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Cinema Memories in 3D Modelling and Virtual Reality Storytelling: The Odeon Cinema in Udine

Eleonora Roaro

Abstract: *Focusing on the project* VR and AR in the Valorisation of Cultural and Artistic Heritage *within the New Cinema History framework, this paper combines microhistory related to local cinema theatres and cinema heritage, and investigates the possibilities of digital media—in this case, Augmented and Virtual Reality—for the valorisation and preservation of cultural heritage. The final output of the project was the VR reconstruction of the Udine Odeon Cinema's architecture and habits of cinemagoing that, thanks to an immersive experience via the Oculus Rift headset, evoke and simulate historical spectatorship. At least four different types of sources on the Odeon Cinema converged to form the basis of its VR reconstruction: the literature on the topic, the consultation of public and private archives, the oral sources, and photographs taken on site. This paper focuses mostly on the documents and sources used in the VR project and it aims to investigate how various and heterogeneous documents can be woven together into a philologically reliable historical reconstruction, and how they can be used in 3D modelling and VR storytelling related to cinema heritage.*

Introduction

The day I arrived in Udine, a city in north-eastern Italy (population ca 99.000) sited in the middle of the Friuli-Venezia Giulia region, I took a picture of an abandoned cinema theatre, where on an impressive facade in concrete and glass an unilluminated sign read "Cinema Odeon". I surveyed the lobby through the window and saw debris and dust on the floor, and two staircases, each the mirror image of the other, disappearing into the darkness. At the time, I did not know that later I would carry out research on that building, and memories of it, during the one-year research fellowship *VR and AR in the Valorisation of Cultural and Artistic Heritage*.[1] I only knew that I would become familiar with the city through local cinemas and their history as if they were a lens through which to look at and understand reality. As a case study of local film history, according to Robert Allen and Douglas Gomery:

> The accumulation of local histories should help reshape our thinking on vital questions of economic and social history. Also, as an important fringe benefit, local film histories not only yield information regarding the history of film, but can also lead to a more general understanding of a particular city or town. (193)

The project, which was developed within the New Cinema History framework, aimed to combine microhistory related to local cinema theatres and cinema heritage, and to investigate the potential that digital media—in this case, Virtual Reality (VR)—holds for the valorisation and preservation of cultural heritage. The final output of the project was the VR reconstruction of the Odeon Cinema's architecture and of habits of cinemagoing which, thanks to an immersive experience via the Oculus Rift headset, could evoke and simulate historical spectatorship that dealt both with the moment of watching a movie and its peripheral practice.[2]

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Indeed, "Employing 3D visualisation enables the evocation of the multiple dimensions of cinemagoing by creating dynamic, interactive models of cinema theatres and their environment" (Noordegraaf, Opgenhaffen, and Bakker 48). Storytelling in VR could also investigate the relationship between the body of the spectator and the materiality of vision according to Vivian Sobchack's notion of embodiment (2–4). Throughout the development of the project, at least four different perspectives on the Odeon Cinema converged to form the basis of the VR reconstruction and storytelling: the literature on the topic, the consultation of public and private archives, the oral sources, and photographs taken on site. This paper focuses mostly on the documents and sources used in the VR project as the problems related to 3D modelling, digital restoration of cinemagoing and digitalisation of archives have been analysed in depth in a recent publication, where I examined Julia Noordegraaf's *Cinema Parisien 3D* (Roaro 230). The aim is to investigate how various and heterogeneous documents can be woven together into a philologically reliable historical reconstruction, and how they can be used in 3D modelling and VR storytelling related to cinema heritage. A meticulous description of the research process and the archival sources can be useful to highlight the contextual perspective from which the different issues will be examined. Not only the rapid obsolescence of the VR technology imposes constant changes both in terms of hardware and software, but also this project design is strongly dependent on the materials that can be found in public and private archives, which are rarely homogeneous—hence the bottom-up approach of the "Odeon VR" case study.



Figure 1: Postcard of the Odeon Cinema in Udine, Italy in the 1950s. Courtesy Eleonora Roaro.

Why the Odeon Cinema?

Since the beginning of the twentieth century, Udine's urban space has been characterised by the presence of many cinemas, as shown both in local history literature, such as the writings of Silvano Bearzi and Renzo Valente, and in scholarly publications, such as Mario Quargnolo's pioneering work on Udine's cinemas. Quargnolo's historically accurate information relying on oral sources and archives constitutes a valid starting point for further in-depth analysis. On one hand, he lists local archives and supplied names, dates and locations of each movie theatre; on the other hand, his journalistic interest in local events provides a detailed understanding of cinemagoing habits, down to the names of such key figures as projectionists and theatre owners. Moreover, my research involved drawing up the film programming in Udine through local newspapers, such as *Il Popolo del Friuli* (1938–1945) and *Il Messaggero Veneto* (1946–1955). This was invaluable in determining the hierarchy of the cinema theatres, the distribution and circulation of films in the city, how movies were advertised, and which theatres hosted variety shows. Therefore, among first-run cinemas such as Astra (1948–1970), Cecchini (1919–1964) and Eden (1922–1959), the choice fell on the Odeon Cinema (1936–2002) because of the richness of the documents available as well as its architectonic and artistic prestige. Above all, it was an opportunity to attract interest in the city for the future of the Odeon, as the building, albeit abandoned and in a degraded condition, is still part of the cityscape. The VR reconstruction of the Odeon Cinema is a valid instrument in the raising of an awareness of the destiny of cinema theatres among citizens, as its dismantlement would impoverish the architectural heritage and urban landscape and deprive the city of recent memories. After its closure, on 14 January 2004 the movie theatre was declared of historical and artistic interest by the regional superintendent Franco Bocchieri to valorise architect Ettore Gilberti's (1876–1935) project, which was described by Quargnolo as "his most meaningful post-war work" (106). The geometric rigour of the facade in reinforced concrete contrasts with the lobby, its walls adorned with Antonio Franzolini's (1889–1963) high reliefs depicting the myth of Orpheus and Eurydice. A mural by Ugo Rossi (1906–1990) made of pierced acoustic panels covers the wall of the screening room with scenes of hunting and wild animals. A false ceiling decorated with constellations and a clock produced by the local factory Solari contribute to the embellishment of the space.

