

# PANORAMA

International Panorama Council Journal, Volume 4  
Selected Proceedings from the 29th IPC Conference

2020



# PAN<sup>o</sup>RAMA

**International Panorama Council Journal, Volume 4**  
Selected Proceedings from the 29th IPC Conference



## **International Panorama Council**

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### **International Panorama Council Journal, Volume 4**

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**Cover Photo:** Panorama 1326 Bursa Conquest Museum

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## Preface

Founded in 1992, the International Panorama Council (IPC) is a worldwide organization of panorama specialists, committed to supporting the heritage and conservation of the few existing panoramas dating from the 19th and early 20th century, and the promotion of knowledge and awareness of the panorama, including its current relevance and development. Since the organization's beginnings, annual conferences have been held around the world. The yearly IPC Conferences are intense encounters, discussing and connecting the past, present and future of the panorama phenomenon. IPC is a non-government and not-for-profit association, according to Swiss law.

In 2017, the peer-reviewed *International Panorama Council Journal* was established in order to stimulate and foster interdisciplinary research on the panorama and its related forms.

The fourth edition of the *International Panorama Council Journal* is a collection of selected essays from the 29th International Panorama Council Conference. Hosted by the Panorama 1326 Bursa Conquest Museum with support provided by the Bursa-Osmangazi Municipality, the conference was held online and in Bursa, Turkey, October 14 – 16, 2020.

This year's conference addressed a broad range of topics related to the panorama, which included: The Panorama Phenomenon in Turkey; Panoramic Innovations: From Drawing to Virtuality; Enlivening the Panorama: Lights, Movement, Architecture; Conserving the Bygone Era for the Future; Panoramic Narratives of Landscapes and Power; and Panoramic Entertainment: Between Reality and Fiction. In addition to the wonderful and thought-provoking presentations and discussions at the conference, other highlights included opening remarks by Bursa's Mayor, Mr. Mustafa Dündar and a virtual tour of the Panorama 1326 Bursa Conquest Museum.

On behalf of the International Panorama Council membership, I would like to thank Orhan Mollasalih, Dr. Emek Yılmaz and the Panorama 1326 Bursa Conquest Museum for their flexibility and understanding in allowing us to switch to a virtual conference format due to the coronavirus pandemic. Together, we made a good collective decision for the safety of both our conference participants and host country. I would also like to acknowledge the great work of Thiago Leitão de Souza, Molly Catherine Briggs, Blagovesta Momchedjikova, Dominique Hanson, Guy Thewes, Melissa Wolfe, Sara Velas and Sylvia Alting van Geusau for their contributions to the conference and journal.

**Seth Thompson**  
President



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**29<sup>th</sup> INTERNATIONAL PANORAMA COUNCIL CONFERENCE (ONLINE)**  
**PANORAMA 1326 BURSA CONQUEST MUSEUM**  
**BURSA, TURKEY**  
**October 14-16<sup>th</sup>, 2020**

**CONFERENCE PROGRAM**

*Program times appear in Greenwich Mean Time (GMT).*

**DAY 1**      **WEDNESDAY, OCTOBER 14<sup>TH</sup>, 2020**

- 13:30 – 14:00    Virtual Check-in
- 14:00 – 14:05    International Panorama Council Welcome Remarks  
                     Seth Thompson, President
- 14:05 – 14:10    International Panorama Council Welcome Remarks  
                     Thiago Leitão, Secretary General
- 14:10 – 14:20    Panorama 1326 Bursa Conquest Museum Welcome Address  
                     Mr. Mustafa Dündar, Mayor (Şenol Dülger, Interpreter)
- 14:20 – 15:20    **Session I: The Panorama Phenomenon in Turkey**  
                     *Moderators: Sara Velas and Thiago Leitão*  
                     Virtual Tour of *Panorama 1326 Bursa* (video), presentation, and behind-the-scenes Q&A  
                                 Orhan Mollasalih, Director, and Dr. Emek Yılmaz, Coordinator, Panorama 1326  
                                 Bursa Conquest Museum, Bursa, Turkey  
                     A Step to the Antakya Habib-I Neccar Panorama Museum “Pano-Roma-N ‘While Running to  
                     Infinity”  
                                 Gökhan Maraşlıoğlu, Hatay Mustafa Kemal University, Antakya, Turkey  
                     Panorama Konya Museum and Tourist Guides’ Views  
                                 Ahmet Büyüksalvarci, Zekeriya Yetiş, Çiğdem Arıcan (Professional Tour Guide),  
                                 Necmettin Erbakan University, Konya, Turkey
- 15:20 – 15:30    Coffee Break
- 15:30 – 16:50    **Session II: Panoramic Innovations: From Drawing to Virtuality**  
                     *Moderators: Molly Briggs and Melissa Wolfe*  
                     Of Innovations in Panorama: Art Meeting the Sciences  
                                 Katarina Andjelkovic, Atelier AG Andjelkovic, Belgrade, Serbia  
                     Where Islamic Visual Theory and Western Pictorial Tradition Meet: 360° Panoramic  
                     Photography’s Two-Dimensional Image Projections and Sacred Spaces  
                                 Seth Thompson, American University of Sharjah, UAE  
                     The Panorama of Rio de Janeiro by Victor Meirelles and Henri Langerock: Part 3 – 360°  
                     Virtual Layers of Atmospheric Perspective  
                                 Thiago Leitão de Souza, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil  
                     Temporary Panorama Rotunda of 1912 is Revived in Virtual Space  
                                 Irina Gribova, Nurlan Ahtamzyan, Museum-panorama *The Battle of Borodino*, Moscow,  
                                 Russia
- 16:50 – 17:10    Panorama Updates  
                     A Tribute to Li Wu, Panorama Painter and Professor at Luxun Academy in Shenyang, China  
                                 Sara Velas, Velaslavasay Panorama, Los Angeles, USA  
                     New Technologies Implementation for Panoramas by Examples  
                                 Alexander Lavrov, President Next.space LLC and Independent consultant at ICOM
- 17:10 – 18:10    Virtual Social Hour

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**DAY 2**      **THURSDAY, OCTOBER 15<sup>TH</sup>, 2020**

- 13:30 – 13:50    Virtual Check-in
- 13:50 – 14:00    Virtual Tour of *Panorama 1326 Bursa* (video)  
                          Panorama 1326 Bursa Conquest Museum, Bursa, Turkey
- 14:00 – 15:00    **Session III: Enlivening the Panorama: Lights, Movement, Architecture**  
                          *Moderators: Seth Thompson and Molly Briggs*  
                          Lighting the Panorama  
                          Suzanne Wray, Independent Researcher, New York City, USA  
                          The Anatomy of a Moving Panorama: John James Story's Ocean and Overland Journey  
                          Round the World  
                          Peter Harrington, Brown University Library, Providence, USA  
                          Fiat Looks at the Panoramic Cinema in the Sixties  
                          Silvia Mascia, University of Udine, Udine, Italy
- 15:00 – 15:10    Coffee Break
- 15:10 – 16:10    **Session IV: Conserving the Bygone Era for the Future**  
                          *Moderators: Blagovesta Momchedjikova and Seth Thompson*  
                          The Only Cyclorama in Canada: Awareness and State of Conservation of the Cyclorama de  
                          Jérusalem et la Crucifixion du Christ in Sainte-Anne-de-Beaupré  
                          Éloïse Paquette, Centre de Conservation du Québec, Ministère de la Culture et des  
                          Communications du Québec, Québec, Canada  
                          A project to host the Panorama of the Battle of Morat  
                          Emile Mermillod, Association of Friends of the Morat Panorama, Friborg, Switzerland  
                          20 Years Hidden in Plain Site  
                          Sara Velas, Ruby Carlson, Velaslavasay Panorama, Los Angeles, USA
- 16:10 – 16:30    Panorama Updates  
                          Earle's Panorama of Sydney (1828–30)  
                          Robin Skinner, Te Herenga Waka—Victoria University of Wellington, Wellington,  
                          Zealand
- New                    Conrad Kreuzer's Graz Panorama in the Graz Museum Schlossberg  
                          Jean-Claude Brunner, Independent Scholar, Vienna, Austria
- 16:30 – 17:30    Virtual Social Hour

**DAY 3**      **FRIDAY, OCTOBER 16<sup>TH</sup>, 2020**

- 13:30 – 14:00    Virtual Check-in
- 14:00 – 15:00    **Session V: Panoramic Narratives of Landscapes and Power**  
                          *Moderators: Thiago Leitão and Blagovesta Momchedjikova*  
                          Passing Through - Ernest Hüpeden's Painted Forest  
                          Lisa Stone, John Michael Kohler Art Center, Art Preserve, Sheboygan, Wisconsin,  
                          USA  
                          Remote Viewing – Panorama Narrative, Landscape Experience and Heritage  
                          Nicholas Lowe, School of The Art Institute of Chicago, Chicago, USA  
                          Panopticum Berlin, Panorama of the Panoptical  
                          Onno Schilstra, Independent Artist, Amsterdam, The Netherlands  
                          Wim Hardeman, Independent Artist, Berlin, Germany
- 15:00 – 15:10    Coffee Break

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**15:10 – 16:10    Session VI: Panoramic Entertainment: Between Reality and Fiction**

*Moderators: Melissa Wolfe and Sara Velas*

Around the Panorama – Shows and Activities Happening Around Vienna's Late 19th-Century Panoramas

Jean-Claude Brunner, Independent Scholar, Vienna, Austria

The End of the End: Panoramic Devices in the Transporting Imperial Fictions of E. Nesbit

Molly Catherine Briggs, University of Illinois at Urbana-Champaign, Champaign, USA

Panstereoramas and Parks: A Comparative Study of Amusement

Blagovesta Momchedjikova, New York University, New York City, USA

**16:10 – 16:20    Panorama Updates**

Panorama Museum on the Cultural Map of the World

Alexander Samsonov, Panorama and Diorama Artist, Moscow, Russia

**16:20 – 17:20    Closing Remarks and IPC General Assembly**

**17:20 – 18:20    Virtual Social Hour**



# Panorama 1326 Bursa Rotunda + Dome Panorama: Technique and Impact for the Community

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## Abstract

The panorama has a two-century history in the world, but it is a newly developing and spreading concept in Turkey. The most venerable example in Turkey opened in Istanbul just a decade ago. This paper examines the Panorama 1326 Bursa, which opened in 2018, as an exemplar of the full-panorama or rotunda + dome technique. It reflects on the historiography of the image, the 3D object platform, and its impact for the community. The technical details are based on interviews conducted on August, 2020 with Haşim Vatandaş, the art director of the Panorama 1326, and the sculptor Atilla Tunca.

## Keywords

Panorama 1326 Bursa, Full-Panorama, Domed Panorama, Istanbul 1453, Bursa, Turkey

## Introduction

Panorama 1326 Bursa Conquest Museum (hereafter Panorama 1326 Bursa), built in 2015-2018 by the Osmangazi Municipality, became a popular destination as soon as it opened its doors to visitors in November 2018. The number of visitors in the first year was more than 500,000 and the average number of monthly visitors suggests, it likely would have reached a million by now if Covid-19 had not hit the world. This number is exceptionally high for a museum in Bursa. As of November 2020, the visitor number stands at 824,000, including foreign visitors from 118 different countries.

Early examples of panoramas in the world were created as commercial attractions. "Panoramas were investment vehicles for their owners, targeting mass audiences." [1] Historical and topographical accuracy was of importance, but a wide research was not involved. Today that is different. Panoramas are considered to be an interesting

visualization of historical representation of collective memory of an event. [2] So, research has a major importance.

Historically, panoramas were produced by private investments but panorama phenomenon in Turkey is welcomed by municipalities and is a result of public investment. In Turkey, the panoramas, indeed, are perceived as representation of significant events in the history of Turkey: Panorama 1453 Istanbul represents the conquest of Istanbul by the Ottomans; the Panorama 1326 Bursa represents the conquest of Bursa by the Ottomans; the Museum of Gaziantep 25 December Defense and Heroism Panorama represents the city's fight during the Turkish Independence War in 1921; and Konyanüma Panorama Museum represents the social life in thirteenth century Konya. [3] The only exception here is the Panorama 1326 Bursa, which was built by the Osmangazi District Municipality in Bursa. This is an important difference because revenue items and ratios of a metropolitan municipality and a district municipality are not the same. The revenue allocated to a metropolitan municipality is bigger than the district municipality. [4] The admission to the Panorama 1326 Bursa is 5 TL (65 cents in USD). The budget (including staff wages, purchases to enrich museum collections, funding for new exhibitions, monthly bills, event expenses etc.) of the Panorama 1326 Bursa is not made of visitor expenditures at the museum but secured by the Osmangazi Municipality. Therefore, the panorama is not a profit-motivated investment, but rather a cultural investment.

## **Panorama 1326 Bursa: Rotunda+Dome Panorama Technique**

Panoramas flourished in a time of rapid economic growth in nineteenth century in the US and Europe.[5] It was a new technique of storytelling and a new experience. “Panoramas are usually defined with 360-degree immersive experiences.” [6] The term and medium panorama was introduced at the end of the eighteenth century by Robert Barker. [7] The panorama of the nineteenth century consists of both a building and a cylindrical 360-degree painting housed inside its rotunda, which is usually covered by cupola or cone-shaped roof. At the center of the cylindrical building, a viewing platform takes place. “The viewing platform requires viewer to remain within a certain perimeter to maximize the illusion.” [8] The panoramas are different from framed images. They do not have boundaries. Usually they have upper and lower boundaries, but these are not visible to the spectator’s eye.

The Panorama 1326 Bursa and the Istanbul 1453 have a feature that makes them different from other panoramas in the world: the full- or rotunda+dome panorama, which can be described providing a complete view experience with a sky above. Panorama 1326 Bursa, like many other panoramas, has a spatial remove from the image. The distance from the image is calculated and creates illusion with sensory (in the case of Bursa, visual and auditory) stimulations. [9] It has no upper boundary. This is a new contribution to the panorama concept by the art director Haşim Vatandaş. The view is both horizontal and vertical orientation on the rotunda+dome structure. The sky added in the image maximizes the effect. The experience begins when viewers take their first step on the escalator and start ascending to the viewing platform. This experience is accompanied by a growing curiosity about what awaits the visitor at the end of the escalator. If the actual weather coincides with the one in the image, some visitors assume, until they arrive in the viewing platform that they are going up to the roof.

The Panorama 1326 Bursa is the second completed example of full panoramas in Turkey, but it is the third work of the same team. The first one is the Istanbul 1453. The team worked on the Canakkale 1915 as their second project. Although the art works are complete, the construction is not finished. As stated above, panoramas are considered old media of late eighteenth and nineteenth centuries but Vatandaş said “Turkey was late in creating a panorama, so we needed to add something new and turn it into an advantage.” [10] He said that, in the beginning, before starting to work on the Istanbul 1453 panorama image, the most important topic the artists discussed was how to involve the dome in the image without distorting the image. The second most controversial issue was

situating lighting. After a detailed elaboration among artists, they came up with a solution: lighting the image from below the 3D object platform. [11] The viewing platform’s diameter is 10 meters. Distance of the image from the viewer on the platform is 14 meters (12 meters of which is the 3D object platform, and 2 meters of which is the distance between the image and the 3D object platform where the lighting is placed). Overall, the ellipsoidal building’s platform is 16 meters high and 38 meters in diameter.

The image is generated digitally for the Istanbul 1453 and the Panorama 1326 Bursa. Eight artists [12] co-created the image and three others worked on the 3D platform objects. Vatandaş preferred composite material polyester on which the picture was printed. Because it allows image colors to prevail approximately two centuries. The ink used in digital printing machine was pigment ink and this type of ink is known to last longer than normal ink. So, the image colors are expected to fade in 100 years. In addition to the ink quality, acrylic varnish with UV protection was used over the picture.

The image will conserve itself with these qualities, but the museum takes precautionary measures to keep the picture and metal skeleton of the ellipsoidal building preserved by maintaining stable temperature (between 20-25 degrees Celsius). The aim is to avoid changing or repairing the image. Because it would require reconstruction of the panorama picture, de-installation of the 3D object platform, build up a scaffold, change polyester-plates and re-install the 3D object platform. Additionally, Haşim Vatandaş carries out periodic inspection on a monthly basis.

## **Choosing the theme and creating the image**

The Panorama 1326 Bursa picture depicts the city at the day of April 6, 1326 at around 11 am. It is the day of surrender and handing over the symbolic key of the city by the Byzantine governor to the new chief of the city of Bursa. The picture’s viewing point is the minaret of Hacı İvaz Pasha Mosque located near the Grand Mosque of Bursa at the city center. Artists took several 360-degree photographs on the day April 6 in 2013 and 2014, these photographs helped them create the landscape as well as decide on the colors of flora of the season, leaf density, position of the sun and clouds, and level of snow on the mountains.

