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Film and Tourism: an Information System for Disclosing the Cinematographic Attractiveness of Destinations

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Abstract

The Department of Cultural Heritage of the University of Padova investigated the topic of film-induced tourism in a year-long project, concluded in April 2015, titled *Strumenti innovativi per la promozione turistica: film induced tourism* (Novel tools to promote tourism: film induced tourism). The project was financed by the Veneto Region through ESF funds. It brought together the expertise of film scholars, computer scientists and destination management experts, in partnership with public bodies (Provincia di Padova) and ICT

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companies.

The goal of the project was to develop an information system that fosters film-induced tourism combining data about a geographical area and the movies produced in it. The system is designed as a platform to store and convey rich contents, able to address the needs of the tourist but also of stakeholders as DMOs and film commissions.

The system was planned as a model for the destinations which could take advantage of a significant cinematographic background, yet are unlikely to spontaneously produce considerable film-induced tourism phenomena. The province of Padova has been used as a case study.

Il Dipartimento dei Beni Culturali dell'Università di Padova ha da poco concluso un progetto di ricerca intitolato *Strumenti innovativi per la promozione turistica: film-induced tourism*, finanziato dalla Regione Veneto con fondi europei FSE, che ha visto coinvolti studiosi di cinema, di informatica ed esperti di destination management, in partenariato con enti pubblici (Provincia di Padova) e aziende private del ramo ICT.

L'obiettivo del progetto è stato lo sviluppo di un sistema informatico che combini i dati relativi ad un territorio e i film ivi realizzati, con lo scopo di promuovere il film-induced tourism. Il sistema è disegnato come una piattaforma in grado di memorizzare, elaborare e rendere fruibili contenuti multimediali e di ricco carattere informativo, capaci di intercettare sia le necessità del turista che quelle di stakeholders quali DMO e film commission. Il sistema si propone come modello per le realtà che godono di una tradizione cinematografica ricca ma non sufficiente a far nascere fenomeni spontanei di "cineturismo". La provincia di Padova è stata usata come caso di studio.

1. *Introduction*

The Department of Cultural Heritage of the University of Padova investigated the topic of film-induced tourism in a year-long project, concluded in April 2015, titled *Strumenti innovativi per la promozione turistica: film-induced tourism* (Novel Tools to Promote Tourism: Film-induced Tourism). The project was financed by the Veneto Region through ESF funds. It brought together the expertise of film scholars, computer scientists and destination management experts, in partnership with public bodies (Provincia di Padova) and ICT companies.

The goal of the project was to develop an information system that fosters film-induced tourism combining data about a geographical area and the movies produced in it. The system is designed as a platform to store and convey rich contents, able to address the needs of the tourist but also of stakeholders as DMOs and film commissions.

The system was planned as a model for the destinations which could take advantage of a significant cinematographic background, yet are unlikely to spontaneously produce considerable film-induced tourism phenomena, and it

strongly facilitates the integration of film heritage promotion with the tourist offer already existing in the area. The province of Padova has been used as a case study.

The paper is divided in three parts discussing the following topics, issued from the different expertise at work:

1. The relationship between Destination Management, Destination Marketing and film-induced tourism, with particular reference to the context of the Italian region of Veneto, where the province of Padova is set.
2. The promotion of film as cultural heritage in tourism related activities and materials, which was one of the main goals of the project, and the consequent strategies adopted in the system.
3. The detailed structure of the developed system.

2. *Destination Management, Destination Marketing and Film-induced Tourism. General Observations with Particular Reference to the Region of Veneto*

International tourism has been constantly growing after the Second World War and, according to the UNWTO (World Tourism Organization), will continue this trend to the point that one billion eight hundred million international arrivals are expected in 2030. This frame given, it is essential to wonder what destinations will be able to take advantage of this growth and how it will be possible to make such growth sustainable in economic, social and environmental terms.