The rich, heterogeneous archival sources relating to the Odeon Cinema allowed a detailed study that considers various points of view at the same time, opening up the interdisciplinary approach that characterises New Cinema History. Indeed, cinemas are investigated as sites of social and cultural significance from the perspective of historical geography, social history, economics, anthropology or population studies (Maltby, Biltereyst, and Meers 8–9). In the case of the Odeon Cinema, documents were found in the following public archives: Archivio Centrale dello Stato MiBACT (Rome), Archivio di Stato (Udine), Biblioteca Joppi (Udine), Camera di Commercio (Udine), Cineteca del Friuli (Gemona, UD), Erpac (Codroipo, UD), Fototeca Musei Civici (Udine), Soprintendenza Belle Arti e Paesaggio del Friuli Venezia Giulia (Udine). Private sources were helpful as well, in particular the documents held by the Archivio Fotografico Brisighelli (Udine), the architects Bernardino Pittino and Enrico Sello (Udine), the Fondo Walter Faglioni – Centro Espressioni Cinematografiche (Udine) and the S.A.U.T.E.C. archive (Udine).

In addition, compared to the other first-run cinemas of Udine, the Odeon Cinema had been part of city life for many decades until the early 2000s, hence oral sources are more abundant, stratified and complex. In the interviews made with spectators (Daniele Fortunati, Carlo Gaberscek, Daniele Orlando, Giorgio Placereani, Gian Paolo Polesini) and workers, in

particular projectionists or their successors (Silvano Bearzi, Zeda Cainero, Giuseppe Cane, Giorgio Cruciatti, Franco Picco, Lucio Zarattini), owners (Guido Zabai) and cashiers (Anna Maria Condorelli), the focus was mainly memories of cinemagoing (Kuhn, "What" 87) rather than the "remembered films" (Burgin 58–73)—mere memories of fragments, sequences and images from movies. In this way, great prominence is given to peripheral and ritual practices of viewing films and elements of local history. In the following paragraphs, I will analyse in depth the use of material culture, in particular of new materialism, ephemera and intangible memories of cinema (such as oral sources) in 3D modelling and VR storytelling, and how the excavation made in the archives shapes these outcomes.

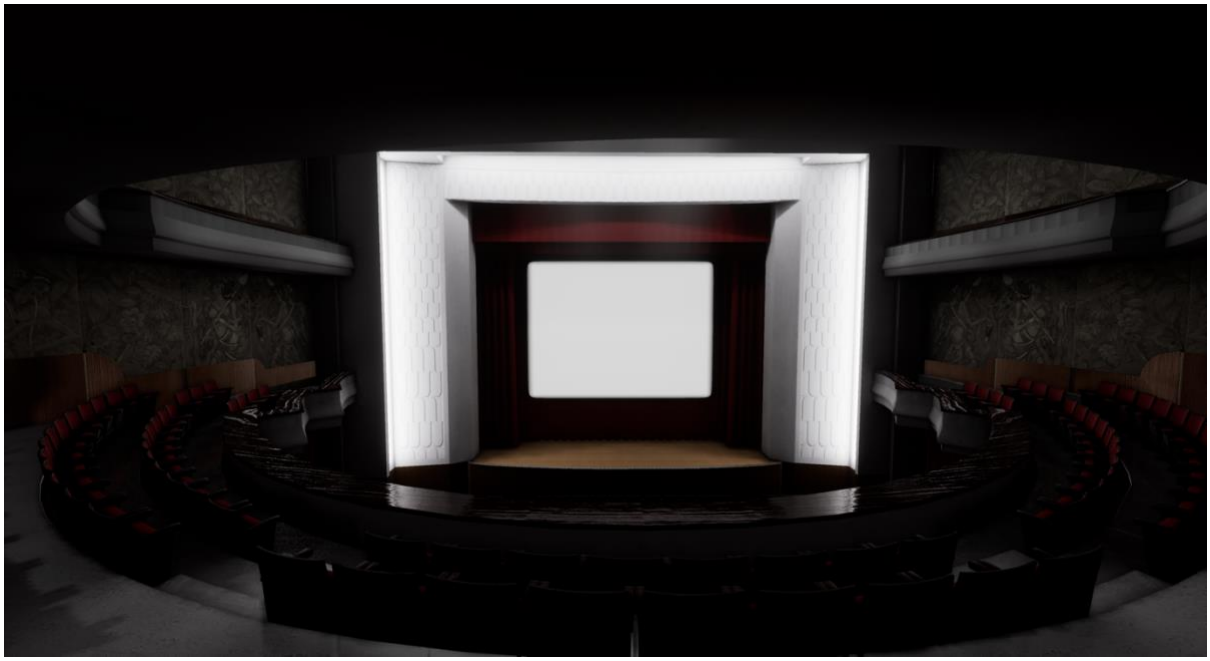


Figure 2: The VR reconstruction of the Odeon Cinema. Courtesy Alessandro Passoni.