Depicting contrasts is an important part of creating an appealing picture. [13] Therefore, the artists aimed at encountering two contrasting powers in the image: Byzantines and Ottomans. They placed Orhan Gazi’s headquarters in the front, close to the viewer point. A big plane tree is pictured next to the tent representing the Ottoman State. [14] Opposite Orhan Gazi, the Deputy

Byzantine Lord in purple cloak is handing over the symbolic key of the city. [15] In the front, the carriage of



Fig. 1. *Two Powers meet*. Handing the symbolic key of the city to Orhan Gazi. Photo Credit: Panorama 1326 Bursa Conquest Museum.

the Bursa Byzantine Governor is depicted on its way to Istanbul (See Fig. 1).

The city of Bursa was under siege for a long time. Although there is no definite date that historians compromise, it is said that it took 20 or 23 years. [16] This long siege semi-nomadic Turkmens settle in Bursa plains. So the picture also presents their social and cultural practices: dressing culture, food culture, games, music, commercial activities, husbandry etc.

Another contrast depicted in the picture is in front of the Bursa City Walls. Byzantines are leaving the city to migrate to Istanbul (then Constantinople) and Ottomans make food and offer to them. The idea of the creative team is to reflect the tolerance of Ottomans. Historical records show that Ottomans were tolerant to local people they ruled after conquering cities. They were not violent, nor did they disstrain local people's property. [17] Their tolerance was experienced and recognized by locals of previously conquered cities. It was another reason why some locals decided to stay in Bursa after the city was handed over to Orhan Gazi. [18]



Fig. 2. *1/10 Scale Model*. Mr Mayor Mustafa DÜNDAR(right), Haşim VATANDAŞstanding in the scale model with Yaşar ZEYNALOV. Photo Credit: Panorama 1326 Bursa Conquest Museum.

There are about ten thousand human and animal figures on the picture which covers a surface area of 2450 m2. The perspective is an important part of the picture. During photo shoots of the city from Ivaz Pasha Mosque minaret, location and remains of the city walls were used for deciding the scale and proportion. Atilla Tunca, the sculptor, emphasized importance of the scale model they worked on before creating the Panorama 1326 Bursa. [19] They built up a 1/10 scale model of the imagined Bursa panorama, which included the picture and the 3D object platform. First, they planned everything on the scale model, then they applied and installed the final version. (See Fig. 2)

The picture was created by applying vertical and horizontal perspective. But when the picture was placed on the scale model, the creative team realized that the vertical perspective was not necessary, so they only used horizontal perspective. [20] 14 meters distance of the image from the viewing platform, lighting, shading gradients, and color are other elements that help enhance 3D illusion of the picture. The human figures in the frontside of the picture were particularly sketched in big proportions, who are as tall as basketball players (about 2.20 meters). Figures less than 5cm were not visible from the viewing platform, therefore the smallest figures are kept as small as 5cm. The size of Roman ruins in the 3D object platform is 1/1 scale. It also helps create illusion and immerse visitors. [21] Besides, since the beginning, the columns have become a photo-point, where almost everyone takes a picture and selfie. (See Fig. 3).



Fig. 3. *3D Object Platform and the Columns representing pre-Ottoman civilizations*. Photo Credit: Panorama 1326 Bursa Conquest Museum.

### Viewers' comments

"History panoramas are a particular form of visual or performative historiography, because they let their viewers immerse themselves into the visual story and inevitably assign them a certain position in it" [22]. Viewers travel through time and space via which they live an emotional

experience [23] as it happens in the Panorama 1326 Bursa. All ages feel differently: pre-school kids enjoy the view as if they are in a cartoon; and elderly people, if they were born and grew up in Bursa, reflect their experience sometimes with tears and nostalgia as the picture reminds them of Bursa, the city of their childhood or youth. Here are two comments from the museum memory book:

[...] a big thank you from my heart for taking us to our origins with this work. I wish local governments would save this historic city from ugly urbanization. (A.Aydın, visitor)

[...] We came to get to know and fulfill our longing for history, to know how a civilization was established... I came here several times, but this is my first time with my mom. She is illiterate and she saw details that I have not realized before. Thank you all who contributed to this work. (R. Aselkara - visitor)

### Why not a digital image?

Today's society is experiencing important technological and digital innovations. People frequently encounter with these tools such as augmented or virtual reality in video games, phones etc. [24] Taking these developments into account, visitors ask the reason why it is not a digital picture depicted on a big screen. Some visitors think that if it were created and screened digitally, the picture could have changed easily: animated weather or climate conditions, people playing or fishing, flying storks in the sky would have added up in multisensory experiences of viewers, and as a result it would have created a more immersing involvement for spectators. However, Haşim Vatandaş responds to this criticism by offering a different perspective: "this is a moment of the day of the peace on April 6, 1326. It is not a photography nor a video. It invites people to get involved and think more about the image and the historical event in detail." [25] If we look at the visitor comments mentioned here and written on the museum memory book; this approach meets wide audience.

### Impact of the Panorama 1326 Bursa

The twenty first century architecture, Panorama 1326 Bursa, narrates the history of early fourteenth century. It attracts public institutions' attention for being built according to environment-friendly green building standards, and these qualities were recognized and awarded with the 'Safe-Green Building Certificate' by the Turkish Standards Institution in 2019.

The project partners, Bursa Uludağ University and Osmangazi Municipality, preferred using local and environment-friendly material for the construction of the building. Renewable energy use created with solar panels

and recycled water help manage sustainable energy consumption of the building. The green roof of the museum not only creates a beautiful and esthetic ambiance, but also contributes to energy efficiency. The museum is a glass building, and the use of glass helps decrease the need for artificial lighting and improve heating and cooling of the building, which overall contributes to energy saving as well. (See Fig. 4)



Fig. 4. *Green Roof and the Park*. Photo Credit: Panorama 1326 Bursa Conquest Museum.

The Panorama 1326 Bursa building was designed as a multi-purpose cultural center, with museum, library, conference halls, temporary exhibition halls, a forum arena, cafeterias, and a gift shop. The exhibition halls make the Panorama 1326 Bursa a museum where the focus is on establishment period of the Ottoman State. The objective is to increase collections on this period and to connect the museum with researchers, academics of the field and provide light to an obscure period. In addition to the Panorama, there is one more permanent exhibition hall with 16 pictures. This hall narrates the early establishment period of the Ottoman State, highlighting important events that took place during the first 6 Sultans, and their contributions to the city. There are two temporary exhibition halls in the museum. One of them is for exhibitions of 2D objects. The other one is for 3D objects, where items are exhibited in showcases. Currently there is a temporary exhibition titled 'Dresses in Turks' exploring traditional Turkic clothing culture. (See Fig. 5)

The Panorama 1326 Bursa aims to become one of the leading institutions in Bursa, where various activities are offered to users. Taking historical data into consideration [26], panorama visitor numbers decrease in time. Therefore, the aim is to keep visitor numbers balanced with these popular and interactive activities.



Before the pandemic, the museum had a very dynamic weekend programs with dance and music performances, arts and handicraft classes, archery practices, and occasional conferences, etc. During the week, most of our visitors were student groups from pre-schools to universities.



Fig. 5. *Dresses in Turks*. Temporary Exhibition Hall. Photo Credit: Panorama 1326 Bursa Conquest Museum.

### Impact for the Neighborhood

The reason why the Panorama 1326 tries to be visible in every possible way to persons of all ages, gender, and background as a museum is because the museum aims to create an impact for the neighborhood, the community, and the city.

Before the museum was built and opened, the area was an insecure neighborhood. Majority of people of Bursa were reluctant to pass through the park. Illegal drug sellers and users were frequent in the area day and night. In the first few months, after the museum opened, security was the main problem especially at nights. There emerged a need for police station and it was provided in February 2019. The atmosphere did not change from one day to the next. It did not become public friendly suddenly. However, there were several steps that helped us reach today's safer condition:

- 1- High number of visitors. It repelled some of these drug-addicted groups or sellers as the area became more visible and was under surveillance. Women, youth, families started coming to the park and have picnics as they gradually felt more secure in the area. In spring, when the weather allows, kids come and fly kites.
- 2- Constructing relations with community members, especially with kids. Roman population constitutes majority of the neighborhood. They were in the beginning not very welcoming to the physical change in the neighborhood as it involved relocating some citizens who used to live in

apartments where the museum stands today. However, as they also began interacting with the museum workers and visitors, we have become friendlier with each other. Museum, as a public space stimulated social interaction among citizens from different backgrounds.

- 3- The Panorama 1326 Bursa building is now a landmark of Bursa. The building arises curiosity for people passing by. Physical changes in the built environment with parking lots, expansion of green space, green rooftop, promotion of cultural heritage overall contributed to the impact on the neighborhood. [27]
- 4- Library and cafeteria services, resting areas and activities held in the museum have a positive effect on the mental health of visitors as these places help develop social networks and stimulate social interaction. [28]

### Conclusion

Panorama 1326 Bursa is a popular museum with the highest number of visitors in Bursa. It is considered as a cultural investment rather than a profit-making-business.

The technique of the Panorama 1326 Bursa is different from usual 360-degree panorama form with upper and lower boundaries. The lighting of the image is situated below the 3D installation platform and there is no upper boundary where the whole interior of the dome surface is integrated in the image, which enhances immersive experience. Visitors not only observe a historical event but also compare how green the city was before, and how it is now due to urbanization.

However, spectators, as they get more involved with digital technologies, demand digital illusions to be used effectively. If a new media is created it is expected to be with new technology, capturing their attention with artistic works and illusions. To speculate, virtual reality might be something users are more ready to be exposed to than culture institutions are willing to invest, which is probably due to financial issues. Brunner says:

It is important for panoramas to stay relevant to modern audiences. The interpretation and perceptions of the historical events have changed since the creation of the panoramas. The messages and marketing have to be adapted to modern audiences using the latest technology, in order to attract the eye and capture the minds of audiences who can learn from these important cultural monuments. [29]

Last but not least, a physical change in built environments creates an impact on the community. The change brought by the Panorama 1326 Bursa to the neighborhood can be observed in our everyday lives but it



is necessary to collaborate with a university in Bursa and conduct a study to measure the Museum's impact for the community when safe face-to-face and close working conditions are secured after the pandemic.

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on topics such as museums as social arenas and places of social inclusion. Recently, Emek is interested in creating digital learning experiences in museums.

Orhan Mollasalih is director of the Panorama 1326 Bursa and chief of directors at Osmangazi Municipality, Bursa. He received his BA and MA in business administration and continues with his PhD studies at the Near Eastern University in Northern Cyprus since 2015. His leisure time activities consist of trekking, team sports particularly soccer and he is an amateur photographer. He is married and father of two kids.

# A Step to Antakya Habib-i Neccar Panorama Museum

## “Pano-Roma-N ‘Running to Infinity’”

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### Abstract

Antakya (Antioch), the southernmost city in Turkey, has a very important place in world history. Barnabas and Paul, who are the apostles of Jesus, came to Antakya, which has an important place in the history of religions. They then began to spread the disciples and teachings of Jesus in Antakya after Jerusalem. Later, Saint Peter (St. Pierre), the third envoy, came to support other envoys. Christian rhetoric first emerged in Antakya to indicate those who believe in Jesus. Antakya also has a very important place in Islamic understanding. It is believed that Yuhanna, Paul, Saint Peter, and Habib-i Neccar (Habib Al-Nejjar) from Antakya, who are Jesus' apostles, are mentioned in the Surah Yasin of the Holy Quran sent to Prophet Muhammad (peace be upon him). The purpose is to convey the story of the city of Antakya, the apostles, and Habib-i Neccar, mentioned in the holy books, to today's people through a panorama. A visual presentation was created with a narrative appropriate to the city's land structure, settlement, view directions, and the flow of the story.

### Keywords

Digital Panorama, Video Panorama, Antakya (Antioch), Habib-i Neccar (Habib Al-Najjar), Jesus Christ's Apostles.

## Antakya and Habib-i Neccar Panorama

### Foundation of Antakya

Antakya (Antioch), the southernmost city in Turkey, has a very important place in religions and world history. Antakya city was established after the death of Alexander the Great in 300s BC by one of his commanders, Seleucus I. Nicator. [1] Antakya city joined the Pagan Roman Empire in 64 BC and, together with Rome and Alexandria, became one of the three most important cities of the empire (fig. 1). [2] During the reign of King Herod (known as Herod the Great and Herod of Judea, 37-4 BC), it became a commercial and entertainment center. Herod Street, one of the first examples of monumental streets in ancient times, was built in this period. [3] Herod Street (today Kurtuluş Street), which was illuminated with torches so that the interaction continue at night, is known as the first street to be illuminated according to records of the 4th century. [4]



Fig. 1. Locations of Antakya, Rome, Alexandria and Jerusalem on the map. Image created by Author.

### The importance of Antakya in terms of Christianity

Barnabas and Paul (Saul of Tarsus), who are the apostles of Jesus, came to Antakya, which has an important place in the history of religions and began to spread disciples and teachings of Jesus in Antakya after Jerusalem. [5] Later, Saint Peter (known as Simon Petrus and St. Pierre), the third envoy, came to support other envoys. [6] Christian rhetoric first emerged in Antakya to indicate those who believe in Jesus. [7] Saint Peter is regarded as the founder of the Antakya Church and the first Pope priest of the first Christian community and the world. [8] St. Pierre Church (fig. 2) was accepted as the first cathedral in the world and declared as a place of pilgrimage by Pope Paul VI in 1963. [9]



Fig. 2. St. Pierre Cave Church, Antakya. Author's photo.

### The importance of Antakya in terms of Islam

Antakya also has a very significant place in Islamic understanding. Yuhanna, Paul, Saint Peter (according to Islamic sources, it is known as Şem'ûnü's-Safa), and Habib-i Neccar (it is also suggested that it may be Agabus. [10]) from Antakya, who are Jesus' apostles, are mentioned in the Surah of Yasin of the Holy Quran sent to Prophet Muhammad (peace be upon him). [11] In the Surah Yasin, it is explained to the people of the city (Antakya) that two envoys had been sent first, and then a third envoy was sent to aid. [12] Habib-i Neccar, who believed in the apostles and Allah, was martyred by stoning and heralded with heaven. [13] The Muslims who conquered Antakya in 638 carried the tomb of Habib-i Neccar to the place of the old pagan temple and built a mosque there in the name of him. [14] The tombs of Yuhanna, Paul, and Saint Peter are also in the same mosque with the tomb of Habib-i Neccar today. This Mosque, built in the name of a Christian friend of God, has been visited by both Christian and Muslim believers for centuries (fig. 3).



Fig. 3. The current view of Habib-i Neccar Mosque built on the historical colonnade street (Kurtuluş street), Antakya. Image: Hatay Antakya Documentary from Zeytinburnu Municipality, 2017, <https://youtu.be/tOaEiSy-v0Y>, time: 12:08, (Drone Cameraman: Volkan Yilmaz).

### About “Pano-Roma-N ‘Running to Infinity’”

As an artist born and living in Antakya, which has been able to sustain the richness of culture and belief for ages, I wanted to create and present a visual work about my city. While I was waiting for the appropriate time for this, after my first panorama visit, I was fascinated by the great work and prepared my master thesis on panorama museums. After working on panoramas, I decided to prepare a panorama for my city. Panoramas primarily include the landscapes besides national and spiritual values of the cities they are located in. While I, as an artist from Antakya, was looking for a subject that could create a panorama of my city, a clear

subject that can summarize the cultural and religious heritage of my city emerged.

Antakya is one of the most important cities under the Roman Empire. It has one of the oldest colonnaded streets and the first street to be lit. Christianity took shape in this city; additionally, the apostles who came to this city are described in holy books. Particular attention is drawn to the story of Habib-i Neccar, who believed in the apostles, in the Quran. The tombs of the Apostles and Habib-i Neccar are located in the mosque built in the name of Habib-i Neccar; - this significant mosque was built on the historical street of the city. After carefully evaluating all the details, the main character of the panorama was determined as Habib-i Neccar was chosen as the main character of the panorama. In this context, a visual was created around Christian Habib-i Neccar, whose mosque is located in one of the first monumental streets in history. It is believed that the Apostles and Habib-i Neccar were possibly together around 37 AD. The most important sign that supports this idea is the story of Habib-i Neccar, told in the Quran. According to the Quran, Habib-i Neccar was martyred and then a disaster happened; Byzantine chronicler Malalas from Antioch (491-578) reported that an earthquake occurred in Antakya in 37 AD. [15]

In conclusion the story of Habib-i Neccar, which is described in our Holy Book Qur'an, in the chapter of Yâsin, is presented as an example to all humanity; based on this importance, the purpose of this panoramais to enable today's people to experience the atmosphere through visual reading. For this purpose, a central point of view was determined based on the location of the mosque on the street, which was first the first illuminated road in history. According to the composition that involves the view in the south direction, there are Habib-i Neccar Mountains (known as the Silpius Mountain in Ancient times) on the left, and the ramparts passing over them; there are the columns with torches on the left (fig. 4), and people who are shopping are in the middle part of the view. There are Asi River (Orantes) and Moses Mountain located in the background (fig 5.).



Fig. 4. West side of the panorama (Habib-i Neccar the running).





Fig. 5. Center of the panorama image (this image shows the salvation street on the left side, the market area in the middle, the rebel river, and the Moses Mountain in the distance).