Though still ranking among the first ten countries for international arrivals, Italy has seriously lost competitiveness in the last decades. In 2013 the World Economic Forum, measuring the Travel & Tourism Competitiveness Index, placed Italy at the 26th place in the world and the 18th in Europe.

In Veneto, which is the first region in Italy for arrivals and nights, tourism is strongly concentrated in a few destinations, which in some cases exhibit signs of market saturation and carrying capacity problems, in other cases are susceptible to stagnation and decline. It is enough to consider that more than 67% of nights are concentrated in the first 10 destinations, 82% in the first 20 destinations and 91% of the overnight stays is registered in only 50 places.

It is evident that in this region too, the concept of future tourism can't be just oriented on policies of promotion and marketing of the tourist offer and it must rather be faced by means of more general Destination Management strategies. In fact, if in a short term perspective we tend to over-use the attractions and natural resources of a destination, in the long term it is necessary to appropriately manage the destination, in order to optimize economic benefits and avoid the

exceeding of the carrying capacity, the lowering of the visitor's "quality of experience" and the consequent decrease of demand. Destination Management derives from the need of integrating in a strategic process all the actions which are necessary to manage the attraction factors and the tourist services, in order to stimulate the market demand and to place the destination in a competitive field suitable to the area's specific features.

The Veneto region meets now a good opportunity thanks to the scenario designed by the new regional law on tourism (L.R. 14 giugno 2013, n. 11, "Sviluppo e sostenibilità del turismo Veneto"), which allows to act according to modern Destination Management principles, fosters the promotion through a thematic approach and contributes to the affirmation of a shared vision, also by means of encouraging public/private partnerships. The new DMOs (Destination Management Organizations) will be able to guarantee a coordinated management of visitor information, welcoming, assistance and promo-commercialization of the tourism product, which until nowadays have been managed separately by public and private bodies.

In the operating area of the new DMOs, it will also be possible to develop appropriate Destination Marketing strategies. The fundamental activities of Destination Marketing are at a first level visitor information, welcoming and entertainment; at a second level, the management of the tools to promote the destination externally and commercialize its products. If traditional marketing was based on the image and brand construction, the current tourism market needs innovation, dynamism and interactivity. Among the Destination Marketing activities which could be implemented, there are those connected to films and TV series, also in order to foster the phenomenon of film-induced tourism.

In the Veneto region too, it is by now evident to all stakeholders that cinema and TV productions not only create economic and occupational outcomes (thanks to the activities and expenses sustained during the shooting period), but also guarantee a considerable contribution in terms of celebrity, exposure and image of the destination itself, of its products of excellence, attractions and identity.

To allow this to happen it is essential, once more, a governance inspired to Destination Management principles, implementing effective organizational models capable of connecting cinema and tourism industries in order to maximize the economic benefits for the destination.

The ability of using the technologies provided by ICT is a key element to make more and more evident and usable not only the multimedia contents, but all the various elements related to these two heterogeneous industries.

In this sense, a multi-purpose information system like the one developed in the project, capable of merging information relevant to both cinema and tourism sectors, could prove to be a useful tool.

3. *Promoting Film as Cultural Heritage through Tourism Related Activities and Materials: Strategies Adopted in the Information System Designed in Padova*

Besides the acknowledgement of the role of films and TV series in destination marketing, another idea important for our project concerned the promotion of film as cultural heritage[1] through tourism related activities and materials.

The EU «has recognised film as an essential component of European heritage»[2] and its promotion through various channels appears even more urgent because in Europe «film education has always struggled to establish itself in school curricula»[3].

Let's propose a very simple, yet revealing, observation: while tourist guidebooks describe architectures or paintings in detail, dealing with basic technical and stylistic issues, this rarely happens in the description of film scenes in the numerous websites, apps or printed guidebooks related to film-induced tourism. In most cases they focus on a limited range of aspects, such as the viewer's supposed emotion in relation to the plot, the stars' appearances or the so-called "trivia" (curiosities and anecdotes).