Archival Research for 3D Modelling

Since one of the aims of the project was the 3D reconstruction of the Odeon Cinema's interior and exterior as they would have been at the time of its opening in 1936, two methodological problems arose: firstly, historical rigour (Bendicho and Grande 4–5) and scientific transparency (Denard 12) had to be maintained throughout the development of the project; and secondly, the final outcome had to be realistic in spite of the low-poly modelling, which was necessary so as to allow an efficient rendering in real time.[3] The structure of the facade and interiors (lobby, stalls area, first and second gallery) was reconstructed using 3D Studio Max software (Autodesk Inc.) and Blender, whereas the textures of the materials were created mainly with Unreal Engine 4 by combining heterogeneous sources, particularly blueprints and photographs (historical and recent), and various techniques, such as laser scanning and digital photogrammetry.[4] Moreover, discussions with architects who had been involved in (unfortunately unsuccessful) attempts to restore the cinema were invaluable. Architect Bernardino Pittino provided us with the blueprints, the original sketches from 1936, and the RHINO files; and fellow architect Enrico Sello gave us access to the DWG of the interior.[5]

The photographs of the Odeon Cinema, taken in 1937 by Carlo Pignat (Udine, 1896–1966) and made available by Fototeca Musei Civici (Udine), were compared to the original sketches so as to correct the imperfections, approximations or modifications that occurred during the cinema's construction. Photographs shot in situ in 1983 by Paolo Brisighelli (Udine, Archivio Fotografico Brisighelli) and by Vittoria Malignani, a successor to the cinema's former owners, during a survey of the Odeon Cinema in May 2019, were useful in filling some gaps and understanding the shape and volume of the building. Some areas of the cinema were not covered in the pictures from the 1930s or had few details. The information gathered from both contemporary and historic photographs proved to be effective for the project, despite some restoration having occurred to bring the cinema into line with building regulations (in 1983–1985 by Umberto Sgobaro, in 1997 by the Clocchiatti company, and in 2000 by Bernardino Pittino). In other cases, a certain level of approximation was necessary due to a lack of sources, such as the original chairs that were destroyed: there were no other references to these apart from Pignat's wide shots, and their volume and dimension in blueprints coeval with the cinema's opening. There were two possible approaches to this problem: to leave empty the areas for which accurate information was unavailable, which would jeopardise the enjoyment of the VR visualisation with the Oculus Rift, or to fill the gaps by referring to later restorations, oral sources or similar case studies in the same area and historical period. Despite its interpretative connotation, the latter option not only prioritises the completeness and pleasantness of the final result, but also brings about new processes of learning, in addition to those of maintenance and restoration. Indeed, Francesco Gabellone, referring to virtual restoration, affirms that, inevitably, a certain degree of interpretation is part of these kinds of operations, otherwise we would be talking about restitution instead of reconstruction (105).

