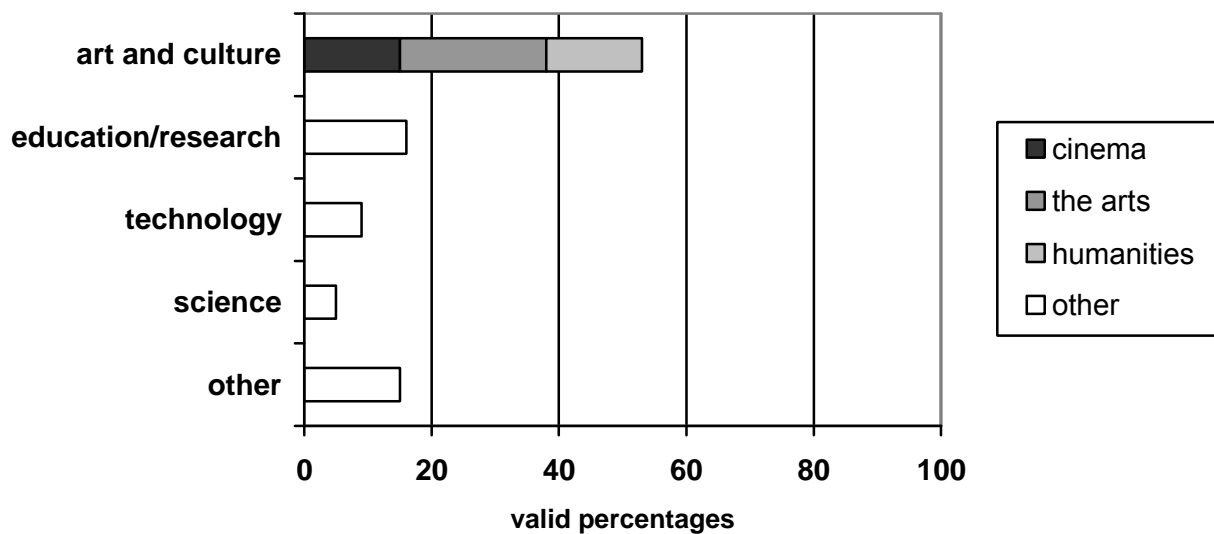
Most people in the sample were highly educated – with almost 40% of them holding a bachelor and more than 20% a Master or a higher degree.

If we look at the occupations or fields of study of the respondents, we notice that most of them are art and culture related and that cinema-related occupations are well represented.

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<sup>51</sup> The request was not satisfied in order to avoid further biases due to partial treatments among languages.

Figure 7a<sup>52</sup> *Respondents' occupations or fields of study*



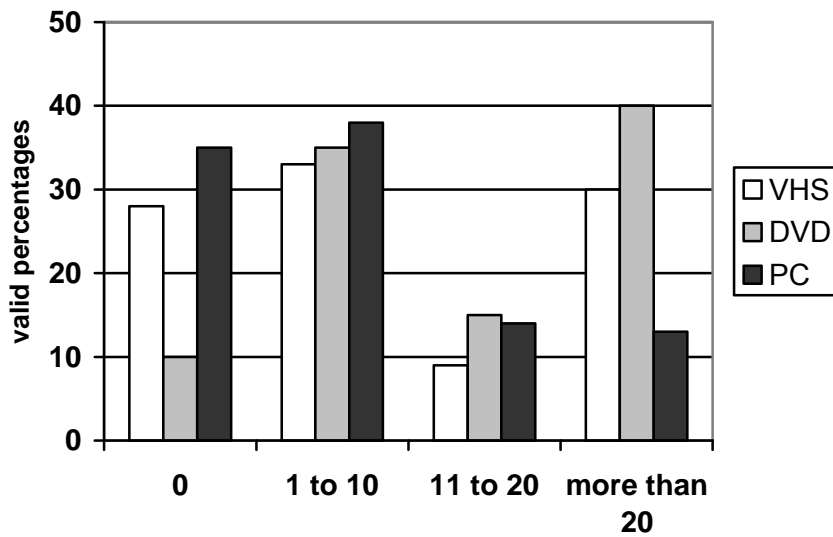
As noted in Chapter 6, following Fossati and Verhoeff (2006:334) demand for cinematic heritage comes from filmmakers, artists, students and researchers of different disciplines. The survey's results show quite clearly that the 'anonymous users everywhere on the Internet' (ibid., p.334-335) mostly belong to the same categories. The disciplines other than film studies that are particularly well represented in the sample are history and languages.

The following figure shows how many silent or old classic movies YouTubers possess:

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<sup>52</sup> "Cinema" includes film or audiovisual studies and cinema-related professions, among which cinematographers, screenwriters, editors, distributors and broadcasting producers; "the arts" comprises students of creative or art related subjects and professionals in the fields of visual arts, music, writing, acting, photography and others; "humanities" embraces history, political sciences, sociology, literature, philosophy, journalism and foreign languages. The category "education/research" includes all non better identified teachers, researchers and students. "Technology" refers to engineering, information networking, telecommunication and computer sciences; "science" refers to biology, physics, mathematics, chemistry and medicine.

Figure 7b **Number of old movies (on VHS, DVD or PC) owned by respondents**



The people in the sample own more DVDs than VHS (over 40% possess more than 20). 65% of the respondents have movies on their computer and among them many have more than 10 or even more than 20 titles stored on hard disks. Since common use software does not enable one to copy movies on pc from original DVDs, we can suppose that those movies (or most of them) have been downloaded from the Internet. These figures are a clear sign of the rapid progress of the technology and of the storage capacity of personal computers.

On YouTube 80% of the respondents post comments, 37% upload cinematographic content and more than half (53%) also use the platform to share videos they edit themselves, showing that this has become quite a spread practice. While searching the movies I have come across a number of creative remakes, cut and paste and re-editing of classic movies' sequences, especially of famous scenes.

## 7.2 Availability and accessibility of cinematic heritage

The following table summarizes the responses to Question 1 and 2, regarding availability and accessibility of cinematic heritage on traditional and new ways of delivery.

Table 7b **Availability and accessibility**

	Good		Neither good nor bad		Bad		Never used/ don't know	
	Availab.	Accessib.	Availab.	Accessib.	Availab.	Accessib.	Availab.	Accessib.
On sale	54%	52%	20%	18%	22%	25%	4%	5%
Rental services	25%	35%	18%	17%	41%	30%	16%	18%
Archives, cinémathèques	51%	35%	14%	18%	8%	22%	27%	25%
Public libraries	43%	40%	20%	25%	20%	18%	17%	17%
Tv	34%		24%		37%		5%	
Legal download (free)	38%	40%	17%	19%	17%	14%	28%	27%
Legal download (fee)	22%	25%	11%	10%	12%	15%	55%	50%
P2P networks	44%	47%	11%	13%	9%	6%	36%	34%
Online platforms	59%	66%	29%	21%	9%	11%	3%	2%

Source: own calculations.

We can now compile a ranking of the best ways of delivery<sup>53</sup>:

AVAILABILITY	ACCESSIBILITY
1. Archives, cinémathèques (70.53%)	1. P2P networks (70.24%)
2. P2P networks (67.90%)	2. Online platforms (68.50%)
3. Online platforms (61.29%)	3. Legal download for free (54.74%)
4. On sale (56.00%)	4. On sale (54.40%)
5. Legal download for free (52.17%)	5. Legal download with a fee (49.23%)
6. Public libraries (51.89%)	6. Public libraries (48.62%)
7. Legal download with a fee (48.28%)	7. Archives, cinémathèques (46.46%)
8. Television (35.25%)	8. Rental services (42.45%)
9. Rental services (29.91%)	

These results show quite clearly that the new ways of delivery are preferred to traditional ones, especially as far as accessibility is concerned. In line with what has been analyzed in Part I, archives and cinémathèques are judged very negatively in terms of accessibility, although they offer the widest availability of film heritage.

Another important finding is that the most successful channels are the ones that (most commonly) provide content illegally.

It would be pretty hasty to conclude that people have expressed a preference for online services as a means of delivery because it is a way to access the content for free. One possible explanation is that file-sharing systems are indeed more effective and more efficient cinematographic heritage providers – a far more extensive and technical research would be necessary to prove this. Another (supplementary) reason could be that today's consumers need *interactivity*, which as Küng et al. (2008:239) have pointed out, 'is clearly one of the leading changes connected with the Internet'. Not only networks physically facilitate sharing files; consumers also get psychological satisfaction sharing their taste with other users (ibid.). This is highly consistent with my (qualitative) observations of the

<sup>53</sup> Percentages consider the total number of respondents who answered 'very good' or 'good'; the result is divided by the digit obtained subtracting the number of the 'never used/don't know' responses from the total number of valid responses for each case. People who do not use the distribution channel or did not know what to answer were excluded in order to obtain a more accurate appraisal of the different options.

comments posted on YouTube. Besides “*best movie ever*” and the like, the most common messages to be found are words of thanks, “*thanks for posting*” being the most used. Furthermore, on YouTube people often exchange information about the movies, including information about where or how to find the movie itself. As typical Internet users, YouTubers are not just viewers: they want to play an “active” role (see Bakker and Sádaba, 2008).

### 7.3 Willingness to pay

In the questionnaire (see Appendix 2), YouTubers were asked to state the maximum sum they would be willing to pay for each way of delivering a movie, choosing among 7 different price ranges. The maximum price levels (7 Euro for the questions concerning the Internet, 20 Euro for the other questions) were determined looking at the average market prices respectively on *Cinemanow*<sup>54</sup> (the leading site for legal download), and *Amazon*<sup>55</sup> (DVD prices).

In the forthcoming pages figures relative to respondents’ WTP for digital versions of archival films will be presented (in frequency tables and graphs), divided per currency. The points of the graphs indicate the minimum level for each selected interval, so that we can estimate how much respondents would be willing to pay *at least*.

For simplicity, only results relative to the purchase of movies via the Internet are discussed in this section. The other options (purchase of DVDs and traditional projection of heritage films) are included in Appendix 5.