On the right side, the view of the apostles who were lynched in the pagan temple, which was then located in Habib-i Neccar Mosque, is presented; Antakya natives who used violence are also revived for the sight of the audiences (fig. 6). Habib-i Neccar is depicted as running from the left side of the envoys towards them in an infinite loop. The purpose of this depiction is to obey the narration in Surah Yâsin; *“A man from the other end of the city came running”*. This depiction is specifically chosen as the image of eternity represents the idea that Habib-i Neccar was heralded with heaven according to the Surah. [16] The incident in the city of Antakya is animated with a cycle of day and night, each represented for 40 seconds. 40 seconds a day and 40 seconds a night (fig. 7-8).



Fig. 6. East side of the picture (In this episode, the lynch attempt of those who attacked the Apostles is animated. Between the columns and the place where the incident took place is where Habib-i Neccar Mosque is located today).



Fig. 7. General view of the panorama exhibition. Author's photo.



Fig. 8. Night-illuminated interpretation of Herod Street (today Kurtuluş Street) and square. Author's photo.

A presentation was prepared for this panorama show in line with the available space and facilities; There were limitations in terms of the surfaces on which space and the image be transferred; it was thus possible to prepare a 180-degree presentation of 2 meters height, 14 meters width, and 9.5 meters diameter (fig. 9). In this work, which portrays a glimpse, thousands of photographs have been scanned and images that can describe the subject have been manipulated and brought together. Finally, the running figure and night lighting in connection with the story are added as a video loop to give an infinity effect.

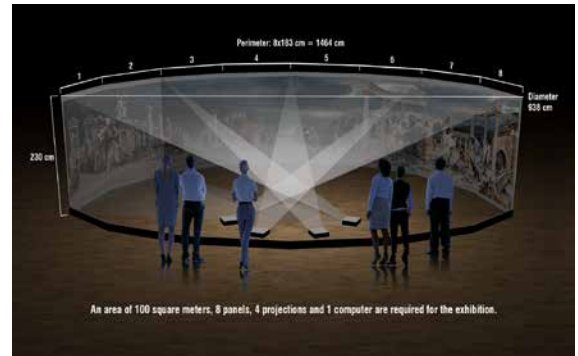


Fig. 9. 3D planning of the panorama exhibition including the technical dimensions. Image created by Author.

This work has been prepared as a preview, which is a personal interpretation of historical and cultural events. Hopefully, such a rich and remarkable story will be reconsidered and studied with the experts in the field and the universal story of the city of Antakya will be transformed into a panorama museum.

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# Of Innovations in Panoramas: Art Meeting the Sciences

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## Abstract

Contemporary theoretical reflection and artistic practice have turned panoramic phenomenon into panoramic imaginaries with satellite image, GPS, image-based modelling and immersive VR environments. Fascination with various forms and application of panorama today testifies its continuing significance in developing the relationship between science and art. This is evidenced in the earliest panorama paintings whose making involved land survey and mapping the territory: geodetic research, measuring plots of land, the National triangulation network and the production of topographic maps. In these projects, artists and scientists worked together to look for cross-disciplinary solutions to complex shared problems in producing maps and views of the territory. Drawing served as a main means in providing solutions to research problems in these projects: for example, purely mathematical principles, the rules of perspective and the three-dimensional effects. The drawing function was to bridge the demands of scientific exactness and the demands of contemplation, affording particular attention to the spectator. By exploring the rich history of the practices of visual representation, it becomes evident that the role of drawings in making panoramas today has been replaced by panoramic photography to provide solutions to research problems in the context of rapid developments in multimedia. The aim of the paper is to trace how this transition from panorama drawing to panoramic photography has challenged and expanded not only ways of virtual reconstruction of the architectural heritage, but also enabled the spatio-temporal reconstruction of historical events.

## Keywords

Panorama, Art, The Sciences, Drawings, Photographs, Architectural Heritage

## Introduction

Technological development in the process of making panorama images marks the transition from employing drawings towards integrating photographs. I will start by analyzing how the first panorama makers searched for cross-disciplinary solutions to complex scientific and artistic problems: firstly, from panoramic phenomenon imagined primarily as an art form; secondly, to the contemporary panoramic imagery that reaches beyond the limits of modern technologies. From the very beginning, the reality that the panorama image represents gravitates around

the scientific and artistic goals of creating first historical panoramas.

## The Technological Progress of the Panorama Image to Date

Robert Barker was arguably the first person who conceived the idea of the panorama. What he had intended was to depict a landscape in a full circle of 360° as realistically as possible. The patent described an *artistic format* of paintings that practically surrounds the viewer, and the novelty is in presenting visual experience. As such, this story would not be complete without a description of the panorama as it had originally started: as an art form. But what about the scientific part? The relationship between art and the sciences in the context of panorama phenomenon turns out to be ambivalent. As first, we see Pieter Bruegel the Elder traveling in the 16<sup>th</sup> century and drawing mountain landscapes on behalf of Antwerp publishing houses. [1] Intended for the collector markets, the representation of the landscape he provided was composed in interaction with cartography according to actual studies. However, they often show details that would not be visible in the exact image. Artists of the first panoramic paintings stop at the mystery of the landscape and through their own eyes notice details that, when fitted into the whole of the mosaic, can decipher bearing elements, without which the identity of the whole is blurry or completely unrecognizable. [2] Unlike this artistic goal of panorama, its scientific goal shows different approaches: it departs from mathematical model to employ the mixture of optics and geometry that comes with the design of panorama cameras.

The making of the first historical panoramas begins with the determination of known points. One of the techniques land surveyors used is resection. The first step was drawing the map with known points and comprised mathematical operations. This method allowed the coordinates of an unknown location to be determined (Fig. 1). The panorama makers were using any of this equipment: Camera obscura (Latin name for "dark room"), Panoramagraph (invented by Chaix in 1803), Camera Lucida (Latin for "light room,"

invented by William Wollaston, an English physicist, in 1806), and Diagraph (invented by Gavard in 1830) that includes the use of a curved ruler to compensate for panoramic curvature distortion. When they came to paint architectural details and shadows, they relied on panoramic photographs. Thus, the making of the panorama combines visual methods and mathematical procedures. An attempt was made by Friedrich von Martens to create a photographic panorama, but because of photographic deficiencies, the results were quite poor. When George Eastman introduced celluloid film in 1888, the flexibility of the improved device opened up new possibilities, thanks to further innovations in the field. Sutton Moessard succeeded in assembling multiple photographs to form a full panorama by using four projectors in a circular room. Subsequent higher field-of-view cameras were constructed, but their fields of view were still limited to 160-170°. In 1894, Charles A. Chase demonstrated his Stereopticon-Cyclorama, which comprised of eight projectors projecting sixteen slides onto a circular screen. This invention was later improved by Raoul Grimoin-Sanson's Cineorama (Fig. 2). As time passed, people found progressively more and more ingenious means of capturing panoramic images of real scenes without the painstaking manual process of painting or the use of elaborate structures to house multiple photographs or projectors. One of the more promising developments is the use of higher fields-of-view cameras. The first panoramic camera was invented by P. Puchberger of Austria in 1843. It was a handcrank driven swing lens panoramic camera capable of capturing a 150° image. The rotating camera invention of M. Garella of England in 1857 eventually extended the field of view of capture to a full 360°.

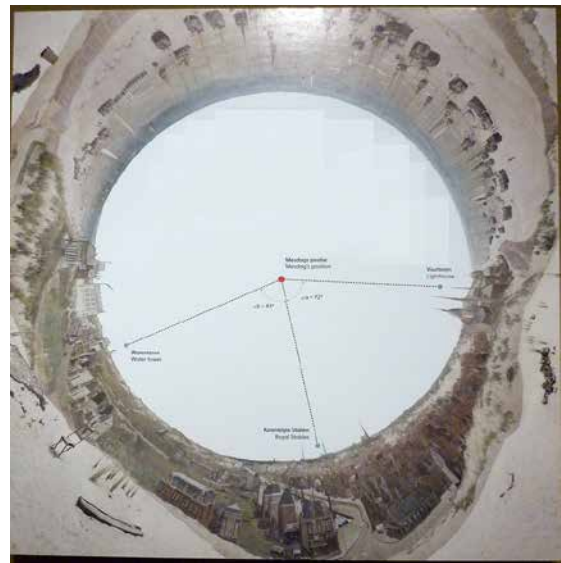


Fig. 1. The map of the Hague and Scheveningen from 1868. The first step was drawing the map with known points and comprised mathematical operations. This method allowed the coordinates of an unknown location to be determined. To this end, from a known point at least three places must be visible for which the position is known. Here you see the RD-coordinates of three places visible on the Panorama Mesdag in Den Haag: 1] the Scheveningen lighthouse, 2] the Water Tower on Pompstationsweg, 3] the small Tower of the Royal Stables © Author's photography, the Panorama Mesdag Museum, Den Haag.



Fig. 2. Camera configuration for Raoul Grimoin-Sanson's Cinécosmorama or 'Cineorama', patented on 27 November 1897 © Cinémathèque Française



## Contemporary Panoramas

Applications of panoramic imaging are not only computer vision, but robotics and image/video processing as well. More specifically, the applications extend to integrate 3D environment modeling, identification and recognition of robots, human tracking, and video representation. Already in the early years of photography several attempts were undertaken in order to enhance the optical field of view by appropriate camera solutions. When, around 1840, the technique of daguerreotypes became available for a wider group of people, mainly pictures of urban areas such as large squares, halls and monuments came into the photographer's focus. The analog panorama camera has been developed and used for photogrammetry. It is important to note the potential of photogrammetric multi-station panorama processing for the 3D reconstruction and documentation of architectural objects. [3] This possibility is based on the fact that the image is made according to certain geometric and optical principles. Relevant applications today are making documentation for the preservation of architectural heritage. Research in photogrammetry use metric site documentation to ensure the preciseness of measuring in the process. [4] It mediates scientific knowledge -- firstly, dealing with panorama imaging, and secondly, using mathematical models and photogrammetric processing. Having said that, it is easy to recognize the potential of photogrammetric panorama to draw by "pixels" instead of lines, as we once did, and in this way to process for the 3D reconstruction and documentation of architectural buildings.

Panoramic images from multiple positions can be used for the 3D reconstruction of historical architectural objects. At least three different cylindrical panoramas need to be generated. Due to the stable geometry of the cylindrical panorama model the bundle adjustment can be performed with few object points. [5] For example, researchers at the Institute of Photogrammetry and Remote Sensing of the Dresden University of Technology investigate a strict mathematical model for rotating line cameras. This model was successfully implemented in different photogrammetric analysis methods, such as a self-calibrating bundle adjustment of panoramic image data. Another example is the analysis of the interior space: the hall of the building can serve as a test object for 3D modelling from panorama images. The procedure included the selection of numerous object points measured in order to provide basic geometry data for the 3D reconstruction (Fig. 3). A traditional approach to extracting geometric information from a large scene is to compute multiple 3D depth maps from stereo pairs or direct range finders, and then to merge the 3D data. [6] Moreover, composed disparate perspectives through a three-dimensional model of the city can serve to reconstruct the spatial relations embedded in the footage.



Fig. 3. Measured point in left panorama (top) and corresponding epipolar line in right image (bottom) © Thomas Luhmann, Institute for Applied Photogrammetry and Geoinformatics, Oldenburg, Germany.

## Applications in Architectural Heritage: Panorama *versus* Photographs

The contemporary panoramic imagery reaches beyond the limits of modern technologies. It stands for an image that was crafted so as to help us understand something, and as such is relevant for the virtual reconstruction of architectural heritage. More precisely, transition from panorama drawing to panoramic photography has challenged and expanded not only ways of the virtual reconstruction of architectural heritage, but also enabled the spatio-temporal reconstruction of historical events. Diverging from the traditional forms of visualization, these images can offer observation and visual communication of scientific evidence. Therefore, they are called *epistemic images*, as practitioners of science open new questions and communicate newly created knowledge during the process. My claim is that media technologies have major impact on ways in which newly created knowledge is communicated visually. It testifies to the fact that images depict not only the representation of objects or events, but rather material replicas of objects and situations. This is visible in contemplating Gaza today, in the recontextualization of a war narrative through the prism of panoramic image. The procedure draws from the basic function of a panorama to contemplate inaccessible locations and past events – in a way to transport historical events into the image, and capture them for the re-examination at some other time. In the case of Gaza, the modalities of representation in the panorama are a symptom of, above all, the realistic intention of depicting this scene in which real historical events are being reproduced. [7] Mapping past events in this way raises the question of the political connotation of war, hypothesizing that whoever wins the battle of media determines history – i.e. controls the way we perceive the past. Namely, the case of the panorama that was originally conceived and developed on a scientific basis, through a game of mathematical and visual geometric parameters, and described by visual means, makes it possible to reveal the space between numerous images it integrates and thus to



come closer to the reality, if not truth. Thus, it triggers the re-examination of what is incomprehensible and intangible for the recipient, which exists in as many versions as there are participants, and what is now open to further contemplation, negotiating that coming closer to the reality of the war event is possible exactly by visual means.

London-based research unit Forensic Architecture was recently hired to undertake spatial and media analysis of the “Rafah: Black Friday” event (2014, Fig. 4), with an aim to clarify its historical narrative. In a renewed attention to informational modes and models, as David Joselit has pointed out, contemporary visual culture “shifted from object-based aesthetics in both architecture and art to a network aesthetics premised on the emergence of form from populations of images,” which constitute “dynamic mechanisms for aggregating content”. [8] In light of this trend, further reflection on the Gaza war case was no different: it took shape based on hundreds of videos and images produced during these events. Namely, the project aimed at locating and reconstructing the story of events that took place in Rafah, Gaza, on the first of August, 2014, by using hundreds of images and video clips existing in disparate locations. Forensic Architecture office composed disparate perspectives through a three-dimensional model of the city, by reconstructing the spatial relations embedded in the footage. [9] The time of each strike is established by looking at the metadata of the images or searching for shadows. In order to reconstruct space from image, they used computer process called photogrammetry that analyzes the difference between multiple photographs of the same objects and derives depth. The results are three-dimensional models called point clouds. [10]

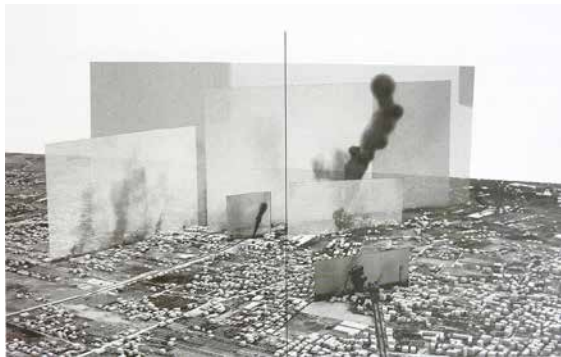


Fig. 4. Forensic Architecture, *The Image-Complex*, from “Rafah: Black Friday” project, 2015. Multiple images and reconstructed bomb clouds are arranged within a 3D model of Rafah, Gaza © Forensic Architecture, 2020.

In this process, the image became a standard for estimating significance of historical reality, i.e. the way of thinking about the issues of time and experience through visual, material, and spatial registers. Accordingly, photographs made during the war serve for contemplating

past events in relation to their historical outcome. Taken in different times and places, in different resolutions and representations, these photographs form a critical pile of a thousand of viewpoints from not only professional journalists but also from ordinary observers. In this way, vast body of images taken during the war events enter the public discourse. Instead of allowing interpreters to see the real war at first hand and thus help them clarify the historical narrative, these photographs lack the means to directly illustrate the events whose course and features they depict. Omitting more than they can possibly include, their frames constraint perception to expose the weakness of the critical tools with which these historical images are comprehended. As a result, the image is distanced from the reality it represents and histories it narrates.

## Conclusion

The technological progress of the panorama image, parsing through the fusion of art and science, has brought us closer to the reality that it represents. Moreover, by virtue of the advanced technologies, the panorama has shown multiple applications today for the 3-dimensional reconstruction and documentation of architectural heritage. Unlike photographs that served for contemplating past events in relation to their historical outcome, my claim is that panorama is revealed as a method for contemplating past events and their historical outcome in the present. In other words, the most *immediate response* the viewers experience when reading panoramas will lead the past to bring the present into a critical state. In this way, the panorama image depicts not only a representation of objects and events, but rather reveals a remote sensing the political background of reality. In other words, technology has enabled yet another role of panorama: to show its deeper political manifestations in an artistic format. In addition, it offered an unprecedented type of scientific evidence: panorama introduced a new standard of evidence as an opportunity to better understand how society’s political processes in each era decisively influence the type and use of the representational agendas of architectural heritage.