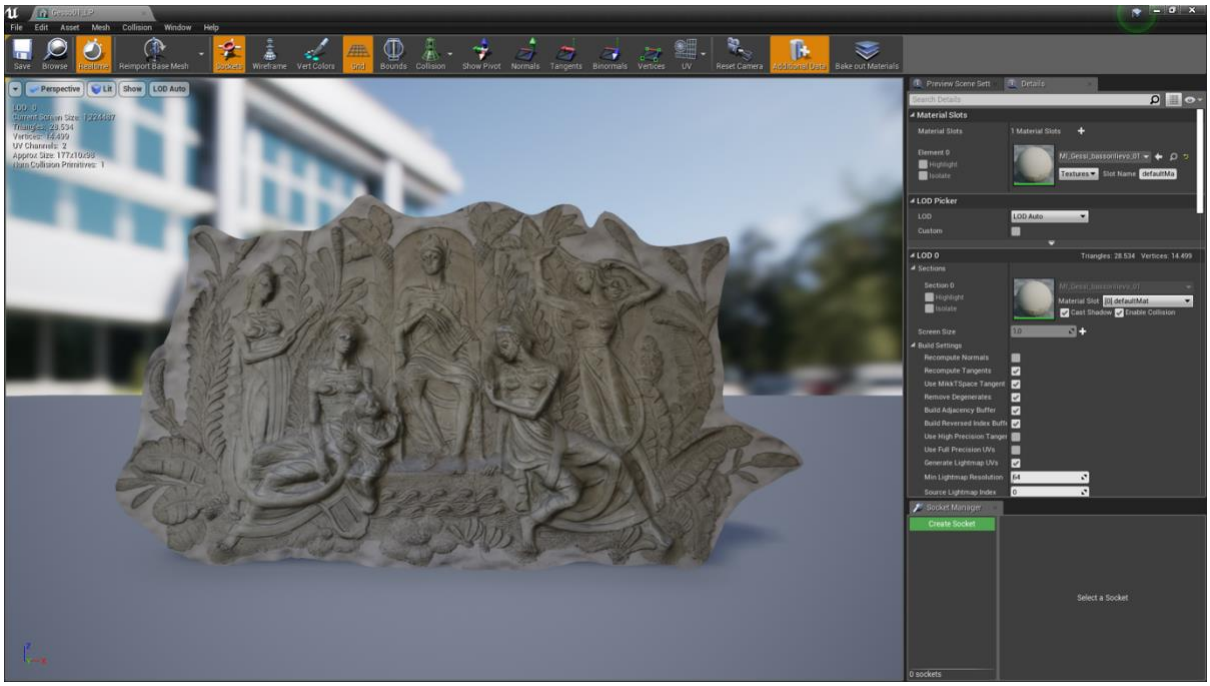


Figure 3: Franzolini's high-reliefs reconstruction in Unreal Engine 4. Courtesy Alessandro Passoni.

Two other compelling parts of the project were Antonio Franzolini's eleven high reliefs and Ugo Rossi's mural. The first ones were developed through digital photogrammetry that allowed the creation of a 3D model by assembling various pictures of the same object taken

from different angles, combining a range of software such as Meshroom, Substance Designer and Zbrush. Ugo Rossi's mural is nowadays completely soiled by cigarette smoke, so this was a particularly important task. Pignat's photographs were the starting point for the recreation of the cinema walls since his images show them in their original state. However, some portions of the building were missing from the images, and so some motifs are repeated so as not to leave empty areas. Completely accurate reconstruction would have required far more resources (both in terms of funds and time) and would probably have warranted its own restoration project.

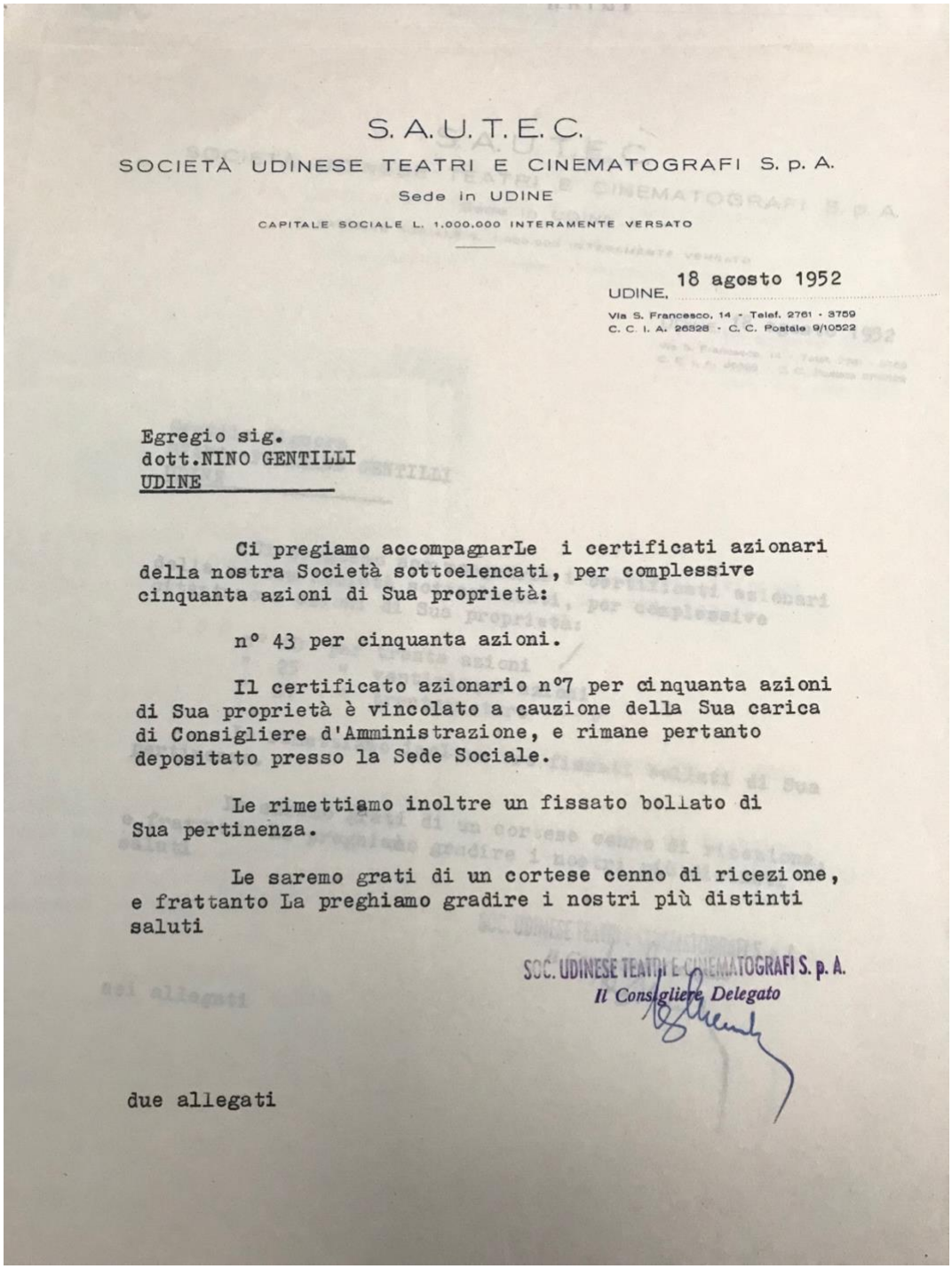
Local History and Habits of Cinemagoing in VR Storytelling