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<sup>54</sup> <http://www.cinemanow.com/>

<sup>55</sup> <http://www.amazon.com/>

Table 7c *WTP for streaming*

	LOW DEFINITION				HIGH DEFINITION			
	US \$		EURO		US \$		EURO	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
0	38	57.6	33	55.9	15	22.1	18	31.0
0 to 0.50	10	15.2	11	18.6	12	17.6	5	8.6
0.50 to 1.00	6	9.1	5	8.5	10	14.7	10	17.2
1.00 to 2.00	9	13.6	6	10.2	7	10.3	4	6.9
2.00 to 5.00	2	3.0	3	5.1	10	14.7	12	20.7
5.00 to 7.00	0	0	1	1.7	9	13.2	6	10.3
More than 7.00	1	1.5	0	0	5	7.4	3	5.2
<b>Total</b>	<b>66</b>	<b>100.0</b>	<b>59</b>	<b>100.0</b>	<b>68</b>	<b>100.0</b>	<b>58</b>	<b>100.0</b>

Source: own calculations

Table 7d *WTP for download*

	LOW DEFINITION (small file)				HIGH DEFINITION (large file)			
	US \$		EURO		US \$		EURO	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
0	15	22.4	14	24.6	5	7.6	7	11.9
0 to 0.50	11	16.4	11	19.3	6	9.0	6	10.2
0.50 to 1.00	18	26.9	10	17.5	8	11.9	2	3.4
1.00 to 2.00	7	10.4	9	15.8	5	7.5	13	22.0
2.00 to 5.00	11	16.4	7	12.3	15	22.4	12	20.3
5.00 to 7.00	3	4.5	4	7.0	17	25.4	11	18.6
More than 7.00	2	3.0	2	3.5	11	16.4	8	13.6
<b>Total</b>	<b>67</b>	<b>100.0</b>	<b>57</b>	<b>100.0</b>	<b>67</b>	<b>100.0</b>	<b>59</b>	<b>100.0</b>