## Notes

1. Andjelkovic, *International Panorama Council Journal*, Vol. 2: Memory and the Panorama, 87.
2. Andjelkovic, *International Panorama Council Journal*, 87.
3. Read more about the potential of photogrammetric multi-station panorama processing for the 3-D reconstruction of objects in: Thomas Luhmann, “3-D object reconstruction from multiple-station panorama imagery,” 2004.
4. A more detailed view on the history of panorama photogrammetry can be extracted from Luhmann,

“Panorama Photogrammetry for Architectural Applications.” 2010)

5. Luhmann, “Panorama Photogrammetry for Architectural Applications,” 2010.

6. Szeliski, and Kang, *Proceedings CVPR IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, 1996.

7. Janson, *Istorija umetnosti: pregled razvoja likovnih umetnosti od praistorije do danas*, 164.

8. Joselit, *After Art*, 43-55.

9. Varvia, *Perspecta 51*: Medium, 48.

10. Varvia, *Perspecta 51*: Medium, 51.

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## Author Biography

Dr Katarina Andjelkovic, Ph.D., M.Arch.Eng., Atelier AG Andjelkovic, is a theorist, practicing architect, researcher and a painter. She served as a Visiting Professor, Chair of Creative Architecture at University of Oklahoma U.S.A., Institute of Form Theory and History in Oslo, Institute of Urbanism and Landscape in Oslo, University of Belgrade-Faculty of Architecture. She lectures internationally at conferences in modern aesthetics of architecture, film-philosophy, art history, media, drawing, performance, visual culture: in Europe, UK, North America and Canada. Katarina has published her research widely in international journals (Web of Science) and won numerous awards for her architecture design and urban design competitions. She is a full author of the Preliminary Architectural Design of the National project supported by the Government Republic of Serbia. She won the Belgrade Chamber of Commerce Award for Best Master Thesis defended at Universities in Serbia in all disciplines. Katarina has published two monographs and an upcoming book chapter and several journal articles with Intellect UK. Andjelkovic exhibited her artwork at many international architectural, fine arts and photography exhibitions, including group exhibitions at Pall Mall Gallery in London, at TU Delft in Netherlands, Royal Hibernian Academy in Dublin, MAAT Museum in Lisbon, The Biennial of Illustration 2019, the Museum of Applied Arts in Belgrade, the National Museum in Belgrade, Gallery Singidunum in Belgrade, the Gallery of the Central Military Club.

# Where Islamic Visual Theory and Western Pictorial Tradition Meet: 360° Panoramic Photography's Two-Dimensional Image Projections and Sacred Spaces

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## Abstract

Using this author's ongoing project Sacred Spaces of New England and Hans Belting's book *Florence and Baghdad: Renaissance Art and Arab Science* as starting points, this paper compares and contrasts Islamic visual theory with Western pictorial tradition and examines Islamic pattern design to root this author's 360° panoramic photography's two-dimensional geometric image projections of sacred spaces into an artistic tradition.

## Keywords

360° Panoramic Imaging, Geometry, Islamic Geometric Pattern Design, Cultural Heritage, Mapping Projections

## Introduction

Geometry and the sacred are often linked in most religions' manifestations of art and architecture, such as churches, temples, mosques, and religious monuments, as well as in designed natural spaces. Sacred geometry often refers to symbolic and sacred meanings assigned to certain geometric forms and proportions. [1] It is through the use of geometry as a cultural technique that one can in part understand the relationship between a religion and its philosophical expressions. In the book *Florence and Baghdad: Renaissance Art and Arab Science*, Hans Belting examines the notions of Islamic visual theory and Western pictorial tradition through the lens of geometry, comparing and contrasting represented geometry (geometric motifs) and representational geometry (applied linear perspective) to examine the philosophies associated with Islam and Christianity during the Renaissance.

360° panoramic imaging is the science, art, and practice of creating interactive and navigable immersive 360° screen-based images, which usually depict a place or event. A 360° panoramic image is built upon a geometric structure that produces the illusion of an immersive image space. This image data can also be output onto a two-dimensional surface using multiple projection variations. It can be

argued that 360° panoramic photography's two-dimensional image projections mirror other geometry-based artistic practices such as Islamic pattern design. Using this author's ongoing project Sacred Spaces of New England and Hans Belting's book *Florence and Baghdad: Renaissance Art and Arab Science* as starting points, this paper compares and contrasts Islamic visual theory with Western pictorial tradition and examines Islamic pattern design drawing to root this author's 360° panoramic photography's two-dimensional image projections of sacred spaces into an artistic tradition, resulting in a body of work that is a conceptual hybrid of two seemingly disparate cultural techniques—represented geometry and representational geometry (figure 1).



Fig. 1. Stereographic Projection of Saint Anthony of Padua Church in New Bedford, Massachusetts. ©2020 Seth Thompson, Author.

## Represented Geometry versus Representational Geometry

In the book *Florence and Baghdad: Renaissance Art and Arab Science*, Hans Belting argues his controversial theory of how the contributions of Islamic visual theory led to the development of linear perspective in Italian Renaissance painting. In this analysis, he compares and contrasts the cultural systems and practices of Islam with the West's in order to show that while mathematician and philosopher Abu Ali al-Hasan Ibn al-Haytham's (965–1040 AD) theory of optics may have been used for a different cultural purpose, his ideas would later influence the development of linear perspective used in Italian Renaissance painting, as well as Western concepts of human perception.

For the purposes of this paper, arguments about the use of linear perspective as a tool for colonization have been set aside in an effort to focus on the different philosophies associated with the use of *represented geometry* (motifs of geometry) found in Islamic Art and *representational geometry* (linear perspective) as it is used in Italian Renaissance painting to create three-dimensional space on a two-dimensional surface. [2]

Credited with inventing the camera obscura, Ibn al-Haytham (a.k.a. Alhazen) used this device and mirrors to test his theory that light moved in straight lines. While classical optical theory believed that the eye emitted energy to perceive objects, Ibn al-Haytham argued that physical light rays were reflected from a multitude of points on objects, and that these rays traveled in straight lines to the eye and were then transmitted to the brain. [3]

Linear perspective is a type of geometric projection system in which sightlines converge to a vanishing point(s) on a horizon line so that objects appear smaller as their distance from the observer increases. The sightlines are intercepted as if the viewer is looking through a window and seeing what intersects on the windowpane. While some may argue that linear perspective mimics optical reality, it is a technical construction and not an expression of natural vision.

The main difference between Ibn al-Haytham's theory of optics and linear perspective is that the former lacks the notion of a horizon line and vanishing point. Belting argues that Ibn al-Haytham's theory reveals a cultural difference between an Islamic approach to seeing and the Western approach to seeing developed in the Renaissance. Belting writes, "The vanishing point was first invented in Western art—because it makes sense only in a kind of picture that did not occur in [Islamic] art ... Alhazen had no need of a vanishing point for his theory, which exists only in the gaze, the act of seeing, but not in the world of objects. Nevertheless the geometrical point through which the world transforms itself into a picture became possible only within

the framework of a system that could be calculated mathematically." [4]

While linear perspective links the observer to the work of art by having the picture take on the person's gaze, Islamic visual theory addressed the notion of light and the laws associated with it. [5] Belting writes that Islam "drew back from the optical stimuli of the external world when it strove to protect the power of the imagination from the senses. A drawn or painted replica of internal images could only be an idol. ... Paintings using perspective technique were thus necessarily regarded as idols when they became known in the Arab world. Such works could compete neither with the living creation in which people existed, nor with production of mental images, which remained a mystery of human nature." [6]

Islam's use of geometry is not related to pictorial space but rather is used to create complex mathematical patterns. Represented geometry in Islam is an expression of the divine and the cosmos. In the essay "A Hypothesis Concerning the Character of Islamic Art," Asli Gocer writes, "Like Plato, the Muslim sees geometry and exact proportion as a direct expression of the divine and takes mathematics to be the key to understanding the structure of the cosmos. For both, repetitive patterns, exactness of proportion, and symmetry are synonymous with God's perfect paradigm." [7]

In Islam, represented geometry is not just ornamentation but is rather a visual expression of meaning very different from Western pictorial tradition, which uses representational geometry as an underlay to depict the world in a mimetic manner. [8]

The differences between represented and representational geometries are best illustrated by examining the different intentions of the window and the mashrabiya. The window within linear perspective symbolizes the location of the observing subject who is looking out the window at the artist's constructed three-dimensional world. The idea of the window as it occurs in perspective is polar to the way the mashrabiya is intended in Arab-Islamic countries. [9] A mashrabiya is typically a protruding window screen found on the upper floors of a building that enables cool air to pass through. It usually has carved wood latticework consisting of elaborate geometric designs. A mashrabiya is porous to enable patterns of light to be cast on the floors and walls of the interior. Belting writes, "In Arabic living spaces we find a 'staging' or 'orchestration' of light that carries its own symbolism. The light always originates outside, but here it is directed inside in a particular way, where it draws the gaze of those inhabiting the space without their having to look outside. It is the *reflection* of the light that is staged, through the angle of incidence and the geometry of the screen." [10] Both cultural techniques—represented and representational geometries—reflect different philosophical intentions between Islamic and Western thought.

## Islamic Geometric Pattern Design

Geometry has played an important role in Islam's material culture, not only structurally but also philosophically, since Islam's very beginning. Examples of the use of geometry can be found in some of the earliest Islamic monuments, including the Dome of the Rock (late seventh century) in Jerusalem and the Khirbat al Mafjar (early eighth century) in the West Bank. [11] In the essay "What Is Islamic Art?" Wijdan Ali defines Islamic art as "the artistic manifestation, created within a defined order and harmony by Muslim and non-Muslim artists, according to Islamic aesthetics, and within Islam's principles and concepts." [12] While Islamic art encompasses a broad span of geographic locations, time periods, and media including architecture, calligraphy, painting, glass, pottery, and textiles, the focus of this paper is on geometric design in Islamic art.

Islamic artists initially drew from classical tradition, early Christian art (particularly Byzantine art), and Sassanian art to create a new form of ornamentation that stressed unity, logic, and order. [13] Islamic art is indebted in part to the philosophies of the Athenian philosopher Plato. [14] Asli Gocer writes, "The most original Islamic contribution to art, geometrical design, arabesque, and patterned surface art often consist in the complex design of an interlocking system of rotating polygons and starts within circles. As it is for Plato, circle is the governing basis of all geometrical shapes for the Muslim, followed by hexagon, triangle, and square depicting the fundamental shapes of the geometric universe. Coupled with a sense of rhythm, these shapes are considered by some sects of Islam to evoke infinity, which is a symbol of divine presence." [15] Populating a space, area, or surface—whether spiritual or secular—with an uninterrupted, repetitious design using essential geometric forms as its basis is a significant quality of Islamic Art. In Islam, the circle relates to both God and the heavens; the square relates to the four directions of the earth as well as to earthly matters. Polygons and stars found within many Islamic geometric design patterns derive from the rotation of the square within the circle. [16]

The use of Islamic pattern design in religious spaces has not been exclusive to the Muslim faith alone. For example, in Coptic Cairo, which is part of the Old Cairo district in Cairo, Egypt, Islamic pattern design may be found in such places as the Ben Ezra Synagogue and Saint Virgin Mary's Coptic Orthodox Church (a.k.a. Hanging Church or al-Mu'allaaqa). In the Ben Ezra Synagogue, Islamic pattern ornamentation is prominently found on the Torah Ark or hekhal as well as throughout the synagogue's interior. Similarly, throughout the nave of Saint Virgin Mary's Coptic Orthodox Church and on the entrance portal and iconostas, Islamic pattern design ornamentation plays a predominate role in the design of the space. Integrated

within this ornamentation is the symbol of the cross, which is found in many Coptic churches in Egypt. [17]

While there is no definitive answer as to why Islamic geometric pattern was incorporated into the interiors of the Ben Ezra Synagogue and Saint Virgin Mary's Coptic Orthodox Church, Ann Shafer offers a plausible theory, arguing that "while it is possible that the choice of Islamic-style geometric decoration was a politically motivated one ... it may instead be interpreted as reflecting an environment of acculturation, wherein Christian and Muslim artists, patrons and congregations alike shared a social and cultural heritage taken from a common frame of visual reference. Likewise, the hekhal decoration in the Ben Ezra Synagogue indicates that a strong element in early modern Jewish identity in Cairo was its connection to the surrounding visual cultures." [18] Islamic art craftsmen in Egypt were not exclusive to the Muslim faith but also included Jews and Christians. Within a broader context, religious influences may be found in seemingly disparate faiths throughout the world, manifested in their art and architecture as the result of shared cultural experiences.

## Sacred Spaces of New England and Stereographic Image Projections

Sacred Spaces of New England is an online artistic research platform developed to document, map, and archive sacred spaces of New England using 360° panoramic photography, hypermedia systems, and related technologies (<https://seththompson.info/sacredspacesne/>). The purpose of this project is to record and re-present New England's religious and secular places that elicit contemplation, reflection, and inspiration. Rather than to be a comprehensive survey, the intent of this long-term project is to be a personal exploration of sacred spaces within New England, showcasing the region's diversity and its rich heritage. [19]

Using the 360° panoramic photography data from the Sacred Spaces of New England project, the panoramic images can be digitally redrawn with a number of different mapping projections (e.g., equirectangular, stereographic, cylindrical, mercator) onto a two-dimensional flat surface, creating what appears to be a hybrid between represented geometry and representational geometry. For this investigation, the author has predominantly used the stereographic projection, which may also involve additional transformation adjustment operations of the image, including yaw, pitch, and roll, as well as adjusting the field of view of the spherical projection to create the final image. Involving these operations is similar in a sense to developing an Islamic pattern design, as one manipulates the image within a set of geometric-based rules to create the formal outcome (figures 2, 3, 4, 5, 6, 7, 8). Interestingly, the



stereographic projection is attributed to Claudius Ptolemy, a mathematician, astronomer, geographer, and astrologer who lived in Alexandria, Egypt, in the second century CE; he referred to it as a *planisphere projection*. Ptolemy's *Planisphaerium* is the oldest surviving document that describes the stereographic projection. [20] By combining such notions as represented geometry and representational geometry, this author's work hopes to inspire an interfaith dialogue between religions by exploring religious philosophies through geometry while documenting sacred spaces.



Fig. 2. Stereographic Projection of Saint Mary–Saint Catherine of Siena Parish in Charlestown, Massachusetts. ©2020 Seth Thompson, Author.



Fig. 3. Stereographic Projection of First Congregational Church of Madison in Madison, Connecticut. ©2020 Seth Thompson, Author.



Fig. 4. Stereographic Projection of St. Andrew's Episcopal Church in Newcastle, Maine. ©2020 Seth Thompson, Author.



Fig. 5. Stereographic Projection of Islamic Society of Boston Cultural Center in Roxbury, Massachusetts. ©2017 Seth Thompson, Author.



Fig. 6. Stereographic Projection of St. John's Episcopal Church in Portsmouth, New Hampshire. ©2020 Seth Thompson, Author.



Fig. 7. Stereographic Projection of First Presbyterian Church in Stamford, Connecticut. ©2020 Seth Thompson, Author.



Fig. 8. Stereographic Projection of Saint Catherine Greek Orthodox Church in Braintree, Massachusetts. ©2017 Seth Thompson, Author.

### Concluding Remarks

Hans Belting writes that mathematics in Islamic culture “do not link abstract with figurative but rather abstract with abstract. Geometry in [Islamic] culture has become a symbolic form in the same sense that pictorial perspective was in the Renaissance. It does not depict the world in a mimetic manner, and it is a symbolic form in the way it raises mathematics to a cosmic law.” [21] While the notions

of represented geometry and representational geometry as cultural techniques seem to be philosophically polar at a glance, the ends appear to be the same—to create vehicles for reflection and contemplation.

With the ability to digitally redraw 360° panoramic photography data onto a two-dimensional flat surface using different mapping projections, a conceptual hybrid between the two cultural techniques—represented geometry and representational geometry—can be made. For this investigation, the stereographic projection of sacred spaces has been used; not only does it make references to Islamic and Western geometric uses, but viewers sometimes equate the images to the mandala, a geometric configuration of symbols found in some Eastern religions, such as Hinduism and Buddhism.

This paper acts as a trajectory for future work by this author in the form of artistic production that examines geometry, spirituality, and religion. This author also hopes to document sacred spaces outside the context of New England to broaden the understanding of *sacred geometry* through practical and theoretical investigations, as geometry is manifested in almost all religions; this study seeks to explore the interrelationship of religion and geometry.