If the methodology concerning architectural reconstruction had to adhere to documents such as blueprints and photographs for objectivity, the creation of the storytelling for VR was much more dependent on the context in which we operated and the materials we found, and it required ad-hoc problem-solving. Therefore, a deep understanding of the local history from various perspectives was necessary to narrow the focus down to the peculiarities that characterise the Odeon Cinema in the period comprised between 1936–1955. I will briefly analyse some of the most interesting aspects that emerged throughout the research, which spanned from management and distribution to habits of cinemagoing and film programming. To frame this research within a wider national context, particularly helpful for the cinema memories' period examined, together with Mariagrazia Fanchi's work, is the recent publication on post-war Italy's cinema audience edited by Daniela Treveri Gennari et al. It relies on similar first-hand sources related to eight Italian cities of different sizes (Milan, Rome, Naples, Bari, Cagliari, Palermo, Florence, Turin) with a strong focus on oral history.

From the Archivio Centrale dello Stato (Rome) and local archives both public (Archivio di Stato, Camera di Commercio, Cineteca di Gemona) and private (Archivio S.A.U.T.E.C.) it was possible to retrace the history of cinema management in the city of Udine. These were very useful as, according to Paolo Caneppele, "the documents destined to or produced by public administrations allow us to individuate the bureaucratic procedure followed by a cinema to establish itself and the attitude of public administration towards it" (300; my transl.). The Odeon Cinema was managed from the time of its foundation (3 February 1936) by Società Anonima Udinese Teatri e Cinematografi (S.A.U.T.E.C.). The aim of the company was "the purchase, the sale, and the lease of cinema theatres, as well as the trade and rental of films particularly in Friuli" (Atto costitutivo; my transl.). The society, after its merger with the Società Anonima Cinema Veneti (V.I.S.) in 1953, managed most of Udine's cinemas, apart from parish theatres run by the Catholic Church: Odeon, Puccini, Centrale, Moderno, Cristallo, Friuli, Cecchini and Arena Italia. From 1936, Albino Dudetti was the manager of the company and was a recurring figure in several archival sources found in the Archivio di Stato (Udine) and the Archivio Centrale dello Stato (Rome). As he was a Jew, these documents highlight the consequences of Fascist race laws (*leggi razziali fasciste*) applied after 1938, in particular related to the exclusion of Jews from all public functions and the restriction of property ownership and the practice of professions.

After the Second World War, S.A.U.T.E.C. (was converted from a limited partnership into a joint-stock company with Nino Gentilli as administrator and Paolo Malignani and Leo Mendes as prosecutors (Atto di trasformazione). The share capital was divided as such: "Gruppo Malignani 60% (1.200.000 lire), Gruppo Gentilli 32,70% (654.000 lire), Sig. Ferdinando Ceschia 7,30% (146.000 lire)" (Convenzioni soci S.A.U.T.E.C.). Not only were

the company's governing documents helpful in finding names and understanding how the budget was organised, but also in discovering the equipment used at the time. A list revealed that there were two Cinemeccanica Vittoria Settimana nr. 6236–6244 projectors, with amplifiers and accessories, and this was evident also in a black and white photograph of the projectionist Luigi Cainero, showing him from behind handling the device in the 1950s.[6] From the documents related to S.A.U.T.E.C., it is possible to understand the kind of monopoly in both the distribution and the management of cinemas in Udine, as well as in the film programming: the same films were often screened in the same first-run cinemas at the same time, and later in second or third-run ones.[7]



S. A. U. T. E. C.
SOCIETÀ UDINESE TEATRI E CINEMATOGRAFI S. p. A.
Sede in UDINE
CAPITALE SOCIALE L. 1.000.000 INTERAMENTE VERSATO

UDINE, 18 agosto 1952

Via S. Francesco, 14 - Telef. 2761 - 3759
C. C. I. A. 26328 - C. C. Postale 9/10522

Egregio sig.
dott.NINO GENTILLI
UDINE

Ci pregiamo accompagnarLe i certificati azionari della nostra Società sottoelencati, per complessive cinquanta azioni di Sua proprietà:

n° 43 per cinquanta azioni.

Il certificato azionario n°7 per cinquanta azioni di Sua proprietà è vincolato a cauzione della Sua carica di Consigliere d'Amministrazione, e rimane pertanto depositato presso la Sede Sociale.

Le rimettiamo inoltre un fissato bollato di Sua pertinenza.

Le saremo grati di un cortese cenno di ricezione, e frattanto La preghiamo gradire i nostri più distinti saluti

SOC. UDINESE TEATRI E CINEMATOGRAFI S. p. A.
Il Consigliere Delegato

due allegati

Figure 4: Document from Archivio S.A.U.T.E.C. Courtesy Guido Zabai.