Source: own calculations



Figure 7c *Minimum WTP Streaming, low definition*

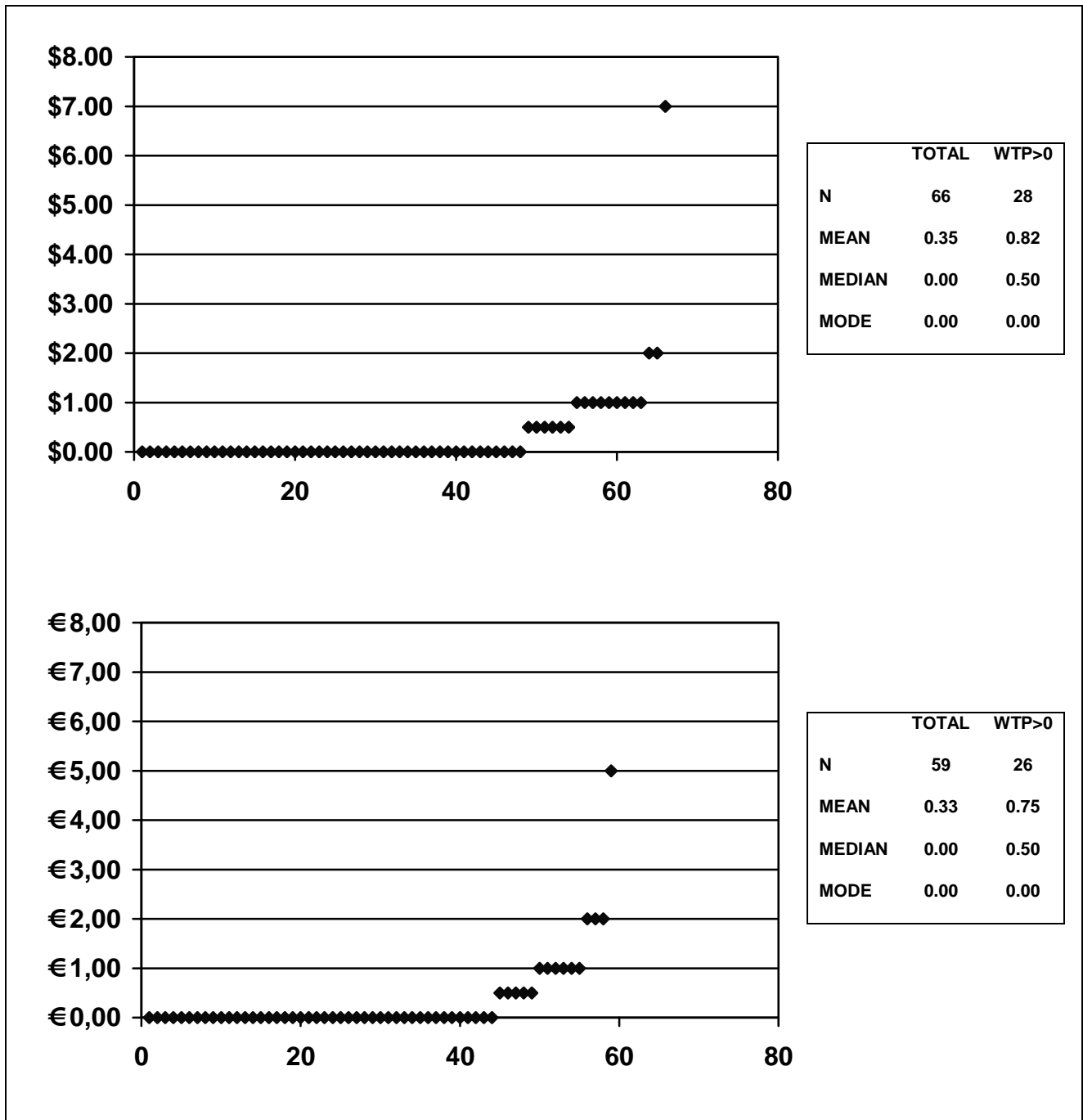


Figure 7d *Minimum WTP Streaming, high definition*

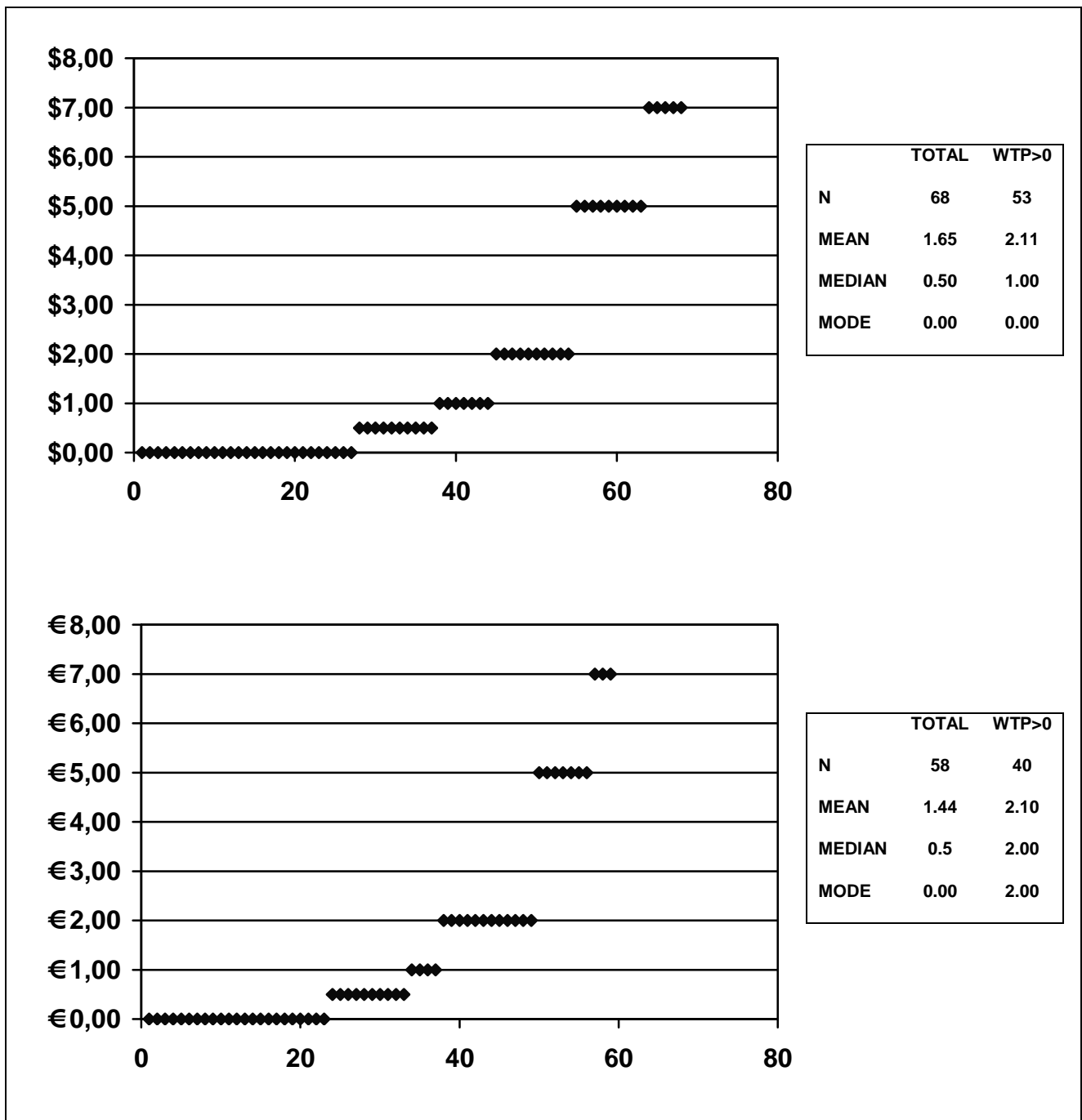


Figure 7e *Minimum WTP Download, small file*

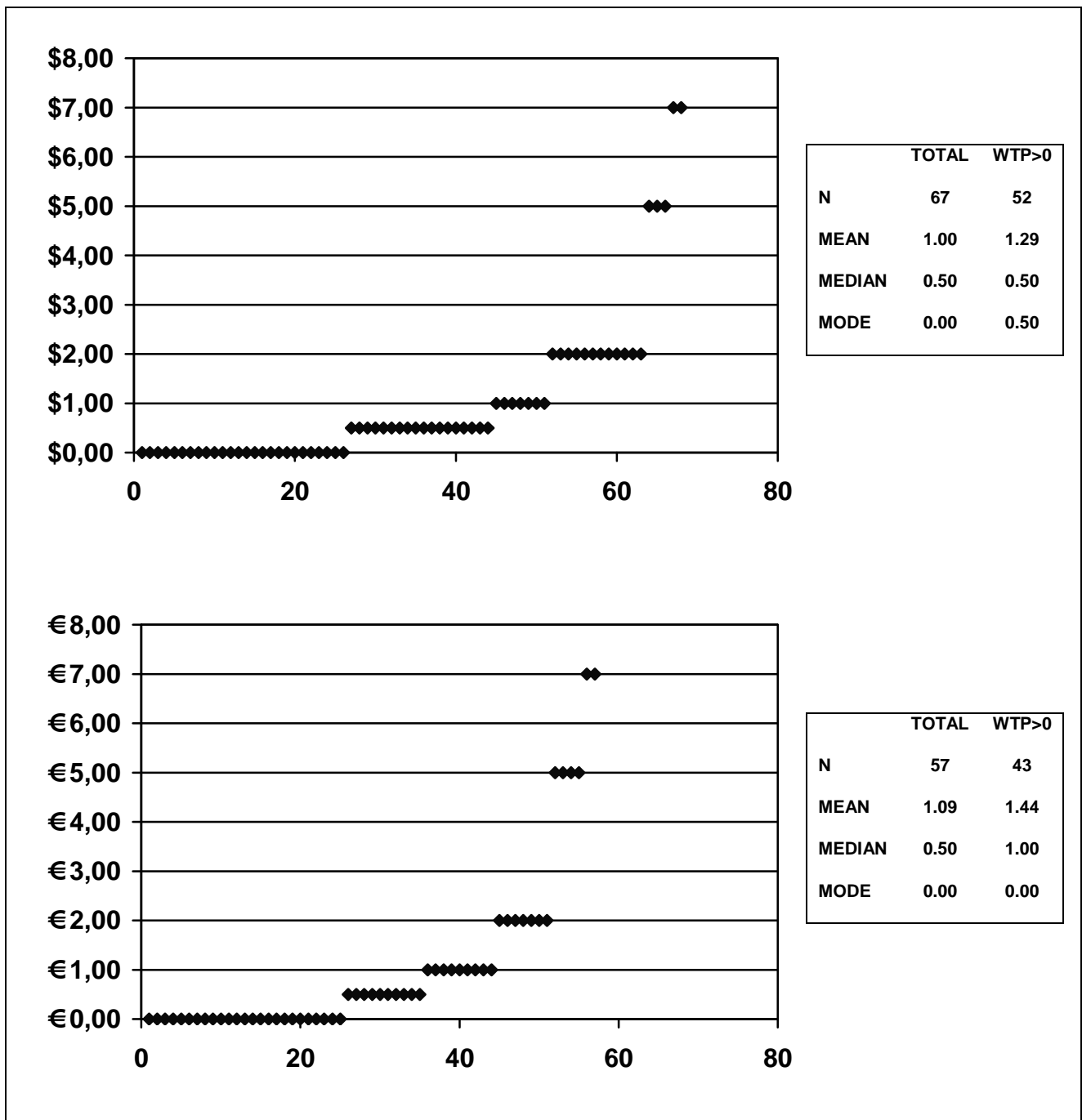
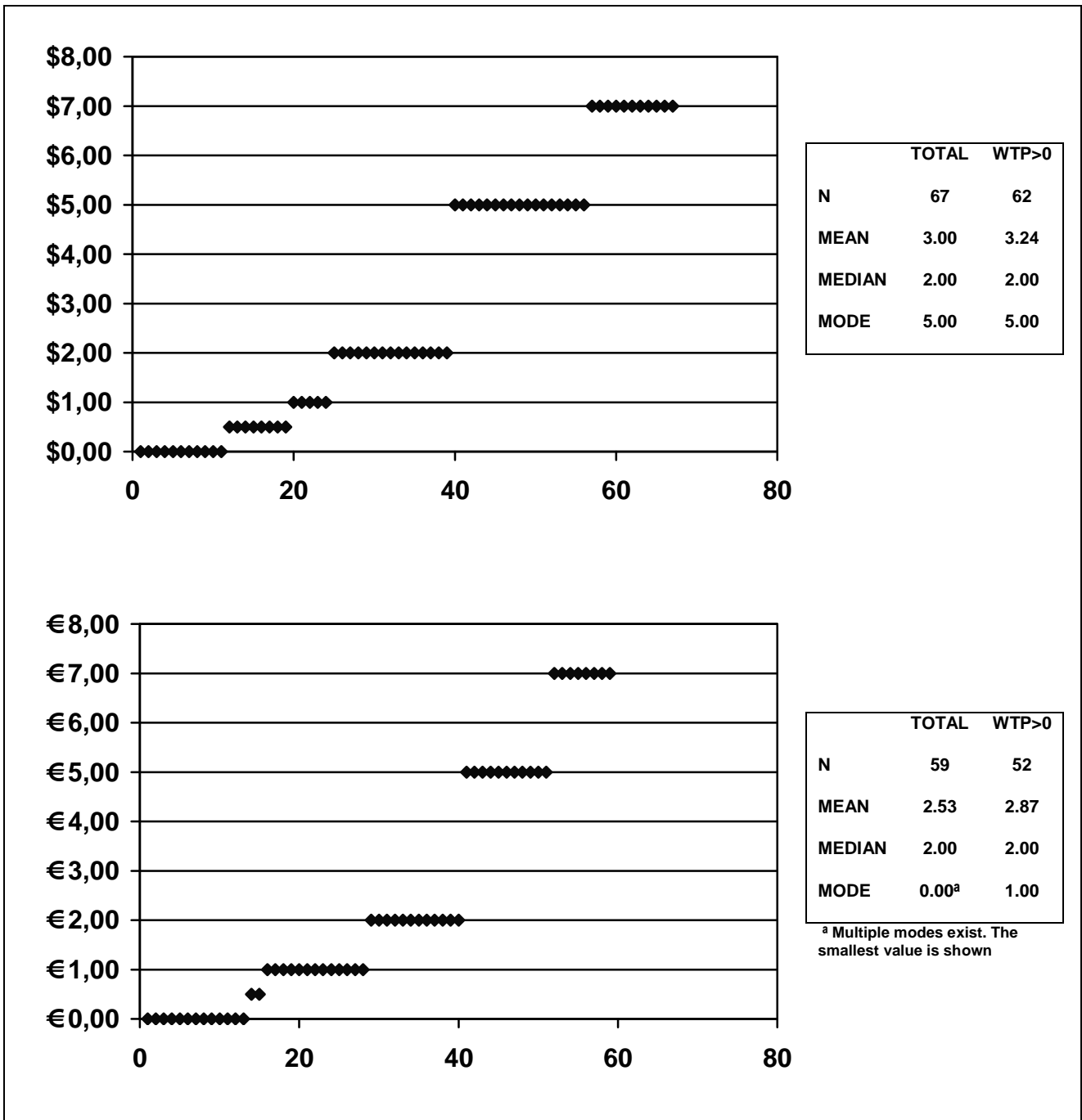


Figure 7f *Minimum WTP Download, large file*



As noted above, in contexts where online access to (old) motion pictures might soon become a reality (like in the Netherlands with the project *Beelden voor de Toekomst*), it is still an unanswered question on what terms and conditions (including prices) this should occur.

Charging a fee (cf. 5.3) for access to cultural goods is a controversial issue, which struggles with principles of equity and the desire of lowering barriers for cultural participation. Empirical evidence, however, reveals that people have in general a positive attitude towards fees for leisure activities (Cuccia and Signorello, 2002b:147, quoting Heritage Conservation and Recreation Service, 1976; Mourato and Pearce, 1999). As argued by Peacock and Godfrey (1974:202), charging is compatible with cultural policy objectives. As Beltrán and Rojas (1996:464) have observed, fees represent an opportunity for 'increasing or diversifying fund raising': information on people's WTP can be useful to determine suitable price schedules and help reducing the dependency on public funds.

The results of the survey show that despite the fact that the majority of the respondents habitually access movies for free (through illegal download), *there is* willingness to pay for online purchase of digitized archival films: if we look at the percentages of YouTubers who express a zero WTP, we notice that only for the first option (streaming, low definition) they go beyond 50%. For downloading heritage movies with high definition (large files) more than 90% of the respondents are willing to pay a fee; among the latter, 17% have a WTP higher than 7\$.

It is interesting to observe that there are considerable differences between the WTP for low and high definition (different levels of image quality) versions of the products. This outcome suggests that there are possibilities of price discriminating and this way eventually increase the number of consumers by attracting (with lower price-lower definition options) the demand segments that fall below the market price.

#### **7.4 Original vs. copies and traditional projection in the digital age**

Figure 7g and Figure 7h show the outcome of Question 4 and Question 5.

Figure 7g **Question 4**

Respondents consider the preservation of a movie's original negative to be:

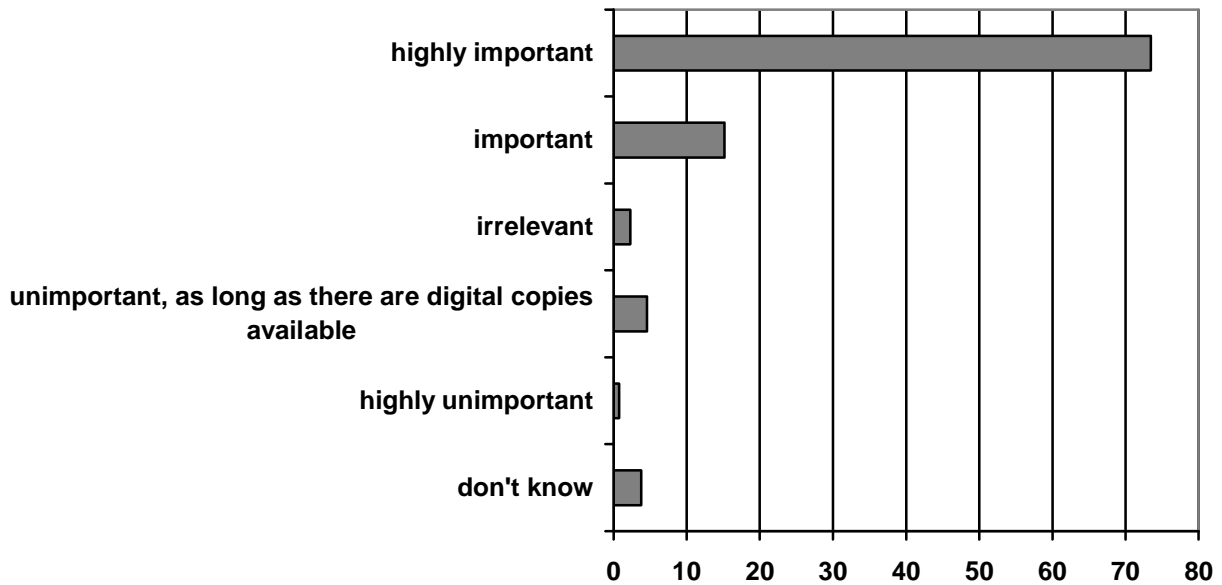
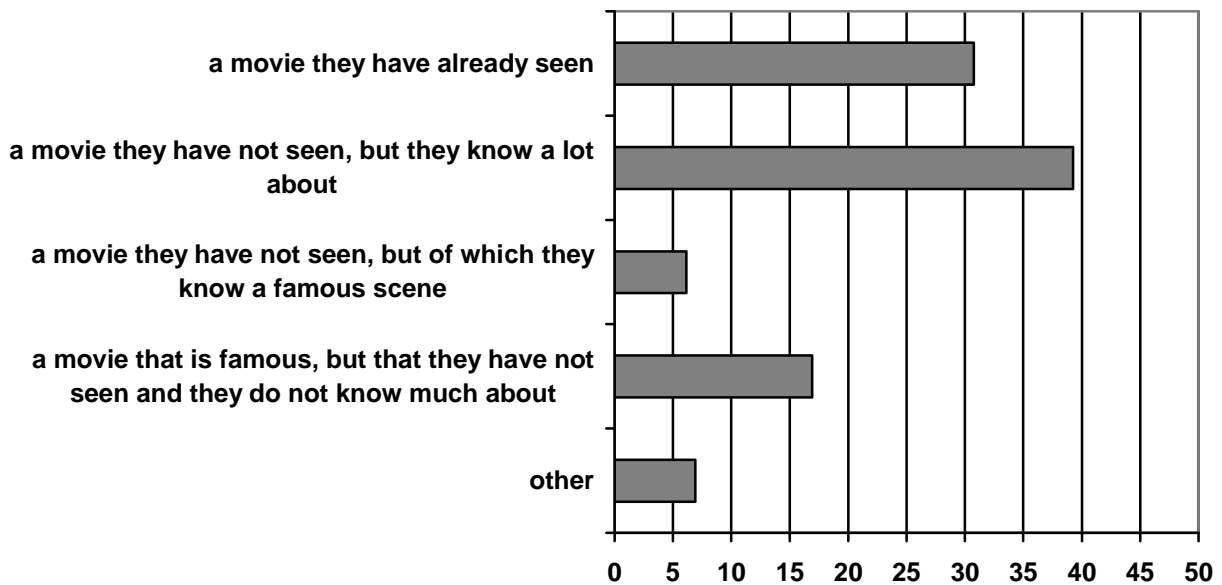