### Notes

1. Strachan, *Chartres: Sacred Geometry, Sacred Space*, 35.
2. Belting, *Florence and Baghdad: Renaissance Art and Arab Science*, 14–15.
3. Belting, *Florence and Baghdad: Renaissance Art and Arab Science*, 29–30.
4. Belting, *Florence and Baghdad: Renaissance Art and Arab Science*, 10–11.
5. Belting, *Florence and Baghdad: Renaissance Art and Arab Science*, 9, 11.
6. Belting, *Florence and Baghdad: Renaissance Art and Arab Science*, 30–31.
7. Gocer, “A Hypothesis Concerning the Character of Islamic Art,” 691.
8. Belting, *Florence and Baghdad: Renaissance Art and Arab Science*, 30–33.
9. Belting, *Florence and Baghdad: Renaissance Art and Arab Science*, 252.
10. Belting, *Florence and Baghdad: Renaissance Art and Arab Science*, 253.
11. Bier, “Geometry in Islamic Art,” 1–2.
12. Ali, *What Is Islamic Art?*, 55.
13. Metropolitan Museum of Art, *Islamic Art and Geometric Design: Activities for Learning*, 11.
14. Gocer, “A Hypothesis Concerning the Character of Islamic Art.”
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# The Panorama of Rio de Janeiro by Victor Meirelles and Henri Langerock: Part 3 – 360° Virtual Layers of Atmospheric Perspective

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## Abstract

This essay is part of an ongoing research project by this author entitled, “The immersive experience in 360°: investigation, representation and digital immersion in the city of Rio de Janeiro in the 19<sup>th</sup> and 20<sup>th</sup> centuries”, developed at Programa de Pós-Graduação em Urbanismo in FAU-UFRJ, Rio de Janeiro, Brazil. The present work is a continuous investigation of *The Panorama of Rio de Janeiro by Victor Meirelles and Henri Langerock: Part 1 – A City Memory’s Representation or a City’s Invention?*, presented at the 27<sup>th</sup> International Panorama Council Conference, Istanbul, 2018, and *The Panorama of Rio de Janeiro by Victor Meirelles and Henri Langerock: Part 2 – Render or not to render? Maybe we need to surrender!*, presented at the 28<sup>th</sup> International Panorama Council Conference, Atlanta, 2019. By examining Meirelles and Langerock’s panorama using both practical and theoretical investigations, a new 360° experience will be developed. In order to achieve this goal, digital and analog systems of representations will be used and applied including: computer graphic techniques, free hand sketches, layers in Photoshop, 3D models, 3D renderings, Game Engines, Videos and Animations.

## Keywords

Panorama of Rio de Janeiro, Victor Meirelles, Henri Langerock, City History, Immersive Experiences, Virtual Reality, 3D Model, Game Engine, Videos and Animations.

## Introduction: A Brief History of the Panorama of Rio de Janeiro, Painters’ Partnership and Three Exhibitions Sites

The *Panorama da Baía e da Cidade do Rio de Janeiro* (Panorama of Rio de Janeiro’s City and Bay) was realized by the Brazilian painter Victor Meirelles de Lima (1832-1903) and the Belgian photo-painter Henri Charles Langerock (1830-1915). It presents Rio de Janeiro in the end of the nineteenth century in a beautiful dusk of April. [1] This Panorama, like other two predecessors [2], represents the city’s central area, the old capital of the country with the nature in great splendor. [3] From its analysis, it is possible to identify significant changes in Rio de Janeiro’s history: its unique landscape, architecture, successive urban transformations, symbolism of political and administrative power, and many other aspects.

Victor Meirelles was the most important Brazilian painter in the late nineteenth century. [4] He had a formal and academic education in *Academia Imperial de Belas Artes* (Imperial Academy of Fine Arts) in Rio de Janeiro, recognition from others painters and notoriety in Brazilian society. Henri Charles Langerock was a Belgian photo-painter, an artist of recognized quality, but without notability and academic education. Langerock was renowned as an expert in landscape painting thanks to his works in Europe and North Africa.

The painters had met for the first time during Langerock’s exhibition in *Academia Imperial de Belas Artes* in Rio de Janeiro in April of 1885. Victor Meirelles was surprised by the quality of the Belgian’s work, and realized that experience in painting panoramas. Langerock had worked with a team of painters on *Panorama of the Battle of Tell-El-Kébir*’s in London, in 1884-1885.[5]

Thanks to the success of this exhibition, Meirelles and Langerock decided to paint a *Panorama of Rio de Janeiro*. They founded *Meirelles & Langerock Panoramas Company* with the purpose to realize the *Panorama da Baía e da Cidade do Rio de Janeiro* in 1886. [6] The two artists were founders and the main shareholders, with a collaboration of a dozen small members. The company would have a term of six years.

After a thorough analysis of the four hills in the central area of Rio de Janeiro city, *Morro do Castelo*, *Morro de Santo Antônio*, *Morro de São Bento* and *Morro da Conceição*, Meirelles and Langerock decided to take the Panorama from *Morro de Santo Antônio*, in this sense, presenting the greater part of city’s central area. [7]

The painters began the studies for the *Panorama da Baía e da Cidade do Rio de Janeiro* in the city in 1885. Langerock painted from Rua da Lapa to the Convento de São Bento, covering parts of the south and central zones. Meirelles depicted the port, north area, and the final section of the city’s south zone, assembling the 360° circular painting. [8] These studies were presented at Rua do Sacramento in Meirelles’ atelier in Rio de Janeiro. After a successful exhibition, and with the financial support needed, the two partners traveled to Ostend, in Belgium’s coast. Together, they worked in the canvas from the last months of 1886 until March 1888.

The *Panorama of Rio de Janeiro* was exhibited for the first time in Brussels, on April 4. The Brazilian and Belgian painters tried to present the Panorama in London, but at that moment, there were no rotundas available. The alternative was to choose the Grand Panorama National de Belgique at the old Boulevard Hainaut in Brussels [9]. The *Panorama da Baía e da Cidade do Rio de Janeiro* was 115 meters in length x 14.50 meters in height. The exhibition was from April 5 to October 16, in 1888, with a great number of 50.000 visitors in its first exhibition. [10]

The second exhibition's site was Paris. After a successful season in Brussels, Meirelles and Langerock had disagreed with the profits of last exhibition and decided to break up their partnership. Brazilian painter went alone to French capital. The Panorama was inaugurated in March 14, 1889, in *Avenue Suffren*, as one of the Panoramas of the Universal Exhibition in 1889. [11] In the first months, the exhibition reached out an average of 200 to 500 people per day, but after the official opening of the Universal Exhibition, the visitation's average decreased around to 50 to 60 people daily. The Panorama was not able to compete with World's Fair attractions.

The third exhibition's site was in Rio de Janeiro. It was opened on January 3, in 1891. [12] The exhibition was a huge success establishing an unprecedented mark in art presentations in Brazil (Fig. 1). Local newspapers started to publish small notes with public's frequency [13], and its thorough analysis [14], is possible to state that the Panorama of Rio de Janeiro reached out in the first year the number of 87.500 visitors. The Panorama remained in exhibition for about five years. Slowly, the greatest city's entertainment spectacle was no longer a big attraction. The Panorama was closed and the rotunda demolished. [15]

In 1902, Victor Meirelles donated his panoramas to *Museu Nacional da Quinta da Boa Vista* (National Museum of Quinta da Boa Vista). [16] They were stored inadequately and after a few years they became lost. No more precise information was found after 1910. [17]

This paper continues a series of studies that investigate this Panorama and interpret of its immersive experience.

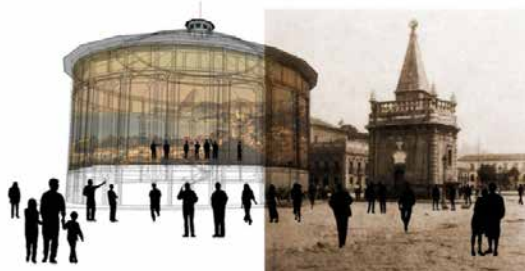


Fig. 1. *The Panorama of Rio de Janeiro* at Praça XV de Novembro in Rio de Janeiro near to Master Valentim's fountain: 3D model x Photography based on newspaper reports, 2018, Private Collection.

## Objective

As part of an ongoing research project, the purpose of this essay complements the papers presented at 27<sup>th</sup> International Panorama Council Conference in 2018, in Istanbul, and 28<sup>th</sup> International Panorama Council Conference in 2019, in Atlanta. In order to follow this aim, we assume that the main objective for this opportunity is:

- To recreate a 360° immersive experience, by 3D digital interpretation, of the Panorama of Rio de Janeiro by Victor Meirelles and Henri Charles Langerock of 1888 based in all information collected and data developed.

## Theoretical Framework

The theoretical framework also follows the essays published in the International Panorama Council Journal in Volume 2 and 3. The main authors remain the same: Ernst Gombrich, *Art and Illusion* (2004); Oliver Grau, *Virtual Art* (2003); and Gordon Calleja, *In-Game* (2011). These and other authors are discussed and analyzed in the PhD thesis *O panorama e a experiência imersiva em 360°: do espetáculo de entretenimento aos meios digitais* (The panorama and immersive experience in 360°: from the spectacle of entertainment to the digital media), by Thiago Leitão, PROURB / FAU / UFRJ (2014).

For this opportunity, we would like to add three new authors to this ongoing research: for theoretical and historical approaches: Teresinha Sueli Franz, with a new research about Victor Meirelles; Erkki Huhtamo, with a thorough analysis about Moving-Panoramas art form; and for theoretical-practical development: Evan Rawn, related to 3D models and engine games.

The Brazilian researcher Teresinha Sueli Franz has been doing new investigations about Victor Meirelles. [18] Franz thoroughly examined the painter's family tree, family members in Brazil and Portugal, his social circle in childhood and youth, birth certificate, marriages – Meirelles got married twice – and death, among other documents. Her study does not focus on Meirelles' Panoramas, but brings a perspective that contributed to a new understanding of the artist's life: Meirelles had a wide network of contacts, in addition to the Imperial Family, who always kept him close to power and social elites.

Therefore, the author suggested a new investigation: could any study concerning Panoramas be acquired by some member of this network after the painter's death? Would any documentation produced by Meirelles for his Panoramas remain with the former partners of the company Meirelles & Langerock? It is well-known that his collection was acquired by *Escola Nacional de Belas Artes* (National School of Fine Arts) [19]. Part of its collection was destined to the *Museu Nacional de Belas Artes*

(National Museum of Fine Arts) in Rio de Janeiro, while another was sent to Florianópolis, painter's hometown, for a Victor Meirelles' museum.

Based on new research realized in *Hemeroteca Digital*, Jornal's Library system, at *Biblioteca Nacional* (Brazilian National Library) close to Meirelles' death, February 22, 1903, we find the newspaper *A Notícia* of October 24, at the same year. The note commented that Victor Meirelles has left some paintings in his atelier after his death and these paintings were purchased by *Escola Nacional de Belas Artes*. Some of the items described brought us special attention: 7 studies for the *Panorama da Baía e da Cidade do Rio de Janeiro*; 3 studies for the *Panorama da Esquadra Legal em 23 de junho de 1894 observada da Fortaleza de Villegaignon em ruínas*; 3 studies for the *Panorama do Descobrimento do Brasil*.

However, the collection of *Museu Nacional de Belas Artes* only contains: 6 studies for the *Panorama da Baía e da Cidade do Rio de Janeiro*; 1 study for the *Panorama da Esquadra Legal*; and 1 study for the *Panorama do Descobrimento do Brasil*. What have happened to the other five studies mentioned above? If the Victor Meirelles Museum in Santa Catarina doesn't have any studies related to Panoramas? What would be the relevance of these five missing studies for the compression of Meirelles' Panoramas? The seventh study of the Panorama of Rio de Janeiro would be of great interest for this research, since the six found already restore the 360° circular city image. What else would this new study add? Would it reveal any atmospheric perspective used in the Panorama? A crucial key point for Meirelles and Langerock as it as described in their appointments? Would there still be others lost? [20] Unfortunately, it is not possible to answer these questions now. Further research needed to be done.

Finnish researcher Erkki Huhtamo is one of the most important authors related to Media History [21]. In 2013, he published the book *Illusions in Motion* with an unprecedented investigation on Moving-Panoramas [22]. Huhtamo analyzed the Panorama phenomenon and demonstrated that Moving-Panoramas were as interesting and complex as Panoramas. Rather than "static", Moving-Panoramas incorporated the idea of movement into the experience, whether by moving a canvas by cranks, in the first examples around 1850, to moving the observation platform, with complex hydraulic systems developed at the end 19th century in later examples.

From Huhtamo's investigation, and mainly through analysis of some Moving-Panoramas variations, such as *Stereorama*, *Transiberiorama*, *Cineorama* and *Mareorama*, it was possible to state that to incorporate the movement's idea into Panoramas' immersive experience was necessary to re-discuss the painting's atmospheric perspective representation. After all, the immersive experience's depth notion would also be in motion.

This optical effect became even more noble and relevant, since the observer's gaze and / or his body movement, would need to be in complete harmony with atmospheric perspective depiction and its depth notion, otherwise, the illusion would break.

The painting's depth notion and the immersive experience used to be developed and executed by divisions in pictorial planes. This movement's suggestion occurred in different ways depending of Moving-Panorama variation: *Stereorama*, the observer was in a boat's cabin and surrounded by windows with sea's depiction and moving boats; *Transiberiorama*, the visitor was in a train's cabin and watched the landscape speed past his eyes; *Cineorama*, the observer was in a basket of balloon and was perceiving a vertical displacement of its height, going up and down in slightly different paintings; *Mareorama*, the visitor was on a transatlantic deck, between two large Moving-Panoramas, his body was oscillating like ocean waves and his gaze was perceiving the banks landscape, due to the platform's movement; among other examples.

We would like to highlight the *Transiberiorama*. It was built by *Compagnie Internationale des wagons-lits* for the Russian Pavilion at the International Exhibition in 1900 in Paris. [23] *Transiberiorama* simulated a train travel experience from Moscow to Beijing through the Russia's Siberian region. The 9500-kilometer route, normally realized in two weeks, at *Transiberiorama* could be done in just 45 minutes. Visitors could choose the company's three wagons or stay in the waiting platform. The *Transiberiorama* was an ingenious system with four Moving-Panoramas working simultaneously (Fig. 2). It was designed by the architect Georges Chedanne (1861-1940) with Jambon and Bailey's painting collaboration. These pictorial planes' division could increase visitor's depth notion, highlight the painting's atmospheric perspective idea, and consequently, the whole experience.

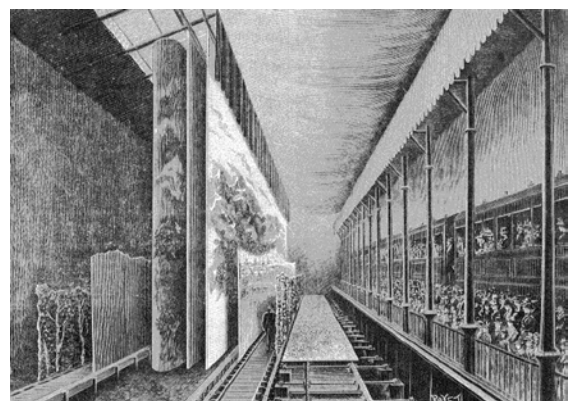


Fig. 2. The *Transiberiorama* in the International Exhibition in Paris in 1900: four Moving-Panoramas working simultaneously to increase the experience, 2020, Private Collection.

The four Moving-Panoramas of the *Transiberiorama* were positioned in such a way as to suggest the atmospheric perspective in motion and accentuate the notion of depth. Each pictorial plan was operated at a different speed: the first plan ran 300 meters per minute; the second at 120 meters; the third at 40 meters; and the fourth and last plan at 5 meters. (Fig. 3). Thus, visitors had the feeling that the landscape was moving like in a train: closer elements moving quickly, more distant elements moving slowly. The landscape depiction was always unique, never repeated, because the objects represented on the canvas never overlapped twice in a row. The *Transiberiorama* was one of the greatest attractions of International Exhibition in 1900 in Paris.

The *Transiberiorama* brought us a new hypothesis: the idea of moving plans to suggest the atmospheric perspective in motion and accentuate the depth's notion could also be applied to a 180° x 360° panorama? Could the pictorial plans be replaced by "concentric rings"? And would have a specific "rotation" to enhance the immersive experience? The present essay will investigate this possibility.

The last author that we would like for theoretical-practical approach is Evan Rawn. The author frequently publishes articles on the ArchDaily portal and develops visualization projects in Architecture and Urbanism [24]. One of its main themes of interest is Architecture representation. Rawn reflects on how the improvement and simplification of digital representation tools, especially *game engines* [25], has been developing a new debate between architects, urban planners and designers.

The author points out that the old – and complex – digital tools used to make video games became simpler and more accessible. They are increasingly being used both in the universities by students and professors, as well as architects and urban planners professionals. If before was necessary to have a great knowledge about digital modeling tools, to create high verisimilitude 3D models, today it is possible to achieve quite satisfactory results easily. The images generated by computers had become very credible, with a great power of "convincing", and mainly, easy to be made. *Game engines* are no longer intended for programmers.

For Rawn, video game industry and architecture visualization industry are increasingly hybrid: video game developers may look to architects to understand how to build 3D buildings; architects may learn from the navigable virtual environment of video games in order to generate new ways of representing experience and space; among other examples. The Architecture representation is no longer distant from video games' representations especially because of the real time render possibility.

Rawn's research demonstrates that resources such as walkthroughs, animations, and even immersive panoramas, were very common in the video games development, but very rare in Architecture and its experiences'

representations. They were considered crude, lifeless, seemed unfinished, and therefore, students and professionals rarely employed this means of representation. It was precisely the improvement and use of *game engines* aimed at Architecture's visualizing that changed this point of view.