Even though the emotional involvement in film watching and the intense fan interest in single films and movie stars are what mainly drives film-induced tourism phenomena, other aspects of cinema may be of interest for different types of tourists. A recent study describing the psychological profile of film tourists, for example, highlights a slight preeminence of the «playful and dreamer type» (*ludico e sognatore*, 43%), but nearly just as many are identified as being «committed and autonomous in their choices» (*impegnato e autonomo nelle scelte*, 39,5%), more interested in culture than in entertainment[4].

It will be interesting, for the topics of the current and the next chapter, to describe the findings of a survey of the existing Italian and European websites and apps for smartphone and tablet which relate films and places, with a focus on systems directly aimed at fostering film-induced tourism (created by either DMOs, film commissions or public bodies). The survey was carried out during the opening stage of the project (2014) and the websites and apps were analyzed by using a set of parameters created for this purpose. These parameters ranged from the most generic ones (e.g. the areas or films considered by the database) to others which have been defined by applying specific tools provided by computer science and by film studies (e.g. when evaluating the information given in relation to entire films and single film scenes).

[1] See also di Cesare, Rech 2007, pp. 70-74.
[2] European Commission 2014, p. 9.
[3] British Film Institute 2012, p. 5.
[4] Nelli *et al*. 2014.

From the perspective of computer science, the most interesting findings were that the parameters for queries (e.g. film title, location…) and for recommendations (e.g. based on proximity, locations used for the same film, …) proved to be very limited, and that it was usually impossible to create personalized tourist itineraries. In the next chapter we will describe how these findings have been used in the development of our system.

From the point of view of film studies, it was interesting to ascertain that an analysis of the film scene shot in a certain location was proposed in almost none of the websites and apps taken into account. The location was often described with tourist information and sometimes the reason for the choice of a particular place as set for a certain scene was suggested, but there was no analysis of how the location was portrayed through the specific cinematographic means.

I do not intend to claim that such an analysis is useful for widening knowledge about audiovisual language: my point is that it participates in the forming of destination image. The image of a place in a film is not just constructed through narrative, but even more through framing, camera movements, and editing, not to mention sound[5]. A film scene with its particular language may highlight what is traditionally attributed to a certain location, but also build a new and outstanding image. Just to give a few examples from films shot in Padova, the vertical structure of the Anatomic Theatre in Palazzo Bo (the headquarters of the University) is strongly emphasized by striking plans from above and from below in the opening scene of *Galileo Galilei* (Cavani, 1968), while photography stresses the vibrant colors of another area of the building – somehow enlivening its traditional solemn image – in the comedy *La sedia della felicità* (C. Mazzacurati, 2013). The monumental centre of Padova is filled with overwhelming dynamism thanks to music and speed editing in the opening scene of *La moglie del prete* (D. Risi, 1971).

Without joining the debate about matters of authenticity or of identity, I would like to address a proposal to those who understandably complain that for unaware tourists films "betray" the presumed "authentic" image of a place – or even give a "bad" one. Instructing tourists about the construction of filmic space as the result of a representational process, not unlike that of a painting, would be a more viable solution than giving up film-induced tourism and its economic benefits, or, worst, considering forms of unacceptable censorship.

Starting from these considerations, one of the main issues at stake in our project became that of exploiting the tools provided by the analysis of space in films, typical of film studies literature, in order to write the texts contained in the database. The texts also required a large effort because they were all standardized in structure (as will be detailed later) and length (number of characters), with different standards according to their different functions.

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[5] The issue of film language, considered as «a key to the promotion of destination image», is also addressed in Hao, Ryan 2013.

The standards were defined with the help of the communication agency that collaborated with the project, which also contributed to the identification of an accessible and concise style for writing.

The aim of all the procedures adopted was to provide materials directly usable by DMOs or other bodies for the development of tourist activities and websites, apps and guidebooks. A wide range of possibilities of use, for several platforms (smartphone, tablet, PC) and different levels of detail (entire movie, single film scene), have been considered.