Figure 7h **Question 5**

If they were given the opportunity to watch an old movie in its original format respondents would choose:



Visibly, Question 4 was the one that brought the most unambiguous outcome: YouTubers, even though they habitually consume cinematographic content in its digital format on the Internet, still consider the preservation of original film reels to be not just important but

*highly important* (73.5%), while very few (barely 5%) mean that to be unimportant as long as there are digital copies available.

As far as Question 5 is concerned, only 17% of the respondents stated that if they were given the opportunity to watch a classic in its original format in a film museum they would watch a movie they do not know much about. An interesting data is that nearly one third of the sample YouTubers indicate that they would choose a movie they have already seen. We can consider “already seen” to represent the highest degree of familiarity with a movie. The total percentage of respondents who would go for a movie they ‘know a lot about’ would therefore go up to 70%.

Despite the possible critics to how the question is asked, from these results we can presume that consumption of (low definition) digital versions of (parts of) cinematographic works uploaded on the Internet does not/would not discourage people from the consumption of the original, but quite the contrary – this supposition is supported also by the outcome of Question 4 and of the last part of Question 3 (see Appendix 5). Further research is certainly required on how online video consumption affects demand of “authentic experiences” like the projection of a movie’s original print. The validity of our “learning by consuming” (taste acquisition) assumptions need more accurate tests to be confirmed.

Following the theoretical model applied by Thompson et al. (2002) and Salazar (2007), it is possible to analyze how WTP is affected by the characteristics of the selected YouTubers.

In this research the groups of characteristics that are of interest are respondents' socio-demographic attributes, if and to what extent they do (illegal) downloading, how many movies they buy and whether or not their occupation is cinema related.

WTP for digitized movies delivered via the Internet is expected to rise with the intensity of movie purchase, with people who are not illegally downloading and with occupations related to the audiovisual sector. Nothing can be clearly predicted for socio-demographic attributes.

We can see WTP as the dependent variable in a regression framework:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + \dots + b_kX_k \quad (1)$$

In our analysis we will use:

$$WTP = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 \quad (2)$$

$X_1$  is a vector comprising all socio-demographic attributes (gender, nationality, age and education). For gender and nationality dummy variables are used that take the value 1 for male and in case the respondent is from a certain origin<sup>56</sup>. Education takes the value 1 for high school or lower, 2 for bachelor and 3 for master or higher.

The second vector  $X_2$  includes a dummy variable that takes value 1 if the YouTuber does not download illegally, and the ordinal variable "extent of downloading" (legal or not legal) that takes values 1, 2, 3, 4, 5, 6 depending on the number of movies one has on his or her computer. Those two variables might not be totally accurate, because they are based on the researcher's (non-verified) assumption that movies on people's computers have been

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<sup>56</sup> To avoid collinearity problems, the analysis only included two variables, one for US and one for European nationalities.



downloaded and that the respondents who do not have any title on pc *and* state not to use p2p networks, do not download illegally<sup>57</sup>.

X3 is a set of variables indicating how many movies respondents purchase. Two variables will take the values 1, 2, 3, 4, 5, 6 depending on the number of VHS and DVDs respondents possess<sup>58</sup>. A third variable will be a dummy one taking value 1 if the person is using “download with a fee” services.

X4 considers the respondents’ occupation or field of study and whether or not they edit videos themselves. Two dummy variables are constructed taking the value 1 if the occupation is cinema-related and if the person posts her own work on YouTube.

WTP is set up as a dummy variable with value 0 for WTP=0 and value 1 if WTP>0. This way the problems relative to the use of two different currencies lose their relevance.

Following Salazar (ibid., p.50), the predicted value of the dependent variable can be interpreted as the probability that the respondent will be willing to pay for streaming or downloading a movie, given the values of the independent variables. Following Thompson et al. (2002, also quoted in Salazar, ibid.), assuming that WTP follows a logistic distribution, the probability of an affirmative answer is:

$$\Pr (WTP>0) = 1/(1+e^{-x}) \tag{3}$$

where x refers to the right-hand side of equation 2.

The logistic regression was done for all four possibilities of delivering a movie via the Internet – streaming low definition, streaming high definition, downloading small file and downloading large file. The results for ‘streaming high definition’ are not shown due to the presence of only one significant coefficient and the low overall significance of the model for that case.

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<sup>57</sup> As explained earlier, to avoid distorted answers, in the questionnaire it was not asked directly if people were downloading movies illegally.

<sup>58</sup> This is also based on a supposition, because some movies can be presents and young people probably indicated also the videos and DVDs bought by they parents; we believe the validity of the analysis not to be affected by those limitations.

Table 8a **Logistic regression analysis<sup>a</sup>**

<i>variable</i>	<b>Streaming, low definition</b>	<b>Download, small file</b>	<b>Download, large file</b>
	<i>coefficient</i>	<i>coefficient</i>	<i>coefficient</i>
male	-.433 (.539)	-1.171 (.629)**	-3.112 (1.591)**
age	.006 (.026)	.081 (.038)**	.257 (.140)**
education	-1.081 (.419)***	-1.426 (.592)***	-3.021 (1.693)**
europe	.795 (.771)	1.749 (.855)**	1.518 (1.450)
usa	-.542 (.836)	.293 (.818)	2.407 (1.804)
nodownload	.145 (.782)	1.330 (.993)	-3.566 (2.536)
moviespc	-.072 (.192)	.009 (.216)	-.502 (.401)
vhs	.180 (.175)	-.528 (.231)***	-.121 (.374)
dvd	.155 (.169)	.417 (.205)**	.820 (.475)*
fee	.007 (.543)	1.238 (.670)**	-.188 (1.063)
cinemaoccupation	1.877 (.784)***	2.226 (1.217)**	19.415 (8758.441)
edit	-.600 (.543)	.873 (.614)	.100 (1.019)
Constant	.350 (1.167)	.105 (1.156)	2.335 (2.646)
N	97	96	98
-2 Log-likelihood	105.841	84.056	35.292
Cox and Snell R <sup>2</sup>	0.226	0.202	0.186
Nagelkerke R <sup>2</sup>	0.306	0.303	0.430

Source: own calculations.

<sup>a</sup> Standard Errors in parentheses. \* For 90% confidence level, \*\* for 95% confidence level, \*\*\* for 99% confidence level.

Let us look at the results for 'download, small file', which is the analysis that brings about the highest number of significant coefficients.

The probability for a WTP>0 is positively correlated with age and strongly increases if the respondent has European nationality, while it is negatively correlated with the gender male and the level of education. The latter figure, highly significant in all three cases, comes quite unexpected. A possible explanation is that WTP for digitized versions of cinema

masterpieces is not dependent on what level, but on what kind (what field) of education one has attained. The analysis of cross tabulations, in fact, reveals that among the respondents holding a master or a higher degree, only one of them has a cinema-related occupation and a significant percentage (43%) does not have an occupation related to culture.

Coherently with the expectations, the probability is positively correlated with an occupation related to cinema and with respondents who are likely to purchase many movies in digital format (in DVD or via the Internet). These results were the same in the other two cases, when the coefficients were significant.

On the contrary, no significant coefficient is associated to the variables relative to downloading or non-downloading habits. This outcome is consistent with the above discussed assumption that people who regularly download movies illegally (hence do not pay for them) are willing to pay anyway – at least if the reasons to charge a fee are made clear, as it is the case here.

Although both our data and their statistical and econometric analyses are surely insufficient to test any hypothesis or come to any certain conclusion, we can suppose that respondents do not rely more on p2p networks and user generated content platforms like YouTube (on which, as we have seen, long sequences of or even entire archival movies can be found) because that way they access cinematographic heritage for free, but because of the lack of a satisfactory alternative (cf. 7.2).

## CONCLUSION

### I. Heritage definition and classification: motion pictures

Since the aesthetic and historical value of motion pictures received universal recognition – a process that required several decades – films and cinema have been officially considered cultural heritage and therefore worthy of being preserved.