Another factor also pointed out by Rawn is the free license, or low cost, offered by most *engines*. It is only necessary to register by email on the developer's website and download it. And, normally, the developer also offers a free forum for questions and answers to assist its use. Certainly, the easy access helped to disseminate the utilization of real time render possibility among students, teachers and professionals in Architecture and Urbanism.

The author's reflection can be confirmed by the growing number of *game engines* that has been developed and improved specifically for Architecture and Urbanism in the last five years: *Unreal*, *Unity*, *Blender*, *Archviz*, *Lumion*, among others. Each of these engines can be better applied for a specific purpose, but all can be used to represent Architecture. This essay will not analyze all these *game engines*. However, we will discuss the use of *Lumion* engine to recreate the 360° immersive experience of the *Panorama of Rio de Janeiro* by Meirelles and Langerock as we will see below.

### **The Fourth Experiment: 360° Virtual Layers of Atmospheric Perspective in *Lumion* engine**

The fourth experiment brings together all material researched and realized in the previous three experiments [26]. This essay applies the circular image of the Panorama of Rio de Janeiro, already redesigned in previous experiments, in the *Lumion* game engine. Its main purpose is to recreate its 360 ° immersive experience.

Initially, the *Unreal*, *Unity* and *Lumion* game engines were analyzed. These engines were selected for their ease, to not require a higher set up, especially video board and processor, for its real time rendering, and for performing interesting and satisfactory images as a final result.

Although we consider Rawn's statement as an important premise in terms of ease and access, *Unreal* and *Unity* engines did not prove to be as simple as expected. Their interfaces are not as intelligible as we thought before. They are based on operations and commands very similar to programming languages, which we are not familiar. It is important to highlight that we will not discard such engines definitively, we will return both at a later time.

However, *Lumion*, a kind of 3D engine, proved to be quite accessible. It is based on the graphic manipulation of pre-defined objects and presets. *Lumion* allowed us to do operations that we could not easily do on *Unreal* and *Unity* engines. Its use proved to be very similar to 3D programs frequently used in Architecture and Urbanism.

In addition to these already quite favorable features, *Lumion* was also able to provide great compatibility with other 3D modeling softwares and an easy editing of the atmospheric perspective. It is worth mentioning that this possibility is not so easily found in 3D modeling programs used in architecture. Normally, images mathematically generated by 3D models come out flatness, crude, without distinction between what is closest or what is distant, without a clear sense of depth. Usually, there are no edges, just chromatic planes. *Lumion* was not developed to create a 3D model, but to visualize and experience it. This idea makes an interesting difference in its use.

*Lumion* not only allowed to test many possibilities regarding the atmospheric perspective, but also offered some effects to improve it: accentuating the depth's notion of the nearest objects with more sharp edges and fading the most distant planes, leaving them more blurred. All made in a simple way: by editing pre-defined parameters and combining them with the correct distances with the color of the sky and the positioning of sunlight.

Another essential factor that made it possible to improve the atmospheric perspective in *Lumion* was the division of the *Panorama of Rio de Janeiro* into layers, considering the pictorial plans used by Meirelles and Langerock. This moment differed from the previous experiments when we had the intention of recompose all studies found, combining 3D models and hand drawings in a single 360° circular image. However, once the image was finalized, it was possible to visualize it in its entirety, and therefore, understand it in new ways. The division of pictorial plans allowed us to suppose how the canvas painting process took place, conjecturing where elements were represented in relation to the platform. From this observation that it was envisaged to accentuate the notion of depth precisely in these pictorial planes when incorporated into *Lumion*, so the computer generated Panorama could be more similar to the original Panorama of Meirelles and Langerock.

This Panorama's division into new layers demanded special attention. At times it was relatively simple to observe these pictorial planes, such as vegetation in the foreground, bay, relief and sky; but in others, as the transition from vegetation to the city and the transition from the city to the medium relief, required us to decide which elements belong to one plane or to the other. Overcome this step, it was possible to separate the Panorama of Rio de Janeiro into pictorial plans.

However, it is worth noting that these plans are not really "plans", since they belong to a circular painting in its original format. So, in fact, these planes should be considered as circular bands, or even, "rings" of a cylindrical projection in 180° x 360° format. This understanding was essential for the proper Panorama use in *Lumion* and its division into large rings.

After this division, was necessary to verify how these rings would behave inside *Lumion*. The circular image of the Panorama of Rio de Janeiro in its original 180° x 360° format was incorporated and worked perfectly, but now, divided in ten parts: five Architectural Elements for the building and five "rings" for Atmospheric Layers (Fig. 3.)

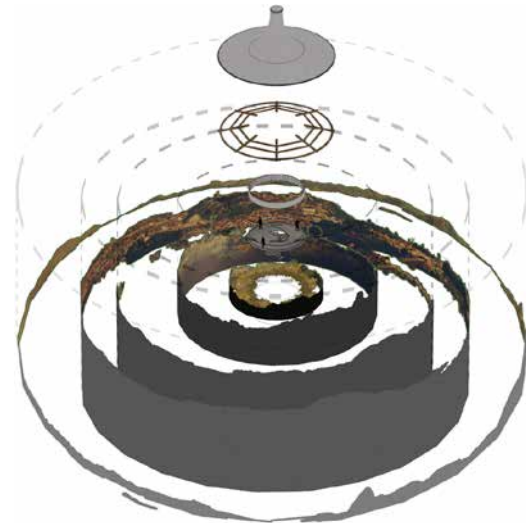


Fig. 3. The *Panorama of Rio de Janeiro* of Meirelles and Langerock divided in five "rings" in *Lumion*. From top to bottom: Architectural Elements - Upper velum, Timbering, Lower velum, Observation platform, Faux-terrain; Atmospheric Layers - Bushes, Higher trees, Closer city, Far city and Landscape, Landscape and Bay; 2020, Private Collection.

This ease and assimilation division of the Panorama image in *Lumion* suggested other questions: what would happen if these rings were animated? Would they suggest a slight movement for the visitor who observes them from the platform? What would be the behavior of the atmospheric perspective in face of these possibilities?

A considerable part of these responses came through the historical correlation with the *Transiberiorama*: four simultaneous *Moving-Panoramas* were presented to simulate the landscape's movement in favor of those who observed it in the train cabin or on the waiting platform and it was divided and presented in four pictorial planes with different speeds. It should be noted that although the *Transiberiorama* visitors' reports were quite impressive, the experience was "planar", the end result was a large mural panel with moving plans. Unquestionably, the experience was immersive, but it was not surrounding.

From this analysis, it was also possible to glimpse the movement's idea to improve the atmospheric perspective's optical effect and the immersive experience's notion of depth of the *Panorama of Rio de Janeiro*. However, this idea had to be adapted: the *Transiberiorama* was



composed by plans and generated an immersive “planar” experience, while the *Panorama of Rio de Janeiro* is formed by a cylindrical projection in a surrounding format. The similarity between the models is in the movement’s idea established by the two systems parts: the *Transiberiorama* had a horizontal planes’ displacement in one direction, while the *Panorama of Rio de Janeiro* proposes a slight rings’ rotation from one single axis.

With this concept, *Lumion* could easily generate these animations for each ring. Nevertheless, the result achieved was not expected. The simple rotation of the five rings did not improve the immersive experience. It generated problems: some empty spaces arose due to represented elements’ displacement. Although different rotations were used for each ring, the closest as fastest, and the furthest as slower, this incongruity still persisted. This problem brought another hypothesis: what would happen if the five rings had different diameters and scales?

The closest ring to the platform would have the smallest size and diameter; the furthest would have the largest size and the largest diameter, always respecting Meirelles and Langerock’s original drawing’s proportionality. Some tests and adjustments were made; the result in *Lumion* was quite satisfactory. The 360° immersive experience’s atmospheric perspective had been radically improved.

To finalize the immersive experience, two other elements were developed: the observation platform and the *faux-terrain*. In the historical research is possible to state the platform set had a staircase, handrail and wooden deck, and the *faux-terrain* was composed of innumerable species of tropical plants. It is worth remembering that *Panorama* represented the top of *Morro de Santo Antônio* in 1885 a natural site at this moment. These two elements were modeled in 3D, using *Lumion*’s library, and incorporated into the immersive and final experience (Fig. 4).



Fig. 4. Detail of the *Panorama of Rio de Janeiro* in *Lumion*: Platform set, faux-terrain and rings, 2020, Private Collection.

After all this processes and development, it was possible to affirm that the atmospheric perspective’s optical effect of the *Panorama of Rio de Janeiro* by Meirelles and Langerock was emphasized and improved, and the immersive 360° surrounding experience can finally be enjoyed and reached. (Fig. 5-9).



Fig. 5-9. The *Panorama of Rio de Janeiro* by Meirelles and Langerock recreated in *Lumion*, 2020, Private Collection.

## Concluding Remarks and Perspectives

It is possible to state that the greatest learning from this essay was its elaboration process. The three experiments realized in the previous years were fundamental for this fourth's work. Without previous investigations, it would not be possible to achieve the desired result in recreating the Panorama of Rio de Janeiro by Meirelles and Langerock immersive 360° experience.

Evidently, the three new authors' contributions, Franz, Huhtamo and Rawn, which add to the main theoretical framework of this ongoing research - Gombrich, Grau and Calleja -, were very important. Through the examination and interpretation of their works, it was possible to glimpse some questions which guided this investigation.

The atmospheric perspective's optical effect could be highlighted and improved. This result was only achieved due to a new division of the Panorama image into five concentric rings, by increasing the scale and diameter of each, and by incorporating unequal rotation movements for different distances. For a nearest ring to the platform, a faster rotation, for the more distant, a slower rotation, and proportionally, the same for intermediate rings. The historical and related analysis of the four Moving-Panoramas of *Transiberiorama* were essential to establish this understanding. The viewer notion of depth who contemplates the Panorama from the observation platform became more evident thanks to this new development.

Finally, the *Lumion game engine* played a very important role realizing this fourth essay. It was through its easy use that it was possible to develop all these new attributions for the Panorama of Rio de Janeiro immersive 360° experience. Its material's library, pre-defined effects, animation presets, like video walking-through, video in 360°, and among others, were widely used during several tests for this experiment. Its easy editing also allowed the development of numerous alternatives. We believe that the experience with this *Lumion engine* was so successful that it could be replicated as a model for further investigations.

In the light of the work realized, some perspectives have been presented for the following years: developing a new walking-through in the *engine* with total freedom of 360° x 360°, and not just a video that simulates the observer's movement; create the experience in Virtual Reality Glasses; hold an exhibition for Panorama of Rio de Janeiro, by printing it in large format, or by a 360° multimedia installation; create a new Panorama of Rio de Janeiro from up-to-date photographs and *Geo-Location* and compare it with the historical painting of Victor Meirelles and Henri Langerock in order to demonstrate the city's history; and mainly, foster discussions between students, professors, researchers and professionals about immersive experiences in Architecture and Urbanism.

## Notes

1. Leitão, Thiago. *O panorama e a experiência imersiva: do espetáculo de entretenimento aos meios digitais*. Thesis (Ph.D. in Urbanism) – Universidade Federal do Rio de Janeiro, PROURB / FAU, 2014.
2. The first Panorama of Rio de Janeiro was the “*Panorama Rio-Janeiro*” painted by Félix-Émile Taunay (1795-1881) a French artist, represents a romantic city's view, presented in Paris, in 1824, at the 3rd rotunda of Pierre Prévost (1764-1823); the second Panorama, “*City of St. Sebastian, and the bay of Rio de Janeiro*” by John William Burchell (1781-1863), English naturalist traveller, represents a meticulously detailed city landscape, was presented in London, in 1828, at the Barker's double rotunda in Leicester Square. For more information see: Leitão, Thiago. Un'opera brasiliana in quattro atti: Panoramas of Rio de Janeiro, p. 60-66. In: Koller, Gabriele ed; *More than Meets the Eye – The Magic of the Panorama*, Amberg: Buerio Wilhelm Verlag, 2019.
3. Leitão, Thiago. *O panorama: da representação-pictórica espacial às experiências digitais*. Dissertation (Master in Urbanism) – Universidade Federal do Rio de Janeiro, PROURB / FAU, 2009.
4. Xexéo, Monica F. Braunschweiger, Victor Meirelles – um desenhista singular, p.64-77. In: Turazzi, Maria Inez org.; Rosseto, Lourdes coord. *Victor Meirelles – Novas leituras*, São Paulo: Studio Nobel, 2009.
5. Bibliographical note of Henri Charles Langerock published in the Belgian newspaper *Le Gand*, May 14, 1888. We found this information during our Master course in Urbanism co-realized at Hogeschool Sint-Lukas, Brussels, in 2007-2008. For more information see: Leitão, Thiago. 2014. *Ibid.*, 136-138.
6. Mello Junior, Donato. O Panorama da Baía e Cidade do Rio de Janeiro, de Vitor Meireles: no Arquivo Nacional três documentos inéditos para sua história. *Mensário do Arquivo Nacional*, Rio de Janeiro: Arquivo Nacional, v.13, n.10, 0, p.336-346, 1982.
7. The choice for *Morro de Santo Antônio* is due to the fact that it allows a privileged and balanced view with the city as an unique whole: south zone, with the relief worldwide well-known *Morro do Pão de Açúcar* and *Morro do Corcovado*; northern zone, part of Brazilian Imperial History, where the Portuguese kings and nobles lived in the city; and the central zone, where the main buildings, churches, squares, architectural landmarks were located. Victor Meirelles would also have easy access to the top *Morro de Santo Antônio* through the convent of the same name, where he already had a studio for large-scale paintings during his already successful career as a teacher at *Academia Imperial de Belas Artes*.
8. Rosa, Ângelo de Proença, et al. Victor Meirelles de Lima 1832-1903. Rio de Janeiro: Pinakothek, 1982.
9. The *Boulevard Hainaut* is now the *Avenue Maurice Lemonier*. The name was changed in 1918 by the Brussels

Municipality to honor the baron Charles Jean Maurice Lemonnier (1860-1930), liberal politician and Belgian patriot. The building of *The Grand Panorama National de Belgique* was disabling in 1924 by the company *Plasman*. Currently, the building is a parking garage.

10. Meirelles, Victor. Relatório apresentado aos Srs. Sócios da Empresa do Panorama da Cidade do Rio de Janeiro pelo sócio gerente Victor Meirelles de Lima. Fundação Biblioteca Nacional, Rio de Janeiro: Imprensa MontAlverne, 1889.

11. François Robichon mentions that before the Panorama of Rio de Janeiro was presented at Avenue Suffren, it was installed in a "waiting" building on Avenue de la Motte-Picquet. The author comments on September 11, 1888, a permission was requested for a provisional construction for Panorama by the Architect Leon Daubourg. Only in 17 of January 1889, a new permission was made for the Avenue de Suffren, No. 80. For more information see: Robichon, François. *Les Panoramas em France au XIXe Siècle*. 954f. Thesis (Doctorat de 3ème cycle) – Université de Paris X Nanterre, 1982.

12. *O Diário de Notícias*. 1891. Newspaper of Rio de Janeiro. Biblioteca Nacional. Year VIII, nº 2013, January 2, 1891, 1.

13. Considera, Eliane. Uma modernidade bem-comportada: O panorama da baía e da cidade do Rio de Janeiro de Vitor Meireles e Langerock, In: *I colóquio Internacional de História da Arte. Paisagem e arte: a invenção da natureza, a evolução do olhar*. São Paulo: H. Angotti Salgueiro, p. 287-293, 2000.

14. Online newspapers' of *Hemeroteca Digital* (Journals Digital Library) of *Fundação Biblioteca Nacional* (National Library Foundation).

15. Victor Meirelles did other two Panoramas: *O Panorama da Esquadra Legal em 23 de junho de 1894 observada da Fortaleza de Villegaignon em ruínas*, inaugurated at the same rotunda, in 1896; and *O Panorama do Descobrimento do Brasil* inaugurated in another rotunda, in Santa Luzia's Street, also in the city's center. For more information, see: Leitão, Thiago. *O panorama: da representação-pictórico espacial às experiências digitais*. Dissertation (Master in Urbanism) – Universidade Federal do Rio de Janeiro, PROURB / FAU, 2009.

16. Museu Nacional da Quinta da Boa Vista (National Museum of Quinta da Boa Vista) suffered a terrible fire in September 2018. Recently, a large restoration project of the Museum was started. However, if there were any documents forgotten, or even hidden by time, containing information about Victor Meirelles' Panoramas, it is probably lost forever.

17. The last pieces of information are correspondences of some authorities in 1910 between Arquivos da Escola de Belas Artes da UFRJ (Archives of the School of Beauty Arts of UFRJ), today, Museu Dom João VI (D. João VI Museum), with the Museu Nacional da Quinta da Boa Vista. The authorities discussed about the future of the

Panoramas, if they need to be buried, burned, cutted in several pieces. No conclusion was taken. Nobody know exactly what happened with the three Meirelles' Panoramas. For more information see: Leitão, Thiago. *O panorama e a experiência imersiva: do espetáculo de entretenimento aos meios digitais*. Thesis (Ph.D. in Urbanism) – Universidade Federal do Rio de Janeiro, PROURB / FAU, 2014.