The relevant textual parts inside the database are related to entire films (the entities we called "movie") and to brief movie excerpts suitable for watching on a smartphone or tablet, yet still meaningful to the viewer in terms of narrative (the entity "estratto").

Concerning the description of a "movie", we have inserted four types of text. The first and the fourth respectively summarize the plot and propose some "trivia", while the second and the third one are more original proposals. The second text briefly places the film in the history of cinema and in the director's career, stressing its main thematic and stylistic features. The third text is dedicated to the general relationship of the movie with the considered area (the province of Padova): it contextualizes in the film's plot all the parts shot or set in the area, it lists the main locations shown and proposes general remarks about their use, and it highlights the presence of characters or products typical of the area. The first text (plot) and the third one (relationship with the location) have been formulated with the purpose of being shown to the viewers jointly with each "estratto" related to the film, in order to better help them understand the connection.

Concerning the "estratto" we have a single text, which is internally structured in three parts. The first part contextualizes the narrative events of the "estratto" in the plot of the entire film. The second part identifies the locations and analyzes how they are used in terms of narrative function, mise-en-scene, filming and editing (here lies the main application of the aforementioned analysis of space in films). The presence of possible characters, products etc. which are typical of the area is also pointed out. The third part briefly highlights one or more thematic, technical or stylistic aspects which are particularly evident in the "estratto" but do not necessarily concern its relationship with the location.

In conclusion, we can affirm that the database model has been expressly designed for creating a positive synergy between tourist promotion and the promotion of film as cultural heritage.

4. *An Architecture to Store and Convey Rich Contents in an Information System for Film-induced Tourism*

The aim of the research project *Strumenti innovativi per la promozione turistica: film induced tourism* was the development of an information system for fostering film-induced tourism. The goals of such a system were quite ambitious: on the one hand, we wanted it to be able to address the needs of the different actors and stakeholders involved in the context of film-induced tourism; on the other hand, we wanted the system to play a role in the promotion of film as cultural heritage.

A survey carried out on professionals working in the fields of cinema and tourism allowed us to identify the different types of data needed by the different potential users of the system; furthermore, it helped us to define how the data should be presented to each type of user. Table 1 summarizes how each user type has different interests and hence needs different data, presented in different ways.

User type	Interests	Useful data	Data presentation
Tourist	discover new places, learn new things both on movies and the territory	entertaining, appealing and informative data about movies and territory	maps, itineraries, recommendations, video clips
Tour operator, destination manager	touristic promotion, creation of touristic itinerary	location used in movies, information on movies produced	textual, video clips
Film maker, location manager	discover locations for new movies, see how the territory was read in previous movies	visual and logistic information on the locations	maps, video clips, data sheets

Tab. 1. The different system users' needs (after Lavarone *et al.* in press)

As the table shows, to serve all the users' needs, our system has to store multimedia (video clips and images), georeferenced data, information at different levels of detail, numerical and textual data of various kind as summaries, references, data sheets, ...

To store all the information required in a structured way, we had to design a novel database model for our system[6].

The central element of the database is the entity "movie", to which all the data stored are related. The movie is described using standard attributes (e.g. title, poster, plot, year of production, ...) but we also added texts that enlighten the relationship between the movie and the territory and discuss the movie

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[6] Lavarone *et al.* in press.

from a historical and critical perspective; these texts, expressly written, play an important role in the promotion of film as cultural heritage (see previous chapter).

To describe the movie at a higher level of detail, the entity movie is related to another entity, called "estratto". The "estratto" is a contiguous portion of the film with a narrative consistency.

Each "estratto" comprises a clip of the movie, a title, a descriptive text and a score. The score is assessed by experts and measures the artistic quality of this portion of the movie and its possible appeal for the viewer.

The duration of the clip and the length of the text are carefully selected to be suitable for promotional purposes (e.g. to be used by a DMO in a guided tour), while the content and composition of the text and the score give the user a way to better understand the clip and compare it to other clips.