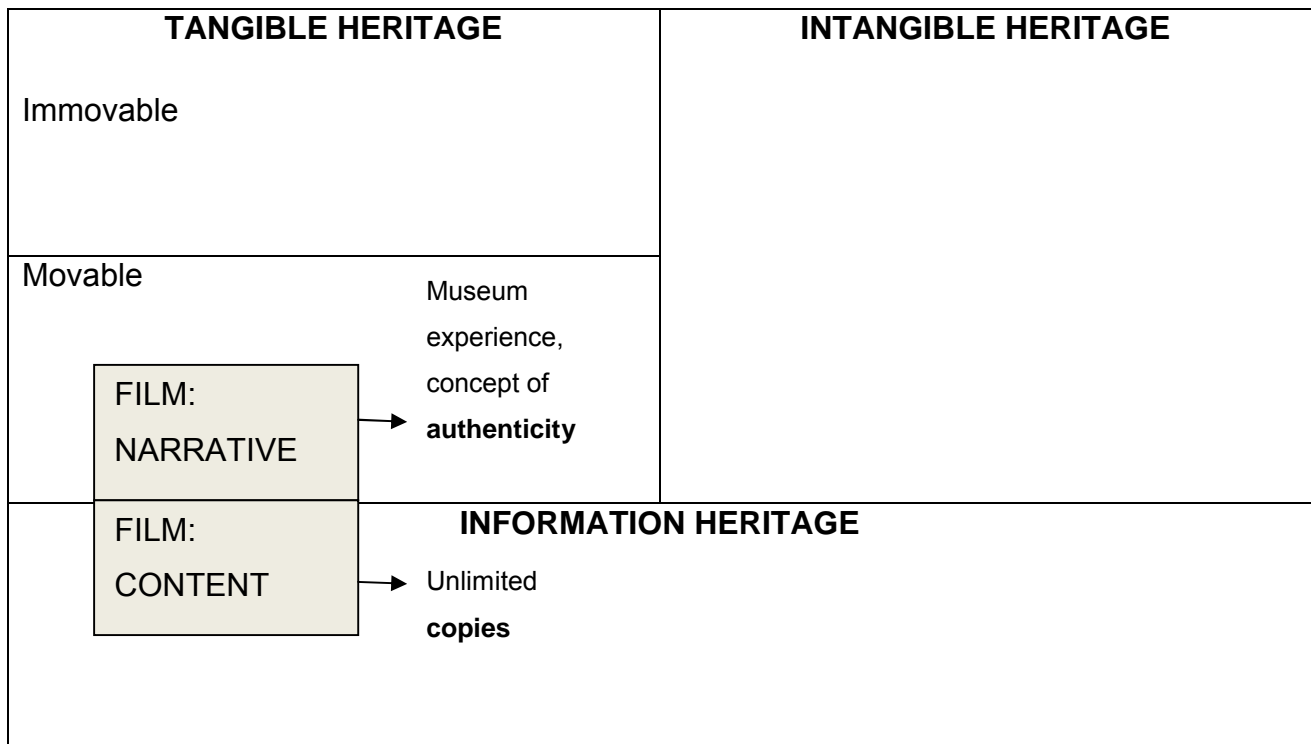
There are two main kinds of cultural heritage, the tangible and the intangible heritage, to which different preservation practices apply. Audiovisual works can arguably be defined as intangible content recorded on a tangible medium. Together with the other products of the so called “content industries”, they represent a special category of heritage that we have labelled *information heritage* and whose essential attribute is reproducibility. As a consequence, this category differs from the other two by not sharing the characteristic of “fixed location”.

As far as films are concerned, the attribute of reproducibility has been bitterly opposed by Mark-Paul Meyer (1996; 2005), who argues that, unlike the “content”, the “narrative” of a movie cannot be transferred on new media and that the authenticity value of the original prints must be acknowledged.

In every archive the ideal situation (whenever possible) is to find and preserve the original negative of the movies, but this has little to do with the “aura of originality” possessed by the products of the core arts – i.e. architecture, sculpture and painting. In principle, film archives strive to preserve original negatives and prints because these are the copies with the highest *quality*, but the quality we are referring to differs fundamentally from the artistic quality of an artefact (which is lower in copies or replications of the object itself), by being *measurable* (in levels of definition). Also the loss in quality due to replication is measurable (in loss of information or details). To date, digital images have not yet reached the standards of photochemical ones, but the speed at which technology is progressing gives good reasons to expect that those difficulties will soon be overcome. Moreover, movies are already starting to be born digital, hence the distinction between original and digital copy is most probably going to be blurred in the near future.

Despite all this evidence, Meyer's argument is certainly persuasive. Films and photographs, as well as books and manuscripts, in fact, find their place also among tangible movable heritage items, as museum pieces.

My conclusive suggestion is therefore to revisit the classification of cultural heritage with the following scheme:



## II. Digitalization

The purpose of this thesis was to research what is the impact of digitalization and the Internet on the film heritage sector.

Digitalization has essentially a two-sided impact on archival practices (cf. Fossati, 2005):

- impact on preservation (restoration and storage);
- impact on accessibility (including presentation).

Empirical evidence has shown that, at present, in the audiovisual sector, digitization (and further migration) of content as a means of preservation is only viable for broadcast, video and audio archives, not (yet) for film archives. Looking back at our classification of heritage, we can state that (only!) within the category “information heritage” digitization *equals* preservation. Only in this area of cultural heritage, in fact, the digital copy, if the definition is satisfactory, can be considered a substitute of the original: these heritage items, once digitized, can be made accessible to the public independently of place and time (‘not just in real time, but anytime and anywhere’, as expressed by Sonja De Leeuw at the *Video Vortex* Conference, on Saturday, January 19, 2008) and without any risk of overexploitation.

While most film archives around the world are today making wide use of digital technologies for film restoration, the tremendous potential of digitalization and the Internet in terms of accessibility is still not being fulfilled. The main reason for this is probably the overall uncertainty that surrounds the rapid technological developments. On one side the movie industry as a whole is facing the challenge of piracy and the inexorable spread of file sharing systems; it is still unclear whether or not copyright infringements will cause a ‘mortal blow’ to the industry (Liebowitz, 2003:29), hence copyright holders are likely to show apprehension towards the idea of having their work digitized and uploaded on the Internet, and are fighting for more protection. On the other side, film archivists, although they are looking with enthusiasm to the new opportunities of making content available, alongside being struggling with the objective obstacles of copyright law, fear that digitalization could cast a shadow on their role and identity.

### **III. Technology, archives and YouTube**

As Costa (quoted in Meyer, 2005:15) has ‘demonstrated’ (as Meyer puts it), there is a strong interrelation between technology and archive policy, and the way film archives cope with technological changes ‘will be crucial for their identity and their ability to survive’ (ibid.). In my opinion, besides discussing the impact of digitalization in terms of ethics and aesthetics, archivists should look at the impact of the Internet on heritage films’ new patterns of consumption and continue the reasoning initiated by Fossati and Verhoeff in the paper ‘Beyond distribution’ (2007, often quoted in this thesis).

This research has been an attempt to add some new knowledge about the current state of provision and consumption of cinematographic heritage, starting from the observation of what is going on on the web. Clearly, what we are witnessing with the “YouTube phenomenon” is that users (the general public) themselves are being suppliers of cinematic heritage items. If we for a moment leave copyright issues aside, we have to acknowledge that in many ways they are actually succeeding in exactly what cultural institutions struggle to achieve – because of the legal framework – or do not even try to achieve – because of the lack of financial resources or simply because of a conservative attitude.

Most experts (from different cinema and video related disciplines) that gave presentations in the conference *Video Vortex, responses to YouTube* were very critical towards the website, and indeed there are many good reasons to disapprove it, especially as far as the delivery of full length movies is concerned. Given the size of the phenomenon, however, mere criticism is useless. It is by analyzing what is going on on YouTube and similar platforms that experts can gain better understanding of the needs of contemporary audiences and find the basis to build up a suitable alternative, no less rediscovering their (fundamental) curatorial role. Given the peculiar characteristics of heritage goods (to which films belong), decisions cannot only depend on public’s preferences: experts’ judgements have to be taken into full account (cf. Cuccia, 2003; Navrud and Ready, 2002) .

#### **IV. Policy implications: the European perspective**

When it goes about cinema, we tend to forget that it was born in France and that against Hollywood’s hegemony, a great richness of national cinematographic traditions, styles and movements evolved in Europe through the 20<sup>th</sup> Century – German *Expressionismus*, Italian *Neorealismo* and French *La Nouvelle Vague*, to name but a few. As the results of our survey – i.e. the positive feedback that came from nearly all EU Member States – concur to be evidence for, European citizens show a good deal of interest in great cinematographic works from the past.

The creation of a “Euromovie” database and portal to access archival cinematographic content on a pan-European scale is suggested here as a concrete response to the initiatives the Council of Europe and the European Commission have been taking in the last years, which risk remaining on paper. The daring and forward-looking project *Beelden*

*voor de Toekomst*, analyzed in this thesis, could be the ground-breaking step towards the development of a Video on Demand system – eventually created within the framework of the European Digital Library (EDLnet<sup>59</sup>), alongside the project *Video Active*<sup>60</sup> (an ongoing project aimed at making accessible the Europe’s television heritage) –, which would enable European citizens to access their common cinematographic heritage online, through downloading or streaming, both for study and leisure purposes.

As discussed in Part I, one of the greatest obstacles for the upload of motion pictures and other audiovisual material on the Internet is not simply the copyright law, but what we can call “the unidentified right holders paradox” (see Chapter 3).

In this thesis, film preservation practice has been analyzed from the point of view of a cultural economist, with the strong belief that economic theory can be illuminating and help making the correct choices in the heritage sector (cf. Rizzo and Throsby, 2006). Furthermore, as pointed out by Towse (2001), discussions about copyright law are also of particular interest to cultural economists. Looking at the specific problem of the unknown copyright owners, one does not need complicated econometric models to detect an anomaly: a simple (though conscious) reasoning about “who pays, who benefits, who cares” (see Chapter 2 and Chapter 5) is sufficient to understand that the current situation does neither lead to any increase in social welfare, nor to any incentive to creativity. On the contrary, it calls for regulation, which should occur at the supranational level. The EU intervention is recommended, because the problem mainly affects Europe.

My suggestion would be the compilation (by each national archive) of a list of movies whose right holders are not clearly identified. The list would be published on a newly developed section of the EDLnet – which as a start would only contain information about European film archives’ collections and give access to the digital versions of the (though few) European movies that fall into the public domain. Legal intervention would be required to establish and enforce that whoever is still holding the rights of the films on the list has to notify herself within a certain (limited) number of years, a temporal term after which all rights are transferred to the archive in possession of the physical copy.

When the right holders are known, supranational initiatives should provide incentives to negotiations and contractual agreements in which legal protection and public interest are

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<sup>59</sup> <http://www.edlproject.eu/>

<sup>60</sup> <http://videoactive.wordpress.com/>



reconciled. As intended by *Beelden voor de Toekomst*, research into suitable license models<sup>61</sup> (for instance the Creative Commons) is highly recommended.

As a response to Meyer's above quoted claim, the "Euromovie" website should also be used as a means to give the public accurate information about where the original negatives and/or prints of each movie are located and preserved, as well as when and where traditional projections of the films in question occur.

## V. Suggestions for further research

The survey and WTP study conducted for the empirical part of this research was rather experimental and too limited in terms of size (considering the low response rate) to bring to any certain conclusion. As it often happens, the results have probably brought up more new questions than answers. For instance, having shown that individuals consider peer-to-peer networks and online video on demand services the best ways of delivery for cinematic heritage content, especially in terms of accessibility, the next question is why this is happening.

The analysis of the outcome of our survey suggests that people view or download movies uploaded without the permission of the copyright owner basically because cultural institutions (archives, cinémathèques, film museums, libraries) do not offer a satisfactory service and do not take into account the needs of contemporary audiences (the *users*). Responses to the WTP question (the core question in the survey) reveal that individuals *would be* willing to pay for a (legal) alternative to YouTube and the torrents to access their favourite classics online – especially if high image quality (definition) and a "contextualization" that would include additional features (i.e. extra content and information) were guaranteed.

All these are hypotheses that our study helped formulating, but that require additional research to be tested.