18. Teresinha Sueli Franz holds a PhD in Fine Arts from the University of Barcelona, Spain. She was an Associate Professor at UDESC - Santa Catarina State University. Franz is currently retired, but continues her investigations. In 2014 published the book "Victor Meirelles: Biografia e legado artístico" presenting a series of unpublished documents about the life and artist's work.

19. The *Academia Imperial de Belas Artes* e the *Escola Nacional de Belas Artes* are the same institution. The Academy became a School in 1890 after the Proclamation of Brazilian Republic in 1889.

20. Meirelles had a very careful working method: he used to draw the first lines in pencil, investigate color palette, made the first compositions, sketched, outlined several times, until he was convinced that alternative was the best to finalize the canvas. We didn't find this kind of information about Langerock. However, it is well-known that both painters paid special attention to the atmospheric perspective in the Panorama of Rio de Janeiro. Therefore, it is possible to assume that Victor Meirelles and Henri Langerock had done numerous studies about this aspect but these studies were not found yet.

21. Erkki Huhtamo is a media historian and pioneering media archaeologist. Currently, he is Professor in the Department of Design Media Arts at the University of California, Los Angeles. He is the coeditor of *Media Archaeology: Approaches, Applications, and Implications*.

22. Moving-Panoramas were an art-spectacle variation of Panoramas. They were long paintings that unfolded behind a window, or a stage, through a system of cranks. Traditionally, they were performed in theaters, operas, church halls, and most of the time, accompanied by lectures, sound and light effects. It was the first major successful mass entertainment in the USA. In the second half of the 19th century it arrived in Europe and was transformed into other variations and denominations, bringing the movement's idea to the Panoramas' rotundas.

23. It is important to note there were two Moving-Panoramas with the same subject in the Russian Pavilion at the 1900 International Exhibition in Paris: the first was the *Panorama Transsibérien*, the *Transiberiorama*; and the second was the *The Great Siberian Railway Panorama*. In a strict sense, this second was more similar with original American Moving-Panoramas. It was painted by the Russian doctor, traveler, artist and writer, Pavel Yakovlevich Piasetsky (1843-1919). It was presented in a small cabinet with half meter high in a few meters wide. The watercolor compressed the 10,000 kilometer journey

in a whopping one kilometer of canvas, divided over nine rolls. At present, *The Great Siberian Railway Panorama* is being preserved at the Hermitage Museum in St. Petersburg with some projects for exhibition.

24. Evan Rawn is designer and architectural professional based in NYC. He holds a degree from Cornell University and has numerous published works on design and urbanism. Currently, he is one of the ArchDaily editors.

25. A game engine is a software-development environment designed for people to build video games. Intrinsically, it has rendering engine ("renderer") for 2D or 3D graphics as its main functionality and it works directly in computer's video board making faster and better results.

26. For more detailed information about the first and second experiences read the essay *The Panorama of Rio de Janeiro by Victor Meirelles and Henri Langerock: Part 1 – A City Memory's Representation or a City's Invention?*, published in *International Panorama Council Conference Journal*, Volume 2, 2018. And, for more detailed information about the third experience, read the essay *The Panorama of Rio de Janeiro by Victor Meirelles and Henri Langerock: Part 2 – Render or not to render? Maybe we need to surrender!*, published in *International Panorama Council Conference Journal*, Volume 3, 2019.

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Arts (PROURB-FAU-UFRJ in Rio de Janeiro, co-realized at Sint-Lucas Architectuur, Hogeschool voor Wetenschap & Kunst, Brussels, 2009), and PhD (PROURB-FAU-UFRJ in Rio de Janeiro, 2014). Since graduation, Thiago Leitão's research areas include: panoramas and virtual reality; 3D models; panoramas and its history; panoramas of Rio de Janeiro; 360° experiences and its conversion to digital media; and how the panorama experience can offer new contributions to the disciplines of architecture and urbanism. He is the Secretary-General of the International Panorama Council.

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## Author Biography

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# Temporary Panorama Rotunda of 1912 is Revived in Virtual Space

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## Abstract

In 2012 the Museum-panorama The Battle of Borodino was preparing to celebrate the 200th anniversary of the Borodino battle and the 100th anniversary of the *Borodino* panorama's creation. In the process of creating the new museum exhibition it was decided that some objects should be implemented as miniature models. Three models were made for visitors with disabilities. One of the models represents the panorama pavilion destroyed in 1918. This model was made based on old photos and documents from the museum's archives. The only disadvantage of this model was that only the outside of the building could be seen. In 2019, using the modern technologies of photogrammetry, architectural drawings and plans of the rotunda from the St. Petersburg Archive, a 3D model of the building was created.

## Keywords

Panorama building, Pavilion, Rotunda, Russian panorama, Model, 3D model, AR, Photogrammetry

## Introduction

In 2012, the Museum-panorama The Battle of Borodino was preparing to celebrate the 200th anniversary of the Borodino battle and the 100th anniversary of the *Borodino* panorama's creation. In the process of creating the new museum exhibition it was decided that some objects should be implemented as miniature models. Three models were made for visitors with disabilities. One of the models represents the current museum building. The second – the panorama pavilion destroyed in 1918. Comparing the models we are not just able to tell the history of the museum but also speak about the evolution of the architectural styles of the panorama buildings. The second model was made based on old photos and documents from the museum's archives. We have to admit that this model was to just render the view of the pavilion; it cannot be considered a completely scientific reconstruction. More

importantly this model only represents the outside of the building.

In 2019, using the model of the building, architectural drawings and plans of the rotunda from the Central State Historical Archive of St. Petersburg, a research officer from our museum created a 3D model of the building.

## History of the First "Borodino" Panorama Building in Moscow

On August 29, 1912 (September 11, 1912 N.S.) a grand opening of a new panorama took place in the center of Moscow. According to Russian newspapers of that time - "At 6 p.m. His Imperial Majesty Sovereign Emperor Nicolas II, together with his daughters Grand Duchesses Olga, Tatiana and Maria, were pleased to visit the panorama of the Battle of Borodino on Chistoprudny Boulevard".[1]

It is also reliably known that at the entrance the imperial family was met by the chairman of the jubilee commission, General of Infantry V.G. Glazov, the original artist of the panorama, Professor F.A. Roubaud and the Honored Professor of the Imperial Military Academy General Lieutenant B.M. Kolyubakin. [2]

Celebrations to mark the centenary of the victory over Napoleon lasted for several days from the 25th till the 31st of August 1912. The Emperor visited memorable places on the Borodino field, Moscow and Smolensk. Due to the fact that the main participant of all these commemorative events was Emperor Nicholas II himself, filming crews were present. For the first time in 2012 the Russian State Documentary Film and Photo Archive published the surviving newsreel produced by the firms *Pathé Brothers* and *Gomon*. [3] Unfortunately, the newsreels that would have captured Nicholas II at the opening ceremony of the *Borodino* panorama have not survived (or perhaps the



filming was not carried out at all) and we have only written sources: the diary of the Emperor and Moscow newspapers reporting about the opening. Of course, the technical capabilities of that time and natural lighting did not allow filming or photo shooting inside the panorama pavilion.

One Moscow periodicals writes the following about the ceremony: "...the enormous building of the panorama was beautifully decorated with flags and banners with national state emblems. The entrance was covered in tropical plants. Above the entrance there is a huge inscription in white letters: BORODINO". And one more quote – "...the huge panorama building, 21 sazhen (sazhen – old Russian measure of distance equal to 2.12 m.) in diameter and 17 sazhen in height, is illuminated by an overhead light during the day and electricity in the evenings". [4] So what do we know about the first *Borodino* panorama building in Moscow?

### Pavilion construction

A military engineer Pavel Vorontzov-Veliaminov was commissioned to construct the building.

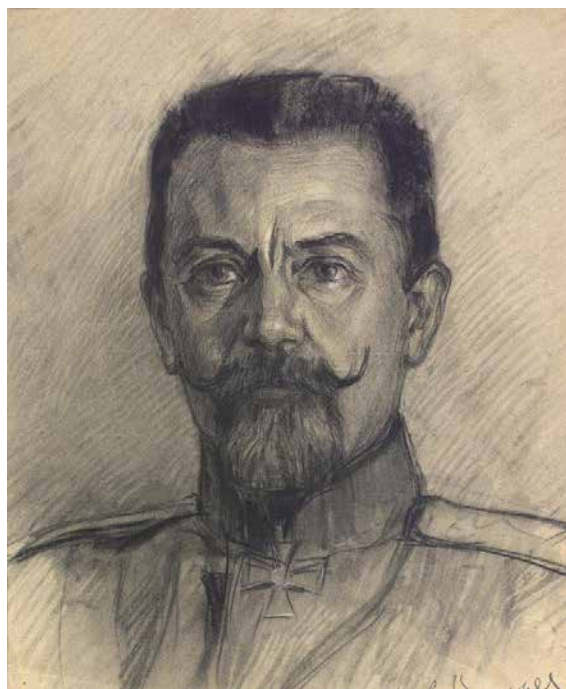


Fig. 1. Portrait of Pavel Alekseevich Vorontsov-Veliaminov by S.Vlasiev, Second half of XX century. © (MPBB) Museum-panorama The Battle of Borodino.

In the Museum-panorama The Battle of Borodino collection, we have correspondence between Franz Roubaud (author of the panorama) and Pavel Vorontzov-Veliaminov, where Roubaud draws a schematic plan of the building with his own hand. [5]



Fig. 2. Drawing from the letter addressed to P.A.Vorontzov-Veliaminov from F.Roubaud, dated June 11, 1912. © MPBB.

At the same time in St. Petersburg on the Field of Mars there was a building constructed in 1909 to display Roubaud's panorama *The Defense of Sevastopol*. Therefore Vorontzov-Veliaminov went to Petersburg to copy the building drawing with the purpose of using them to build the Moscow pavilion.



Fig. 3. Nicholas II and the panorama *The Defense of Sevastopol* on the Field of Mars. © RGAKFD (Russian State Film and Photo Archive).

The panorama pavilion on the Field of Mars was constructed by Russian architect Vasily Ivanovich Schoene.

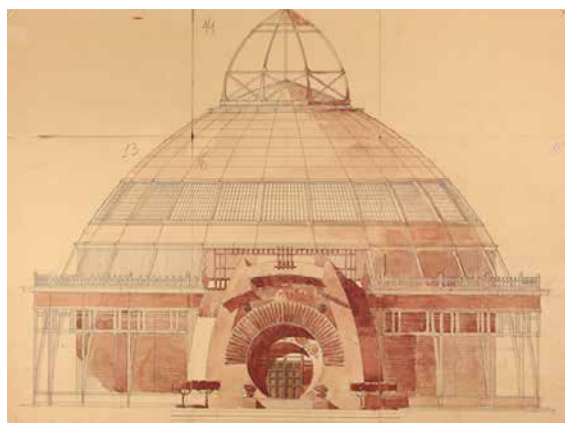


Fig. 4. Drawing of the facade of *The Defense of Sevastopol* panorama pavilion on the Field of Mars, 1909.  
© The Central State Historical Archive of St. Petersburg.

As the historian of architecture Boris Kirikov writes in his article in his project of a temporary building for the panorama *The Defense of Sevastopol*, in fact, Schoene repeated on the Field of Mars the type of pavilion in the form of a ribbed wooden dome, designed by the architect Alexander Ivanovich von Gogen for another one of Roubaud's panoramas, *The Siege of Akhulgo* at the All-Russian Art and Industry Exhibition in 1896 in Nizhny Novgorod. It should be noted that the construction of this project was carried out by Schoene, who subsequently used not only the idea of his senior colleague, but also his own experience of its implementation. [6]



Fig. 5. Exterior of the pavilion *Conquest of the Caucasus* with a panorama by F. Roubaud *The Siege of Akhulgo*, 1896. Nizhny Novgorod. © Committee for Archives of the Nizhny Novgorod Region.

Moreover, in his article, Kirikov points out that there is reliable information in the personal archive of Schoene's granddaughter, that he was the one who designed the first *Borodino* panorama building, at least he did the first

sketch. Through the help of the Russian researcher of panorama-diorama art Alexey Druzhinin, confirmation of this was found in the Russian State Military Archive.



Fig. 6. Photo of the project of the *Borodino* panorama building by architect V.I. Schoene. © The Russian State Military Archive.

For reasons we can only guess Vorontzov-Veliaminov was denied access of the drawings. During his official trip to Saint Petersburg in February 1912 the engineer only managed to make an examination of the building and take some measurements. For this reason, in the construction of the building in Moscow, he had to rely on his professionalism and Roubaud's suggestions that he received from Munich. If only he would have gotten the blueprints of the building, which are now stored in the St. Petersburg Historical Archive, the panorama building in Moscow would look different. Panorama pavilions were built in St. Petersburg, Moscow, Nizhny Novgorod, Kiev, Kharkov, Saratov, Sevastopol and some others but the Moscow military department did not have the same experience.

### Building Interior

Files of the Headquarters of the Moscow military district in the Russian State military-historical archive represent the correspondence of various departments, first on the choice of a place for the construction of the panorama building, and then on various issues related to the allocation of funds for its construction and equipment. There we found the first sketchy description of the constructed *Borodino* panorama interior – "for the public, a special wooden platform is arranged inside with a wooden staircase of 4 aršin wide and can accommodate no more than 80 people at a time" (aršin – old Russian measure of distance equal to 0.7 m., the word means 'arm'). [7]

These documents give an idea of the materials and suppliers that were involved in the construction of the building since the Headquarters of the Moscow military district even before the construction of the building, made an announcement in Moscow newspapers that anyone could apply for supplying materials and workers. [8] One of the most interesting points is the decision to equip the building with electric lighting. In one of the files, we found a report from the chairman of the Executive committee for the construction of the building where he literally writes the following – "electric lighting installation for the *Borodino* panorama was recognized as desirable despite the protests of Professor Roubaud. The *Sevastopol* panorama greatly benefited from the addition of electric lighting because of the longer time period when it is available for the public". [9] This decision was made despite the fact that it required the allocation of an additional 8,000 rubles to the previously allocated 10,000. For example, according to the cash statement for 1916, we know that there were three types of tickets for panorama visitors: green (55 kopecks), red (40 kopecks) and purple (25 kopecks) for children. The green tickets were more expensive just because they assumed the entrance to the museum during evening hours with electric lighting. [10]

From the receipts and payments sheet for 1915 we know that "89 rubles was spent on the museum equipment for the installation of a telephone in the ticket office". [11]

Over the period of 1912 – 1917 there were normally from 4 to 6 employees in the panorama: two cashiers (worked in shifts), two street cleaners and two doorkeepers. We can assume that the task of the doorkeeper was also to control tickets. A cashier usually sold albums with a description of the panorama prepared by Colonel Afanasyev and postcards with the panorama image. The ticket office and the doorkeeper's room were heated with kerosene, which we also learned from the accounting records. Apparently, this was not enough to work comfortably during the Russian winter and in the documents of 1915 we found an estimate for the cost of adding insulation to these premises. [12]

In accordance with the contract for the order for the production of the *Borodino* panorama, the artist was obliged not only to paint the picture, but also had to make the foreground at his own expense. [13] Doing so, Franz Roubaud arranged the foreground when the panorama was installed at the pavilion. To our great regret, we do not know at all how the foreground, conceived by the artist, looked at that time. In the Russian State military-historical archive we managed to find only an inventory of objects that were located on the panorama's foreground. These objects together with the painting were handed over by the artist to the Headquarters of the Moscow Military District. [14] This document is printed here for the first time:

Inventory of the Professor Roubaud's *Borodino* painting with accessories

1. Oil painting – 1
2. Reflector made of white canvas on 4 ropes with steel pipes – 1
3. Gray canvas umbrella on 16 thin and 4 thick ropes with steel pipes – 1
4. Wooden cannons – 3
5. Fake helmets – 8
6. Wooden cannon balls – 18
7. Gun brushes – 4
8. Wooden buckets for cannons – 3
9. Fake ruler for the carriage. – 1
10. Fake guns – 12
11. Sword – 1
12. Shaft bow – 1
13. Sleigh – 1
14. Shirts – 12
15. Blanket – 1
16. Men's trousers – 1
17. Peasant women's skirt – 1
18. Soldier's overcoat – 1
19. Sieve – 1
20. Torn baskets – 2
21. Torn barrels – 3
22. Linen mattress – 1
23. Steel pipe for the painting – 1
24. Steel pipe for the umbrella – 1

Thanks to the technical description of the panorama foreground, we now know for sure that it was lifted from the ground and arranged on posts.

It's fascinating that according to the receipts and payments records the Headquarters of the Moscow Military District spent money several times a year on "straw, moss, sand, wood, birch and soil to maintain the foreground in good condition". [15] Since the foreground was made of natural materials - soil and straw, it required replacement from time to time.