Consultation of the local newspapers *Il Popolo del Friuli* (1948–1945) and *Il Messaggero Veneto* (1946–1955) was necessary both to reconstruct the film programming through a meticulous transcription of daily cinema schedules, and to understand many other aspects of film reception, advertising and attendance. The film programming itself, as it covers all Udine's cinema theatres for almost twenty years, would need a separate digital heritage project to effectively compare data and retrieve patterns of distribution. For this project, and due to a lack of resources, we had to focus mainly on the programming related to the Odeon Cinema, a first run cinema that during the Fascist period screened significant Italian and international movies. Since the premiere of *Snow White and the Seven Dwarfs* (David Hand, 1937) in 1939, it was the cinema that showed all Disney movies. Films were screened continuously from 3 p.m. on weekdays, and from 2 p.m. on Sundays and holidays, as it was the case of other first-run cinemas, whereas third-run and parish cinemas often opened only during weekends and holidays. The Odeon cinema was closed during the summer holiday period in July and August from 1938 to 1945. In addition, all the city's cinemas were closed on Good Friday. In cases of high turnout, the cash desks opened several hours before the movie was due to start. For instance: "To encourage the growing turnout of the public to the screenings of the masterpiece *Snow White and the Seven Dwarfs*, the management of the Odeon cinema theatre has decided to keep the ticket office open from 10 a.m. to 12 p.m. today and tomorrow" ("Biancaneve" 2; my transl.). While Quargnolo generically stated that the Odeon Cinema reopened a couple of years after the end of the Second World War, it was possible to obtain precise information by consulting *Il Messaggero Veneto* (177). After the cinema was seized by the Allied forces (Bearzi 11), and started to host private screenings, it reopened publicly on 4 November 1947 with the film *The Spanish Main* (Frank Borzage, 1945). It kept its status as a first-run cinema, but no longer hosted the *avanspettacolo* (variety shows). The Odeon's prices in 1950 were: "Primi posti 300 lire, secondi posti 200 lire, terzi posti 150 lire" ("Manon" 2; my transl.), and in 1954: "Primi posti 300 lire, secondi posti 250 lire, terzi posti 150 lire" ("Un tram" 4; my transl.). According to the newspaper *Il Corriere della Sera*, the national average price of a ticket in 1954 was 121 lire, with a minimum of 107 lire in Bari and a maximum of 201 lire in Milano; however, these statistics did not take into account the differences between the first, second and third-run cinemas, and the north–south economic divide of the country ("Conti" 4). If we consider the average price of northern cities such as Turin (177 lire) and Genova (155 lire) we can understand the popularity of Odeon's cheap *terzi posti* among the other first-run cinemas in the city.

Particular attention was given to child audiences, and not only for the aforementioned Disney premieres. A few contests were organised for children as well to advertise some products, as in the case of Wührer's soup:

> Dear child, do you want to know how to collect the most beautiful scenes from W. Disney's films? It's simple: cut out 50 tabs from the famous Wührer's soup packages, which you will find on sale in the best food stores, put them in an envelope with the word *STAMPE* on it and a 5 lire stamp […]. After a few days you will receive a complete series of sketches of the story of *Peter Pan*, which you will certainly like." ("Caro bambino" 4; my transl.)

Other activities, such as surveys aimed to involve a wider audience with generic questions regarding a movie, such as with the film *Anni Difficili* (Luigi Zampa,1948), or with advertising. The latter was mainly targeted at female audiences and their assumed desire to look like a cinematographic diva, such as at the screening of *Variety Girl* (George Marshall, 1947): "Max Factor Hollywood, the famous manufacturer of Cosmetics of the Stars (*Cosmetici delle Stelle*),

has organised a poll for ladies with numerous prizes consisting of magnificent Max Factor Hollywood assortment cases" ("Rivista" 2; my transl.). Not only movies, but documentaries and recordings of sporting events were also screened, such as football matches—e.g., Italy vs. England ("Cinema", 6 Dec. 1949, 2), Italy vs. Egypt ("Cinema", 19 Nov. 1953, 4)—and boxing ("Cinema", 9 Jul. 1955, 4). Some emphasis was placed on the introduction of new technologies, such as wide screens, stereophonic sound and colour, particularly in the period between 1953 and 1954, which was defined by Federico Vitella as the "paradigm of technological exception" (186). Although the first-run Astra Cinema was the most technologically sophisticated of the city, also the Odeon's innovations were often highlighted in the 1950s advertising: "Today, a great premiere at the Odeon cinema. Cinemascope. *Knights of the Round Table*. Magnificent colours with Perspecta stereophonic sound" ("Cavalieri" 4; my transl.).

As regards the oral testimonies, one of the biggest challenges was to find respondents, as many people who witnessed the first years of the cinema's activity are no longer alive. It was useful to identify places of culture frequented by the elderly such as the so-called Universities of the Third Age and the cultural venues of the city. Spectators were found through social networks (in particular, the Facebook pages dedicated to the city of Udine such as *Sei di Udine se…*) and the Centro Espressioni Cinematografiche (C.E.C.), a local organisation that manages the cinema business, whereas names of projectionists and owners had to be found in official documents elsewhere. In keeping with the aim of the project, we confined ourselves to the memories of cinemagoing, considered as cultural memory (Kuhn, *Everyday* 9), which allowed the rituality related to the cinema and the peculiarities of the viewing itself to emerge. As the main aim was to retrieve the pieces of information in a short period of time (two months), the questions were tailored to each participant (both spectators and workers) according to his/her relation to the cinema. Although it was a very efficient method for the final purpose (the VR storytelling), it does not provide a precise quantitative analysis: for instance, the number of sources was inadequate to provide a gender analysis as most of the participants were male.