To reach the ambitious goal of a heritage movie database or online film museum (like the idea of an "Euromovie" database, presented above) considerable funds would need to be raised. Further research – including more accurate and extensive WTP studies – is

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<sup>61</sup> See [http://www.imagesforthefuture.org/en/327/copyright\\_research](http://www.imagesforthefuture.org/en/327/copyright_research)

indispensable to understand how to maximize the revenue capture potential of the system, in order to assure its growth and economic sustainability overtime, as well as consent the collection of royalties to compensate right holders.

## VI. Final word

I will leave the final word to one of the greatest (probably *the* greatest) living film director, Francis Ford Coppola, whose discourse about film preservation and technology, once more, is available on YouTube:

<http://www.youtube.com/watch?v=7NhddXMKpKI&feature=related>

*“Although I reach out with one hand to the newer technology, I never let go on the old, and I believe they both have their place, and in fact, maybe, the real question is how to have one foot in the past and one foot in the future and somehow bring them together and that’s the present.*

*Here we are in Rome and we go over to the Vatican and say: ‘ Michelangelo, come on over here, we’re gonna show you some things!’, or Goethe could come here, or Leonardo... and see what is now possible, what tools we have...*

*Those people would get all excited because they discovered a new way to make yellow! Well, here we have something like that multiplied by a billion! And say: ‘here, it’s yours, come on use it, do whatever you want’, that does not mean to say that we love technology more than we love the real backbone of art, which is human passion, learning, emotion; those are the things we wish to gather. But we have always used technology, even when it was a caveman scratching some beasts on the wall...*

*Technology is a servant, not a master”.*

Having this increasingly powerful *servant* at our disposal, it is worth to employ it up to its full potential for the purpose of making accessible to everyone what Coppola himself (ibid.) calls the ‘*the vast vault of our common human culture, the real wealth of the human race*’.

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UNESCO.org Culture, The Underwater Cultural Heritage:  
[http://portal.unesco.org/culture/en/ev.php-URL\\_ID=33966&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/culture/en/ev.php-URL_ID=33966&URL_DO=DO_TOPIC&URL_SECTION=201.html) . Consulted on 3 March 2008.

UNESCO.org World Heritage, UNESCO World Heritage Convention:  
<http://whc.unesco.org/?cid=175> . Consulted on 3 March 2008.

UNESCO.org Word Heritage, The Criteria for Selection: <http://whc.unesco.org/en/criteria/> .  
Consulted on 3 March 2008.

Video Active: <http://videoactive.wordpress.com/> . Consulted on 25 June 2008.

*Video Vortex, Responses to YouTube*, information sheet and booklet published for the International Conference 18-19 January 2008, Institute of Network Cultures, Amsterdam; presentations by Tilman Baumgärtel (participatory culture), Sonja De Leeuw (moderator, cinema and narrativity).

Wikipedia: Copyright: <http://en.wikipedia.org/wiki/Copyright> . Consulted on 15 May 2008.

Wikipedia: Found footage: [http://en.wikipedia.org/wiki/Found\\_footage](http://en.wikipedia.org/wiki/Found_footage) . Consulted on 7 July 2008.

Wikipedia: YouTube: [http://en.wikipedia.org/wiki/YouTube#cite\\_note-4](http://en.wikipedia.org/wiki/YouTube#cite_note-4) . Consulted on 21 May 2008.

YouTube: <http://www.youtube.com/> .

YouTube: video 'Francis Ford Coppola on Film Preservation and Technology':  
<http://www.youtube.com/watch?v=7NhddXMKpKI&feature=related> . Watched on 2 July 2008.

## APPENDIX 1

### **Giovanna Fossati**

Giovanna Fossati is Curator at the *Nederlands Filmmuseum* in Amsterdam where she works since 1997 and is responsible for restoration projects and for the museum's Research & Development activities. Fossati participated in the creation of the MA *Preservation & Presentation of the Moving Image* at the University of Amsterdam, where she has been a member of the teaching staff since 2003. She has published several articles on colour in early film and digital film restoration, and she has developed an educational website on film restoration. Fossati is currently working on a PhD dissertation at the University of Utrecht with the title: 'From Grain to Pixel: Theorising Film Archival Practice in a Time of Transition from Analogue to Digital Technology'.

Source: <http://www.jts2007.org/speakers.html>

APPENDIX 2

**CINEMATOGRAPHIC HERITAGE**

\* Are you

- Male
- Female

\* Please, indicate your age

--

\* Please, select your country of origin

--

\* Please, indicate your maximum level of education

- High school or lower
- Bachelor
- Master or higher

Please, indicate your occupation or field of study

How many old movies (silent or classic, black and white) do you own

	none	1 to 5	6 to 10	11 to 20	21 to 40	more than 40
on VHS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
on DVD	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
on your computer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* On YouTube you

- Post cinematographic content
- Comment on videos
- Post videos you edited yourself

1. How do you evaluate the AVAILABILITY of cinematographic heritage?

	Very good	Good	Neither good nor bad	Bad	Very bad	Never used/don't know
On sale (e.g. DVD market, record stores)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rental services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet: legal download for free (e.g. Internet Archive)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet: legal download with a fee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
peer-to-peer networks (e.g. eMule)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Archives, cinémathèques, film museums	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public libraries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online platforms (e.g. YouTube)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tv	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. How do you evaluate the ACCESSIBILITY (can you easily access the available content?) of cinematographic heritage?

	Very good	Good	Neither good nor bad	Bad	Very bad	Never used/don't know
On sale (e.g. DVD market, record stores)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rental services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet: legal download for free (e.g. Internet Archive)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet: legal download with a fee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
peer-to-peer networks (e.g. eMule)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Archives, cinémathèques, film museums	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public libraries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Online platforms (e.g. YouTube)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 3. Imagine a database is created that gives online access to the movies belonging to our heritage. The system has to be sustainable: funds are required to cover the costs of preservation and digitization and to compensate the rightholders. Consider one of your favourite classics: what would be the maximum amount of money you would pay for

- US \$  
 EURO

	0	0 to 0,50	0,50 to 1,00	1,00 to 2,00	2,00 to 5,00	5,00 to 7,00	more than 7,00
Streaming, low definition (YouTube size)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Streaming, high definition (full screen)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Legal download, small file	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Legal download, large file (DVD quality)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	0 to 3,00	3,00 to 5,00	5,00 to 7,00	7,00 to 10,00	10,00 to 15,00	15,00 to 20,00	more than 20,00
buy the DVD with additional features (trailer, making of...)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
buy the DVD without any additional features	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
watch it in a theatrical release (in a cinema)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
watch it in its original format (projection of the original print)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Do you consider the preservation of a movie's original negative to be

- Highly important  
 Important  
 Irrelevant  
 Unimportant, as long as there are digital copies available  
 Highly unimportant

Don't know

**5. If you were given the opportunity to watch one old movie in its original format (in a film museum) would you choose**

A movie you have already seen

A movie you have not seen, but you know a lot about

A movie you have not seen, but of which you know a famous scene

A movie that is famous, but that you have never seen and do not know much about

Other, please specify:

Powered by [CreateSurvey](#)



## APPENDIX 3

### **Prof. Alessandro Tedeschi Turco's list of movies for the course *Audiovisual Language Analysis*, Ca' Foscari University of Venice**

#### **I. IL PERIODO DEL MUTO**

D.W. Griffith *La nascita di una nazione* (Birth of a Nation, Usa 1915)

D.W. Griffith *Intolerance* (Id., Usa 1916)

Robert Wiene *Il Gabinetto del dottor Caligari* (Das Kabinett des Doktor Caligari, Germania 1919)

F.W. Murnau *Nosferatu il vampiro* (Nosferatu, Germania 1922)

Erich von Stroheim *Rapacità* (Greed, Usa 1924)

Sergej Ejzenstejn *La corazzata Potëmkin* (Bronenoseč Potëmkin, URSS 1925)

Charlie Chaplin *La febbre dell'oro* (The Gold Rush, Usa 1925)

Vsevolod Pudovkin *La madre* (Mat', URSS 1926)

F.W. Murnau *Aurora* (Sunrise, Usa 1927)

Buster Keaton *Come vinsi la guerra* (The General, Usa 1927)

Fritz Lang *Metropolis* (Id., Germania 1927)

King Vidor *La folla* (The Crowd, Usa 1928)

Carl Theodor Dreyer *La passione di Giovanna d'Arco* (La passion de Jeanne D'Arc, Francia 1928)

Victor Sjöström *Il vento* (The Wind, Usa 1928)

Dziga Vertov *L'uomo con la macchina da presa* (Čelovek s kinopparatom, URSS 1929)

G.W.Pabst *Lulù* (Die Büchse der Pandora, Germania 1929)

Luis Buñuel *Un cane andaluso* (Un chien andalou, Francia 1929) + René Clair *Entr'acte* (Id., Francia 1924)

#### **II. DALLA 'CLASSICITÀ' ALLA CRISI**

René Clair *A me la libertà* (À nous la liberté, Francia 1931)

Ernst Lubitsch *Mancia competente* (Trouble in Paradise, Usa 1932)

Jean Vigo *L'Atalante* (Id., Francia 1934)

Alessandro Blasetti *1860 – I Mille di Garibaldi* (Italia 1934)

Robert Flaherty *L'uomo di Aran* (Man of Aran, GB 1934)

Frank Capra *Accadde una notte* (It Happened One Night, Usa 1934)

Charlie Chaplin *Tempi moderni* (Modern Times, Usa 1936)

Julien Duvivier *Il bandito della Casbah* (Pépé le Moko, Francia 1937)

Mario Camerini *Il signor Max* (Italia 1937)

Joris Ivens *Terra di Spagna* (Spanish Earth, USA 1937)

Jean Renoir *La grande illusione* (La grande illusion, Francia 1937)

Sergej Ejzenstejn *Aleksandr Nevskij* (Id., URSS 1938)

Alfred Hitchcock *La signora scompare* (The Lady Vanishes, GB 1938)

Leni Riefenstahl *Olimpia-Apoteosi di Olimpia* (Olympia. I Teil: Fest der Völker - II Teil: Fest der Schönheit, Germania 1938)

Marcel Carnè *Alba tragica* (Le jour se lève, Francia 1939)

John Ford *Ombre rosse* (Stagecoach, Usa 1939)

Jean Renoir *La regola del gioco* (La règle du jeu 1939)

Victor Fleming *Via col vento* (Gone With the Wind, Usa 1939)

Charlie Chaplin *Il grande dittatore* (The Great Dictator, Usa 1940)

Michael Curtiz *Lo sparviero del mare* (The Sea Hawk, Usa 1940)

Orson Welles *Quarto potere* (Citizen Kane, USA 1941)

Michael Curtiz *Casablanca* (Id., Usa 1941)

John Ford *Com'era verde la mia valle* (How Green Was My Valley, Usa 1941)

Ernst Lubitsch *Vogliamo vivere* (To Be or not to Be, USA 1942)

Carl Theodor Dreyer *Dies Irae* (Vredens Dag, Danimarca 1943)