To let the system be able to describe the movie at an even finer level of detail, the entity "movie" is related to another entity, called "moi". The "moi" (Moment Of Interest) is the atomic unit of information of a "movie" and it enables to record the smallest event on screen considered important for the system. "movie", "estratto" and "moi" are connected and the information about one of them can be used to infer data about the others.

As our system is aimed at tourism, the main focus of the "moi" is to track the different places that appear on screen during each movie. This type of information is fundamental to build a system for the tourist (e.g. a movie tour app), but it is of great interest also for other users of the system, as DMOs and film commissions. To track the places that appear in a "moi", we use the entity called "poi" (Point Of Interest): each "poi" stores the georeference of a place, together with a unique id, a common name, an optional textual comment and a type description (e.g. street, square, monument,...).

The entity "moi" is not used just to track places: beside the "poi", each "moi" is described also using tags, that allow to record features and events relative to that specific moment of the movie.

The description of a "moi" is articulated in groups of tags, each group relevant to a defined aspect (e.g. who is on screen, which emotions are evoked, the time setting, …); tags are expressed as a combination of both free words and words extracted from a vocabulary (when describing technical aspects).

The entities "moi", "poi" and "tag" give the system an unprecedented accuracy in describing what appears on screen during a movie, allowing, for instance, to track exactly which parts and in which locations the movie was shot, or which parts have (or have not) on screen a famous actor or an item.

Of course all this wealth of information would not be useful if it could not be accessed in a suitable way; alongside the database, the system was hence equipped with a collection of functions to query and navigate the data.

One of the most important functions is the search. Developing our own search engine, we opted for a free-text search function, that enables the user to

search all the database without any constraint; this makes at the same time the search engine very easy to use and very powerful: typing the name of a person, for instance, the system will search all the movies where this person appears, worked or has been cited.

The search engine fully supports geographical searches: not only users can find for instance all the parts of the movies shot in a specific place (e.g. in the central square of a city) or around a chosen location (e.g. in the city center area) but, thanks to the high level of detail of the system, they can find all the clips shot in a generic location (e.g. in a square or under an arcade). This feature can be very useful e.g. to a location manager to learn how the territory was used by the directors of previous movies and to discover locations that might be less known.

Beside searching the data, the system is able to analyze them and to group and link the information, letting the user explore the database in a continuous way or presenting the data as a collection of elements with some common attributes (e.g. clips evoking a romantic feeling), that can be used to build a sort of personalized itinerary.

The big quantity of detailed data stored in the system allowed us to develop a function that, by analyzing the data, provides recommendation.

The recommendation engine suggests content to the users that is related to what they are searching or viewing. This function, that is aimed more to the tourist than to the other user types, allows to navigate through the data in a nonlinear way, discovering new content and learning new information about both the territory and the cultural aspects of cinema.

We developed a system that is based on a highly detailed database, containing rich information about the movies shot in a given territory, and on a set of advanced functions to analyze, query and navigate the data gathered. The data model allows a fine grained description not only of the places, but also of the events on screen, recording information that are valuable to all the system users. The three levels of detail ("movie", "estratto", "moi"), each with its own distinct piece of information, work together to give a rich, detailed and comprehensive description of each movie. The architecture is flexible and interoperable, as the system can be customized by adding data to each of the entities and can communicate with other systems through public APIs. The functions developed allow to query and navigate the data and can be used to build multimedia applications conveying rich and informative content.

Particular care was paid to develop a system that could be appealing to the tourist, with contents specially tailored (in length, form, …) to be accessible, an architecture that could easily be integrated with mechanism of the social networks (e.g. "likes", comments) and functions to explore and discover the data that could make the experience engaging. Furthermore, the system was specifically enriched with contents to promote the knowledge and understanding of cinema.

This novel mix of features enables our system to go beyond the limits of the existing solutions mentioned in the previous chapter. By answering the needs of the different stakeholders of film-induced tourism and by storing all the information in single place, our system could serve as a central aggregating element that could enable and improve the disclosure of the cinematographic attractiveness of a destination and possibly create new synergies to support film-induced tourism.

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