In the interviews, of which only the audio was recorded and later transcribed, peripheral practices of cinemagoing came to light: with whom and where people used to go to the movies, where they sat, the quality of the projection, and then the long queues, the economical seats in the second gallery, the smoke. For instance, Daniele Orlando (born 1948) described the use of slideshow for advertising before the movie started:

> During the show, there was the first half, then the second, sometimes even a third section. And then you had the film programming and the advertisements on a slideshow, sometimes with music in the background. Also, my mother used to advertise her activity: "Tailoring Orlando, piazza della Libertà". Another one was an appliance store in piazza Duomo. It was the pre-*Carosello* era. (My transl.)[8]

Daniele Fortunati (born 1948) talked about the winter provision and the military presence in Udine:[9]

> Naturally, you had to pay for the winter provision. The ticket cost 10 liras more than usual. The money was needed for fuel, wood etcetera for people living in the mountains. […] At the weekends it was crowded with soldiers. People from Udine lived very close to them. "Eh, the soldiers stink; eh, the soldiers don't wash! Oh what a smell of barracks!" (My transl.)



Figure 5: Film publicity from *Il Messaggero Veneto*, 20 October 1949.

Precious for the project were the oral testimonies of projectionists, in particular Silvano Bearzi (born 1928), who worked in the Odeon Cinema in 1944 and kept track of all the films he screened in Udine, especially in the Cecchini Cinema, categorised by year in his notebook with the following information: title, actors and production company (and, when relevant, the technology used for filming). Due to his age, his meticulous description of events and his passion for cinema, he provided rare "narrative sources" of cinemagoing from the late 1930s to the 1980s with a unique style full of pauses and onomatopoeias that mixed Italian, Friulian and Udine's dialect (Portelli 66–7).[10] As for the Odeon Cinema during the Second World War, he stated:

> At the Odeon they did this: the first two Sundays of September those who wanted could go to the gallery for free, but only in the gallery. They came from the whole region to see documentaries. They screened each one six or seven times. I still remember *Tundra*. It took place at the North Pole. They made a documentary about Mussolini, ten minutes and after that… trailers. Six or seven trailers. *Coming soon on this screen*. (My transl.)

He also talked about the Nazi presence in the cinema:

> There were SS soldiers. They asked for documents and to those who didn't have them they said: "Go downstairs". The cinema was full of criminals to keep kids under control. They had to keep their hands up. We got tired… I am talking about the 20th of July. It happened on the 20th of July. They carried out the attack on Hitler, they put a staircase there... […] They threw bombs from the Odeon's terrace. They threw them to the ground on the square below. Intense bombing down there. That evening I said: "I'm going downstairs." Incendiary. The soldiers: huge swastikas, shiny foreheads, and boots. Din don, din don. They entered the room. *Shultzstaffel*. They were *things* from the SS. From the Fürher. All devoted to death. (My transl.)

His memories of the aftermath are very helpful to shed light on the Allies' presence in the Odeon Cinema: "Just after the war, on the 1st of May the Germans were still there. Partisans were chasing them. They hid in the toilets, in the WC, behind the trees. […] The Odeon was requisitioned by the British. At noon on the 1st of May there already was a screening of *Pin Up Girl*" (my transl.). His memories were strictly related to the spatial dimension of the cinema and the city area showing that "space has been an integral part of the process of recollection, and spatial reference has been used in oral history narratives to help audiences to reorient themselves in the disorienting experience of reminiscence" (Treveri Gennari et al. 28).

The Outcome: Implications and Conclusions

The immersive experience, for which the demo is currently being developed, consists of VR storytelling that emphasises an aspect of the technology in which, according to Katy Newton, the user is internal to the narrative, unlike in time-based media. In this sense, the VR application user is an embodied observer and becomes a character through which the story is experienced. At the moment, there are two dominant approaches to VR storytelling: "The first allows the viewer to watch a scene that is played out in the space around them. They are immersed in the scene but not necessarily an active participant […]. The second philosophical approach allows the viewer to actually become the camera, in a sense" (Bucher 7). Indeed, VR storytelling is more about letting the viewer discover the story actively than telling a story tout court; the user is no longer passive, but actively determines what appears on the screen:

"simulation involve reciprocal effects, coordination, and coupling; feedback mechanisms come into play that require a complex, transformable *re-acting* object beyond mere navigability" (Hinterwaldner 2).