Henri-Georges Clouzot *Il corvo* (Le corbeau, Francia 1943)

Howard Hawks *Arcipelago in fiamme* (Air Force, Usa 1943)

Luchino Visconti *Ossessione* (Italia 1943)

Alfred Hitchcock *L'ombra del dubbio* (The Shadow of the Doubt, Usa 1943)

Sergej Ejzenstejn *Ivan il terribile / La congiura dei Boiardi* (Ivan Groznyi pt. I e II, URSS 1944)

Billy Wilder *La fiamma del peccato* (Double Indemnity, Usa 1944)

Roberto Rossellini *Roma città aperta* (Italia 1945)

John Ford *I sacrificati* (They Were Expendable, Usa 1945)

David Lean *Breve incontro* (Brief Encounter, GB 1945)

Frank Capra *La vita è meravigliosa* (It's a Wonderful Life, Usa 1945)

Marcel Carnè *Amanti Perduti* (Les enfants du paradis, Francia 1945)

Roberto Rossellini *Paisà* (Italia 1946)

Robert Siodmak *I gangsters* (The Killers, USA 1946)

John Ford *Sfida infernale* (My Darling Clementine, Usa 1946)

Howard Hawks *Il grande sonno* (The Big Sleep, Usa 1946)

William Wyler *I migliori anni della nostra vita* (The Best Years of Our Lives, USA 1946)

Roberto Rossellini *Germania anno zero* (Italia 1947)

Claude Autant-Lara *Il diavolo in corpo* (Le diable au corps, Francia 1947)

Vittorio De Sica *Ladri di biciclette* (Italia 1948)

Robert Flaherty *Louisiana Story* (Id., USA 1948)

Michael Powell & Emeric Pressburger *Scarpette rosse* (The Red Shoes, GB 1948)

Howard Hawks *Il fiume rosso* (Red River, USA 1948)

John Ford *I cavalieri del Nord Ovest* (She Wore a Yellow Ribbon, Usa 1949)

Carol Reed *Il terzo uomo* (The Third Man, GB 1949)

Max Ophüls *La ronde* (Id., Francia 1950)

Akira Kurosawa *Rashomon* (Id., Giappone 1950)

Michelangelo Antonioni *Cronaca di un amore* (Italia 1950)

Billy Wilder *Viale del tramonto* (Sunset Boulevard, USA 1950)

Robert Bresson *Diario di un curato di campagna* (Journal d'un curé de campagne, Francia 1951)

George Sidney *Scaramouche* (Id., USA 1952)

Vittorio De Sica *Umberto D.* (Italia 1952)

Kenji Mizoguchi *La vita di O-Haru, donna galante* (Saikaku Ichidai Onna, Giappone 1952)

Jacques Tati *Le vacanze del signor Hulot* (Les vacances de Monsieur Hulot, Francia 1952)

Orson Welles *Otello* (Othello, Itali/Francia/Usa 1952)

Fred Zinnemann *Mezzogiorno di fuoco* (High Noon, USA 1952)

Stanley Donen & Gene Kelly *Cantando sotto la pioggia* (Singin' in the Rain, Usa 1952)

Vincente Minnelli *Spettacolo di varietà* (The Band Wagon, USA 1953)

Max Ophüls *I gioielli di Madame De...* (Madame de..., Francia 1953)

Federico Fellini *I vitelloni* (Italia 1953)

Yasujiro Ozu *Viaggio a Tokyo* (Tokyo Monogatari, Giappone 1953)

George Stevens *Il cavaliere della valle solitaria* (Shane USA 1953)

Kenji Mizoguchi *I racconti della luna pallida d'agosto* (Ugetsu Monogatari, Giappone 1953)

Luchino Visconti *Senso* (Italia 1954)

Elia Kazan *Fronte del porto* (On the Waterfront USA 1954)  
Jacques Becker *Grisbi* (Touchez pas au grisbi, Francia 1954)  
Akira Kurosawa *I sette samurai* (Sichinin No Samurai, Giappone 1954)  
Robert Bresson *Un condannato a morte è fuggito* (Un condamné à mort s'est échappé, Francia 1956)  
Pietro Germi *Il ferroviere* (Italia 1956)  
Kon Ichikawa *L'arpa birmana* (Biruma no Tategoto, Giappone 1956)  
John Ford *Sentieri selvaggi* (The Searchers, Usa 1956)

### III. DALLA CRISI ALLA CONTEMPORANEITÀ

Louis Malle *Ascensore per il patibolo* (Ascenseur pour l'échafaud, Francia 1957)  
Ingmar Bergman *Il settimo sigillo* (Det Sjunde inseglet, Svezia 1957)  
Ingmar Bergman *Il posto delle fragole* (Smultronstället, Svezia 1957)  
Sidney Lumet *La parola ai giurati* (Twelve Angry Men, USA 1957)  
Akira Kurosawa *Il trono di sangue* (Kumonosu-jo, Giappone 1957)  
Andrzej Wajda *I dannati di Varsavia* (Kanal, Polonia 1957)  
Stanley Kubrick *Orizzonti di gloria* (Paths of Glory, Usa 1957)  
Orson Welles *L'infemale Quinlan* (Touch of Evil, Usa 1958)  
Mario Monicelli *I soliti ignoti* (Italia 1958)  
François Truffaut *I quattrocento colpi* (Les 400 coups, Francia 1959)  
Jean-Luc Godard *Fino all'ultimo respiro* (A bout de souffle, Francia 1959)  
Pietro Germi *Un maledetto imbroglio* (Italia 1959)  
Federico Fellini *La dolce vita* (Italia 1959)  
Billy Wilder *A qualcuno piace caldo* (Some Like It Hot, Usa 1959)  
John Cassavetes *Ombre* (Shadows, Usa 1959)  
Alfred Hitchcock *Psycho* (Psycho, Usa 1960)  
Karel Reisz *Sabato sera, domenica mattina* (Saturday Night and Sunday Morning, GB 1960)  
Luchino Visconti *Rocco e i suoi fratelli* (Italia 1960)  
Luis Buñuel *Viridiana* (Id., Messico/Spagna 1961)  
Pietro Germi *Divorzio all'italiana* (Italia 1961)  
Pier Paolo Pasolini *Accattone* (Italia 1961)  
Alain Resnais *L'anno scorso a Marienbad* (L'Année dernière à Marienbad, Francia 1961)

Dino Risi *Il sorpasso* (Italia 1962)

Orson Welles *Il processo* (Le procès, Italia/Francia/RFT 1962)

Joseph Losey *Il servo* (The Servant, GB 1963)

Federico Fellini *Otto e mezzo* (Italia 1963)

Lindsay Anderson *Io sono un campione* (This Sporting Life, GB 1963)

Francesco Rosi *Le mani sulla città* (Italia 1963)

Luchino Visconti *Il gattopardo* (Italia 1963)

Glauber Rocha *Il dio nero e il diavolo biondo* (Deus e o diabo na terra do sol, Brasile 1964)

Marco Bellocchio *I pugni in tasca* (Italia 1965)

Jean-Luc Godard *Il bandito delle ore undici* (Pierrot le fou, Francia 1965)

Miklòs Jancsó *I disperati di Sandor* (Szegénylegények, Ungheria 1965)

Milos Forman *Gli amori di una bionda* (Lásky jedné plavovlásky, Cecoslovacchia 1965)

Michelangelo Antonioni *Blow Up* (Italia 1966)

John Frankenheimer *Operazione diabolica* (Seconds, USA 1966)

Luis Buñuel *Bella di giorno* (Belle de jour, Francia 1967)

Jean-Pierre Melville *Frank Costello faccia d'angelo* (Le samurai, Francia 1967)

Andrej Tarkovskij *Andrej Rublëv* (Id., URSS 1967)

François Truffaut *Baci rubati* (Baisers volés, Francia 1968)

Claude Chabrol *Stephane, una moglie infedele* (La femme infidèle, Francia 1968)

Stanley Kubrick *2001: Odissea nello spazio* (2001: A Space Odyssey, GB 1968)

Fernando Ezequiel Solanas *L'ora dei forni* (La hora de los hornos, Argentina 1968)

Roman Polanski *Rosemary's Baby* (Id., Usa 1968)

Dennis Hopper *Easy Rider* (Id., Usa 1969)

Sam Peckinpah *Il mucchio selvaggio* (The Wild Bunch, USA 1969)

Eric Rohmer *La mia notte con Maud* (Ma nuit chez Maud Francia 1969)

Bernardo Bertolucci *Il conformista* (Italia 1970)

Stanley Kubrick *Arancia meccanica* (A Clockwork Orange, GB 1971)

Werner Herzog *Aguirre, furore di dio* (Aguirre, der Zorn Gottes, RFT 1972)

Francis Ford Coppola *Il Padrino* (The Godfather, USA 1972)

Andrej Tarkovskij *Solaris* (Id., URSS 1972)

Peter Bogdanovich *Paper Moon* (Id., Usa 1973)

Paolo e Vittorio Taviani *Allonsanfan* (Italia 1973)  
Robert Altman *Nashville* (Id., Usa 1974)  
Rainer Werner Fassbinder *Il diritto del più forte* (Faustrecht der Freiheit, RFT 1974)  
Ettore Scola *C'eravamo tanto amati* (Italia 1974)  
Théodoros Anghelopoulos *La recita* (O thiasos, Grecia 1975)  
François Truffaut *Adele H., una storia d'amore* (Adele H., Francia 1975)  
Wim Wenders *Falso movimento* (Falsche Bewegung, RFT 1975)  
Woody Allen *Io e Annie* (Annie Hall, Usa 1976)  
Carlos Saura *Cría cuervos* (Id., Spagna 1976)  
Martin Scorsese *Taxi Driver* (Id., USA 1976)

## APPENDIX 4

### **Invitation letter to take part in the research for users of the website YouTube**

Dear YouTuber,

I am a postgraduate student writing a thesis on the effects of digitalization on the cinematographic heritage sector and online audiences and your account has been selected to take part in the research.

“Cinematographic heritage” means great movies from the past, like silent movies or classics.

I would be most grateful if you would assist me with this research by replying to a short survey. The survey consists of 5 simple questions and it will take you about 5 minutes.

The link is <http://www.createsurvey.com/c/67520-copfrQ/>

The survey is absolutely anonymous and your privacy is guaranteed.

**Your cooperation will be extremely helpful for future developments of online databases and will hopefully lead to greater accessibility of high quality content of the cinematographic heritage.**

THANK YOU VERY MUCH!

Silvia

[305015sc@student.eur.nl](mailto:305015sc@student.eur.nl)

PS: if you have any questions, do not hesitate to send a message to this account or to my email address.

APPENDIX 5

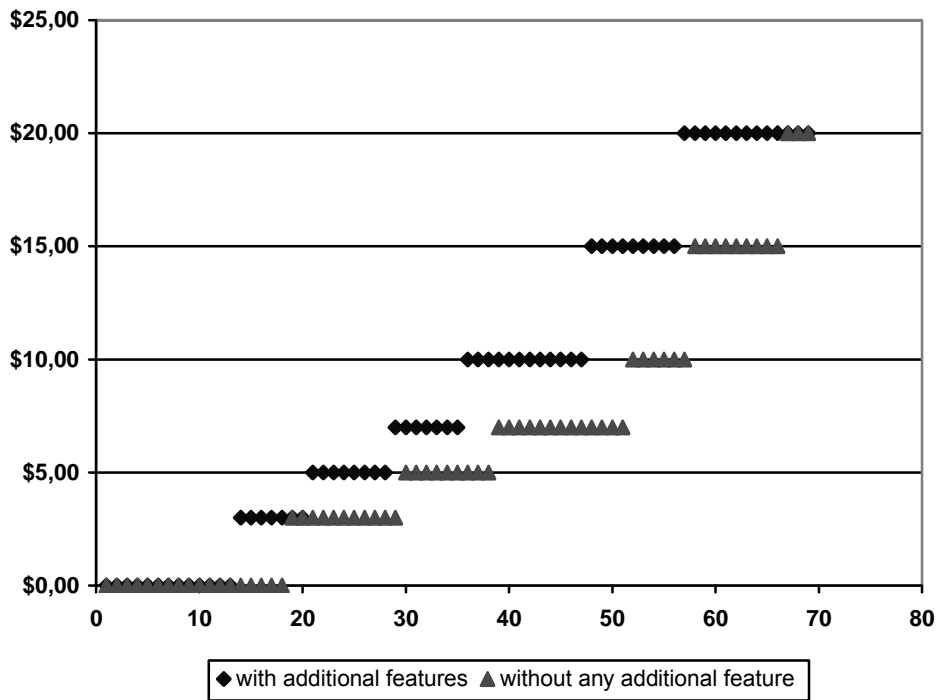
**WTP for DVD and for traditional projection**

	DVD with additional features				DVD without any additional features			
	US \$		EURO		US \$		EURO	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
<b>0 to 3.00</b>	13	18.8	11	18.6	18	26.1	13	22.0
<b>3.00 to 5.00</b>	7	10.1	6	10.2	11	15.9	12	20.3
<b>5.00 to 7.00</b>	8	11.6	8	13.6	9	13.0	12	20.3
<b>7.00 to 10.00</b>	7	10.1	12	20.3	13	18.8	8	13.6
<b>10.00 to 15.00</b>	12	17.4	10	16.9	6	8.7	9	15.3
<b>15.00 to 20.00</b>	9	13.0	6	10.2	9	13.0	4	6.8
<b>More than 20.00</b>	13	18.8	6	10.2	3	4.3	1	1.7
<b>Total</b>	69	100.0	59	100.0	69	100.0	59	100.0

	Theatrical release				Projection of the original print			
	US \$		EURO		US \$		EURO	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
<b>0 to 3.00</b>	11	16.2	13	22.4	10	14.5	8	13.6
<b>3.00 to 5.00</b>	10	14.7	7	12.1	9	13.0	6	10.2
<b>5.00 to 7.00</b>	10	14.7	16	27.6	4	5.8	6	10.2
<b>7.00 to 10.00</b>	19	27.9	13	22.4	13	18.8	12	20.3
<b>10.00 to 15.00</b>	10	14.7	5	8.6	13	18.8	13	22.0
<b>15.00 to 20.00</b>	6	8.8	2	3.4	11	15.9	8	13.6
<b>More than 20.00</b>	2	2.9	2	3.4	9	13.0	6	10.2
<b>Total</b>	68	100.0	58	100.0	69	100.0	59	100.0



### WTP for DVDs, with or without additional features



**With add. features:**

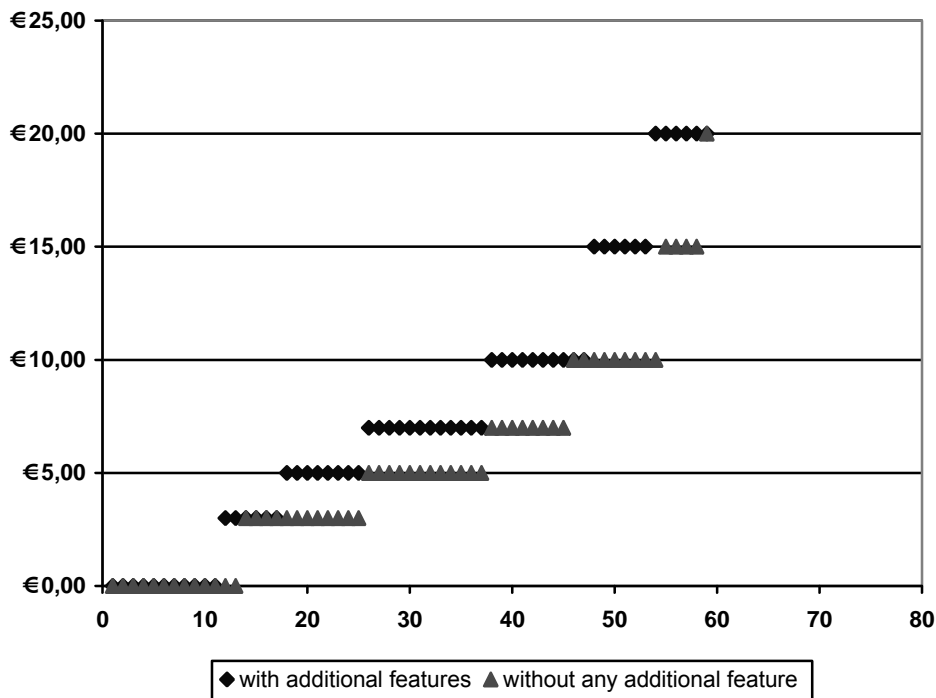
**MEAN = 9.60**

**MEDIAN = 7.00**

**Without add. features:**

**MEAN = 6.14**

**MEDIAN = 5.00**



**With add. features:**

**MEAN = 7.66**

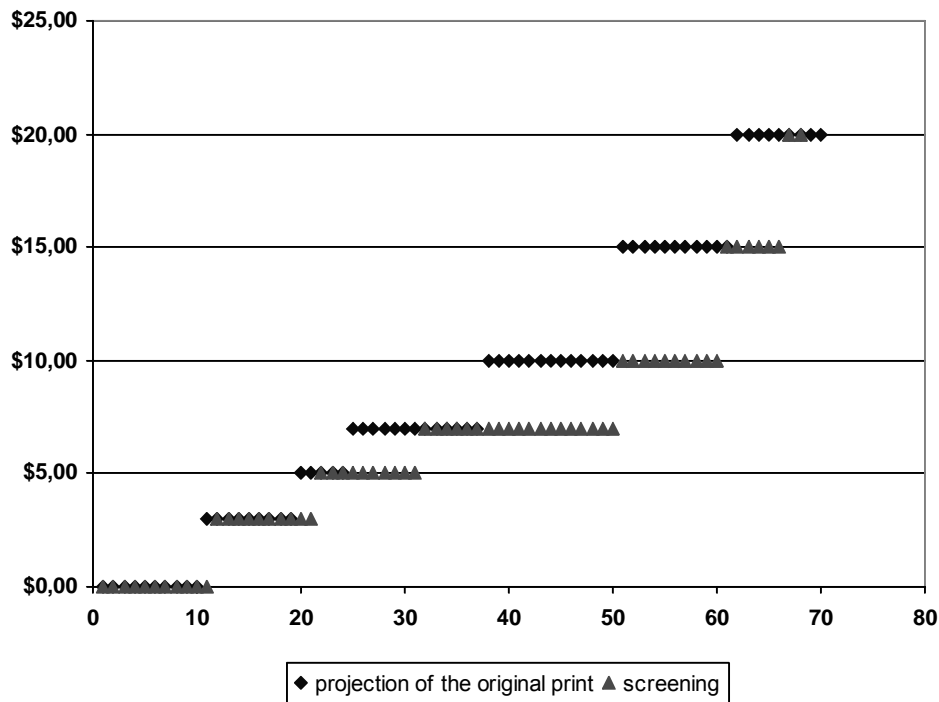
**MEDIAN = 7.00**

**Without add. features:**

**MEAN = 5.46**

**MEDIAN = 5.00**

## WTP theatrical release



**Original print:**

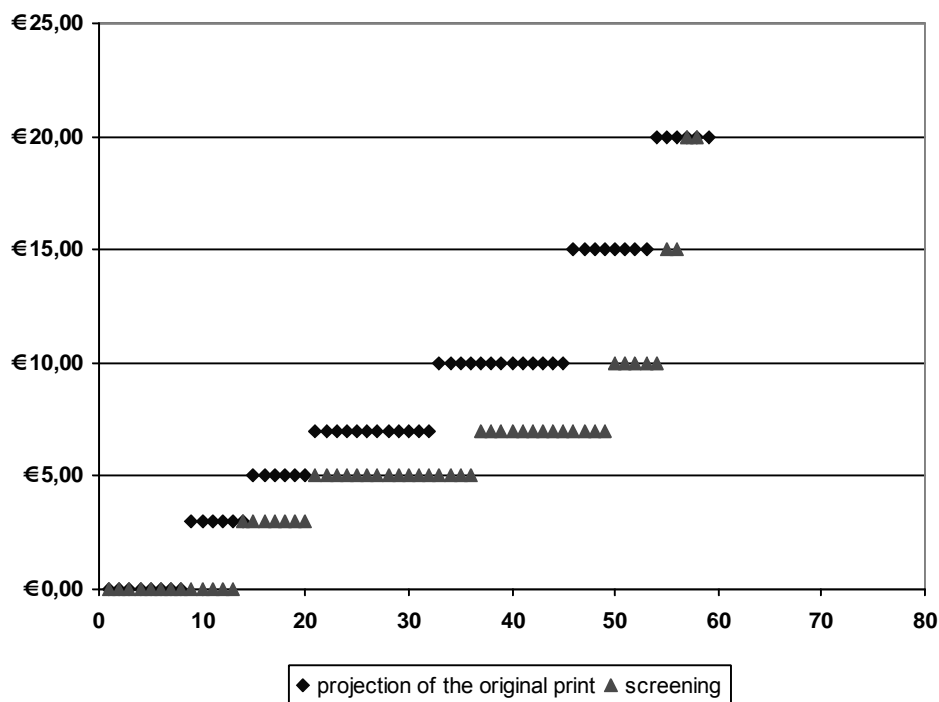
**MEAN = 8.83**

**MEDIAN = 7.00**

**Screening:**

**MEAN = 6.51**

**MEDIAN = 7.00**



**Original print:**

**MEAN = 8.51**

**MEDIAN = 7.00**

**Screening:**

**MEAN = 5.38**

**MEDIAN = 5.00**