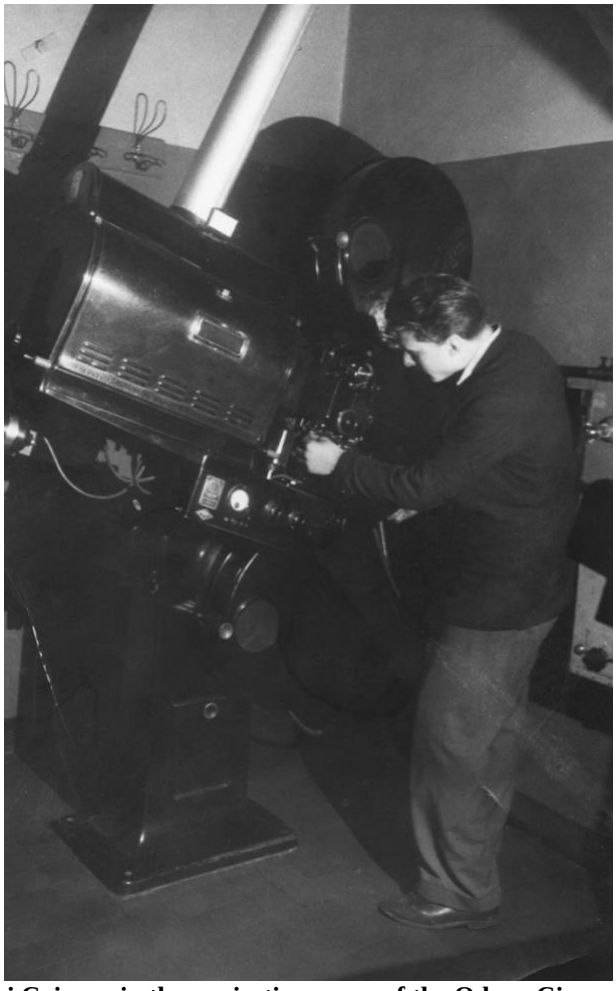


Figure 6: Luigi Cainero in the projection room of the Odeon Cinema in the 1950s. Courtesy Neda Cainero.

The VR reactivation of Udine's Odeon Cinema was configured as an experiment of retro-spectatorship that aimed to reconstruct a historically located spectator: indeed, the user becomes the protagonist of a narrative set at a specific historical moment that valorises peculiar elements of the cinema itself (e.g., its decorations), its history and the city that emerged from documents and oral sources. He/she is free to look around and explore the environment, accompanied by voices and sounds that tell him/her about this other epoch, such as shreds of conversation, ushers' directions, cashiers' interactions, the rustling of red curtains and the trembling of the tram passing by. It is not only a visual VR experience, but also an auditive one: indeed, as often stressed in oral testimonies, the experience of cinemagoing is often remembered as a multisensory one (Treveri Gennari et al. 55). A hypothetical development of the project comprises a story set in 1939 (three years after the opening of the Odeon Cinema) during the premiere of *Snow White and the Seven Dwarfs*. The main character is a child, the future Odeon Cinema's projectionist Luigi (Gigi) Cainero, who goes to see the film with his mother. With this stratagem, the user is guided inside the virtual space and is able freely to turn his/her head without being able to choose where to go, as if he were led by the hand. As the

child walks from the outside of the cinema to the second gallery, he listens to excerpts of conversations: part of Ugo Rossi's mural is commented on in a dialogue, the curtain-raisers are mentioned, and the Jewish cinema manager Albino Dudetti is heard. Or again, this character reads the review of *Snow White and the Seven Dwarfs* from *Il Popolo del Friuli* and his mother on a couple of occasions turns to him and tells him anecdotes related to cinema, such as peculiarities related to the projection booth. Some details of the script allude to Cainero's personality, reconstructed through oral testimonies and newspaper articles: he was described as a meticulous and taciturn person, passionate about the mechanical aspects of projection but not of the films. He also dedicated his spare time to restoring watches and working as a professional boxer. The VR experience ends with the turning off of the lights and the beginning of a film, thus highlighting all those gestures and habits that constitute the ritual of cinemagoing.



Figure 7: The VR reconstruction of the Odeon Cinema. Courtesy Alessandro Passoni.

The first outcomes of the project allowed us to draw some initial conclusions about the implications of VR for cinema heritage preservation, which is considered a "new cultural category, which relates to cinemas and the experience of cinemagoing as the social counterpart of film and filmmaking: in this sense the consumption of cultural heritage becomes a cultural phenomenon in its own right" (Ercole et al. 1). Its nature is mainly epistemological: the importance of VR as it relates to cultural and urban heritage "should be oriented towards the capacity of changing the ways and approaches to knowledge" (Forte 394). This methodology allows a nonlinear and multidimensional perspective: the virtual, in this sense, is a relational instrument for the historian.

The VR application is a tool that triggers new learning processes and, according to Gabellone, plays an active part in urban planning, conservation and maintenance processes (118). The historical sources and the cinema memories are not to be considered a mere nostalgic restitution of a fragment of the past but are coordinated to achieve a perceptive and emotional dimension for a historically situated spectator through which the complexity of the Odeon Cinema's history and architecture can be evoked.

Notes

[1] The research project was supervised by Andrea Mariani (Università degli Studi di Udine) with the collaboration of the VR designer Alessandro Passoni.

[2] Oculus Rift is a line of virtual reality headsets developed by Oculus VR, a division of Facebook Inc., released in 2016. It "changed the VR equation by showcasing a lightweight platform that was both practical and viable" (Greengards 30).

[3] Low-poly modelling is a polygon mesh in 3D computer graphics that has a relatively small number of polygons.

[4] For a further analysis of digital photogrammetry see Egels and Kasser.

[5] .rhino is the file of the software Rhinoceros (known also as Rhino or Rhino 3d) for CAD 3D modeling. Autodesk created the file .dwg in the first version of AutoCAD. The DWG format is probably the most widely used format for CAD drawings.

[6] The undated picture was made available by Gigi Cainero's wife Neda.

[7] For an insight into Italian film distribution, see Garofalo, Minuz, and Morreale.

[8] *Carosello* was an Italian television advertising show broadcast on RAI from 1957 to 1977.

[9] The Friuli-Venezia Giulia region was highly militarised after the Second World War due to its proximity to the Iron Curtain, as stated by Baccichet (pp. 11–80).

[10] See also Bearzi's book *Cinematografo: un caro vecchio amico* related to his memories as a projectionist.

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