Weather affected not just the foreground but also the condition of the canvas. In one of the reports dated March 1913, it is said that "the walls of the building are damp and there is condensation on the canvas and on the umbrella of the panorama, which affects the condition of the painting". The Headquarters took appropriate steps to remedy the situation – 12 holes were made in the walls. [16]

## Building Exterior

The external changes to the building primarily concerned its non-compliance with the fire safety standards adopted in Moscow at that time. The commission which conducted the approval of the panorama building in 1912 pointed out numerous defects. In an attempt to find a compromise, since the building had already been built with violations,



several steps were taken. Namely, the walls were painted with fire-resistant paint and ten fire extinguishers were purchased. For some time the panorama kept a fireman on duty at its own expense. In addition to everything else the commission demanded a lightning rod to be installed on the dome. [17] How willingly the Moscow military department was going to correct these violations can be inferred by one report dated November 15, 1912 – "minor deviations from...the outdated provisions of the building construction regulations should be completely ignored in view of the patriotic, educational and social benefits of the *Borodino* panorama".

The six photographs submitted in this paper are the only images of the first *Borodino* panorama building in Moscow known in existence to the authors.



Fig. 7. Panorama *Borodino* pavilion on Chistoprudny boulevard. © MPBB.



Fig. 8. Panorama *Borodino* pavilion on Chistoprudny boulevard. © MPBB.



Fig. 9. Panorama *Borodino* pavilion on Chistoprudny boulevard. 1916-1917 © MPBB.



Fig. 10. Panorama *Borodino* pavilion on Chistoprudny boulevard. Construction.



Fig. 11. Panorama *Borodino* pavilion on Chistoprudny boulevard.



Fig. 12. Courtyard of the *Borodino* panorama. Refugees of the Western Russian Provinces of the Parochial Committee of Moscow, 1916.

### Photogrammetry

Thus, having these documents, conducting archival research in the Moscow and St. Petersburg archives and also relying on the colleague's experience of creating a model of the first panorama building, the museum staff attempted to create a 3D model of the building.

The work was carried out in several stages: multi-angle photography of the building model (about 1,000 photographs). Further, in the photogrammetry program Reality Capture, the work was carried out as follows: leveling and aligning photos, creating a dense point cloud, creating a polygon mesh and texturing.

Further, using the 3D Coat program, on the basis of the obtained photogrammetric model, using it as a "template", a three-dimensional model was developed. This was done for several reasons: the model obtained on the basis of photogrammetry had fuzzy geometric areas and asymmetric parts. The next step was 3D modeling of the interior space of the building based on drawings of a similar panorama pavilion in St. Petersburg, showing Roubaud's panorama "The Defense of Sevastopol" and descriptive sources. Since there are no exact data on the internal structure, the reconstruction can be considered historical only theoretically. We used the current panorama foreground for the model, taking 2600 photos and then creating a photogrammetry model. Since the acquired model took up about 1.5 GB, posting it on the Sketchfab web platform required a lot of optimization. Thanks to retopology, the optimized model with all the textures takes

up about 100MB. Texturing and "baking" (backed) was carried out by three programs - Marmoset Toolbag, Adobe Photoshop, Substance Painter.

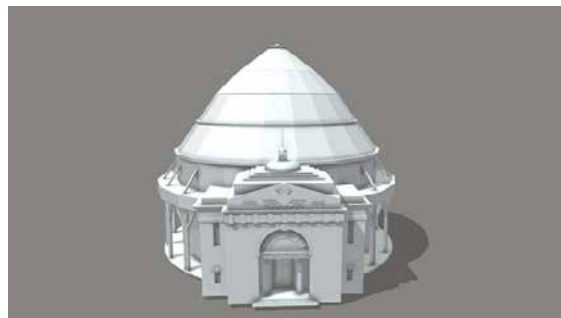


Fig. 13. 3D model of the *Borodino* panorama building (based on photogrammetric model data).

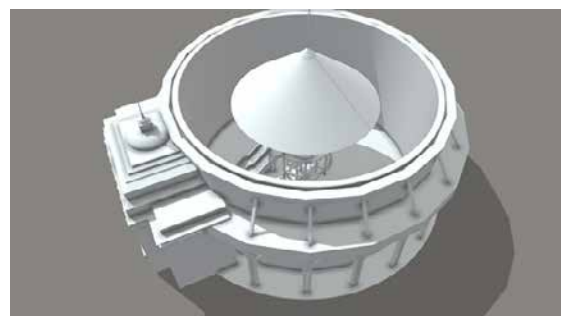


Fig. 14. 3D model of the *Borodino* panorama building without a dome. Part of the interior design is visible.



Fig. 15. 3D model of a modern foreground, obtained by photogrammetry from 2600 photos (this model is imported into the model of the old building).

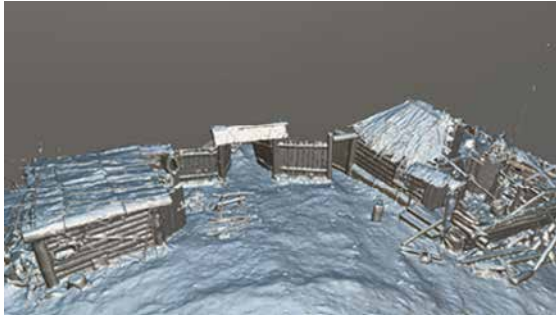


Fig. 16. Geometry without textures.

Photogrammetry was chosen as a tool for creating a 3D model of the building as the most affordable option in economic terms, which does not require the purchase of specialized equipment.

We want to undertake further work with the reconstruction and using ARKit technology, integrated into the ARTEFACT augmented reality application, to enable visitors to lay the resulting reconstruction over a real mini-model of the building, so that through a vertical section across the dome of the building, they could view the internal structure. We also plan to use photo and video renders from the final model in educational historical videos.

### Notes

1. Newspaper *Moskovskie vedomosti*. 1912. No. 201.
2. Newspaper *Moskovskie vedomosti*. 1912. No. 201.
3. Album *Jubilee Celebrations in Commemoration of the 100th Anniversary of the Patriotic War of 1812 in the Highest Presence. Borodino – Moscow – Smolensk*, Moscow publishing house. Poliform, 2012.
4. Newspaper *Moskovskie vedomosti*. 1912. No. 201.
5. Letter from Franz Alekseevich Roubaud to Pavel Alekseevich Vorontsov-Velyaminov from Munich, June 11, 1912.
6. Kirikov Boris, *The Defense of Sevastopol on the Field of Mars. Addresses of St. Petersburg*. 2014. No. 51 (65), 8-9.
7. The case of the construction of a building for the Borodino panorama in Moscow. RSMHA, F.1606, R.2, D.i.770, 83.
8. The case of the construction, 7.
9. The case of the construction, 13.
10. Receipts and payments records of the Borodino panorama, 1914-1916. F.1606, R.1, D.i.281, 75-76.
11. Receipts and payments records 1914-1916, 11.
12. Receipts and payments records 1914-1916, 78.
13. The case of the construction of a building for the Borodino panorama in Moscow. RSMHA, F.1606, R.2, D.i.770, 24.
14. The case of the construction, 106-107.

15. Account activities of the Borodino panorama. 1913-1914. RSMHA, F.1606, R.1, D.i.277, 41.
16. The case of the construction of a building for the Borodino panorama in Moscow. RSMHA, F.1606, R.2, D.i.770, 110.
17. The case of the construction of a building for the Borodino panorama in Moscow. RSMHA, F.1606, R.2, D.i.770, 83-88.
18. The case of the construction, 92.

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Files of the Headquarters of the Moscow military district, The Russian State military-historical archive, 1912-1917. F.1606.

Boris, Kirikov. *The Defense of Sevastopol on the Field of Mars. Addresses of St. Petersburg*. 2014. No. 51 (65).

Letter from Franz Alekseevich Roubaud to Pavel Alekseevich Vorontsov-Velyaminov from Munich, June 11, 1912. Collection of Museum-panorama The Battle of Borodino.

Military newspaper *Russky Invalid*. 1914. No. 44, Proposal of the Tentative Regulations of panorama Borodino.

Newspaper *Moskovskie vedomosti*. 1912. No. 201.

Newspaper *Voice of Moscow*. 1912. No. 200.

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# Lighting the Panorama

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## Abstract

“The panorama will hereafter be open nightly as well as daily,” wrote the New York Times when Felix Philippoteaux’s *Siege of Paris* painting at 55<sup>th</sup> Street and Seventh Avenue was successfully lit by electricity in January of 1883. Electric light made it possible to extend opening hours of the panorama, thereby increasing attendance and profits. The successful panoramas of Civil War battles gave rise to many new panorama companies, whose locations and plans for buildings were given in real estate publications. There was competition to illuminate these paintings and buildings by several companies using different lighting systems. The fairly new electrical industry publications described the numbers of lights and the system to be used as each new panorama was planned. In Chicago in 1885, three panoramas were open, each using a different system; the *Electrician and Electrical Engineer* wrote that “comparative estimates of the efficiency of the three systems for similarly illuminated pictures may be made by any one who desires, and he may view three grand battles, at 50 cents each, any day.” Many of these companies were also competitors in the new streetcar industry, and competed to put street lighting in cities that wanted to replace gaslight. This paper will discuss the many new buildings being put up to house panoramas, and the lighting systems that would illuminate them.

## Keywords

Electricity, Arc Light, Incandescent Light, Gaslight.

## The Modern Panorama Proper in New York City

In 1882, the New York *Herald* reported that New York City would finally join the list of cities that would have “the modern panorama proper,” thereby joining Paris, London, and “all the Continental cities of importance.” [1] The Belgian Panorama Company opened *The Siege of Paris* panorama at their rotunda at 55<sup>th</sup> Street and Seventh Avenue in September: “the panorama will only be visible in the daytime,” from 9 A.M. to sunset, the public was told. The National Panorama of the *Surrender of Yorktown* opened a few months later at 59<sup>th</sup> Street and Madison Avenue, and hours were advertised as “from sunrise to sunset,” later changed to 9 A.M. to sunset.

Then, at the end of January 1883, the *Siege of Paris* was lit by electricity and “the experiment was an unqualified success,” with the electric lights producing an effect similar to the light of a cloudy wintry morning, as represented in the painting. From then on, the building was to be open day and night, “lighted Sunday and every evening during the week by electricity;” [2] the longer hours allowed, of course, greater attendance and profits. The lighting was by means of an isolated plant installed by the Weston System, one of many, many electrical systems in existence at the time. A viewer who had witnessed panorama lighting in London reported that the *Siege of Paris* lighting was superior. The panorama of the *Battle of Tetuan* followed *Siege*: advertisements noted that it too was lighted by electricity in the evenings, and was open from 10 A.M. to 10 P.M.

Now New York had two “modern” panoramas, but only one, the *Siege of Paris*, was lit by the most “modern” system: electricity.



Fig. 1. *Siege of Paris* lighted by electricity. *The New-York Herald*: [www.fultonhistory.com](http://www.fultonhistory.com). Not in copyright.

## Earlier Lighting of Panoramas

Robert Barker’s original panorama plan used the natural light coming through the rotunda’s skylights to illuminate the painting: viewing hours were limited. Stephan Oettermann, in his book *The Panorama, History of a Mass Medium*, discusses the importance of choosing the right kind of light to paint in a panorama: the light painted in the picture had to be carefully considered to work with the real light outside of the building. Some early panoramas in Paris lost money due to poor light on cloudy or rainy days. There were experiments with artificial lighting: a panorama of Toulon, shown in Hamburg, Germany, was shown by gas light, and Langlois’ *Battle of Navarino*,

opened in 1831, illuminated parts of the picture by gas burners. The flickering flames sometimes frightened spectators. [3]

Frederick Catherwood opened his panorama rotunda in New York City in late 1836. An advertisement of July 1839, wrote that “the panoramas are brilliantly illuminated every evening by upwards of 200 gas jets,” allowing the paintings to be viewed from 9 A.M. to 10 P.M. [4] (When shown later in Philadelphia, the panoramas were illuminated in the same manner.) Gas light was also used for advertising: when a fire engine knocked down the gas post outside the panorama, breaking a large ornamental gas lamp, Catherwood petitioned the city for a replacement. City officials replaced the gas post, but would only provide an ordinary street lamp, saying that the ornamental lamp was used only to direct the public to the panorama. [5] The cost of gas lighting was the greatest expense for the panorama after the payment for use of the paintings. [6] By 1841, the panoramas were only open in the evenings 3 days of the week.

In August 1842, the panorama building and four of Catherwood’s panorama paintings were destroyed by fire. The gas had been turned off earlier, but the building was apparently struck by lighting, which ignited the gas in the pipes.

The Colosseum opened in New York in 1874: this was a temporary iron building, showing the old panoramas *London by Day* and *London by Night*. In the evenings concealed argand burners illuminated the paintings. An electric light had been proposed for the top of the building, but it was feared that this might be mistaken for a lighthouse by ships at sea—probably not a realistic fear as the building was in the center of Manhattan island. [7] The building and panoramas were transported to Philadelphia for the Centennial exhibition of 1876, lit by gas supplied by city mains, but “inside lights lighted by electricity.” Opening hours were 10 A.M. to 5 P.M. and 7 P.M. to 10 P.M. daily. [8]

## Gas Light, Electric Light

Since the early 19<sup>th</sup> century coal gas had been used to light streets, businesses, and homes. Gas lamps cast a relatively weak flickering light, and lamps had to be turned on and off one by one; indoors, the lamps took oxygen out of a room and raised the temperature, left a residue on walls, and were a fire hazard. [9]

In 1878 electric arc lights were installed in a hotel, office building, and the main post office in New York City; arc lights were installed by the Brush Electric Light Company as streetlights on part of Broadway and were a great success.

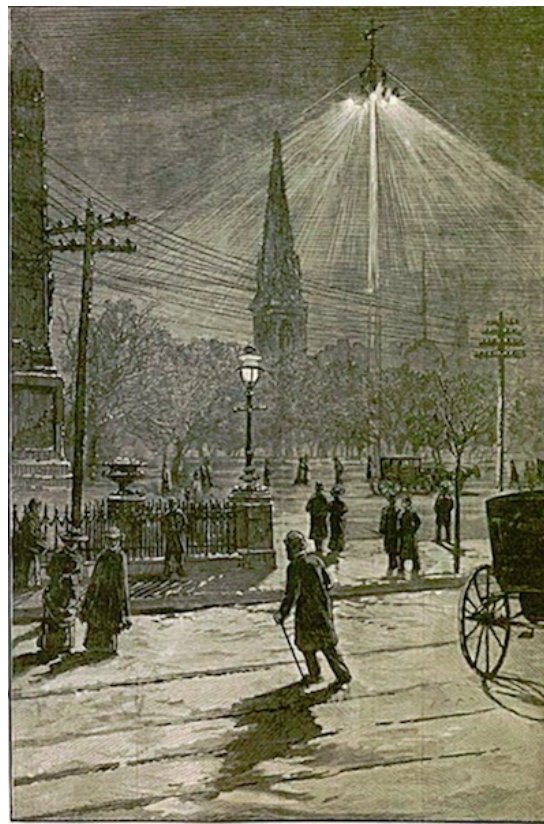


Fig. 2. Brush arc light in Madison Square, New York. *Harper's Weekly*, January 14, 1882. Wikimedia.

Electricity released no noxious gases into the air, did not remove oxygen, or raise the temperature of a room, and provided a steadier light. [10] The two main systems of electric light were the arc light and the incandescent light: arc light was very bright, very hot and could produce an unpleasant humming noise: reflectors were used to direct the light. It was best used for street lighting, placed high above the street. The development of the incandescent light, more suitable for indoor use, came about gradually: a filament that would burn for many hours was first needed to make it practical. In the late 19<sup>th</sup> century, there were a large number of lighting systems, supplied by many companies, in simultaneous use. As late as 1913, Chicago had more than 38,000 lights in public places, and half of these were not electric: there were 4 different public lighting systems, and only one light in 20 was an incandescent bulb. It took about 50 years for electricity to replace gas lighting. [11] In 1885 New York City had power provided by the Edison Electric Illuminating Company, The Brush Electric Light Company, the United States Electric Light Company, the Thomson-Houston Electric Light Company, and the Harlem Lighting Company, and others. Over time, several of these companies bought controlling interest in another, or

merged with another. Although the first “Central Station” for generating electricity was opened in 1882 in Pearl Street in New York, by Edison’s company, many homes and businesses, including panoramas, relied on the “isolated plant” to generate electricity. This was an on-site system consisting of a steam-operated boiler, an “engine”, the dynamo used to generate electricity, wiring, and arc or incandescent bulbs.



Fig. 3. Edison Light Isolated Plant. *The Electrical World*. Not in copyright.

## Electricity as “Modern”

Electricity was viewed as “modern” and a symbol of “progress,” and progress was viewed as something positive. A city without electricity was considered backwards. City populations were growing rapidly due to immigration and an influx of people from the agrarian countryside. Electricity provided light, powered elevators that made “skyscrapers” possible, powered industries, the telegraph and telephone, and streetcars. Experimentation and innovation in the electrical field was constant: the name of Thomas A. Edison is well known, partly due to his talent for self-promotion, but he was no means the only person to make important electrical discoveries.

Elihu Thomson, of the Thomson-Houston Electric Light Company, said:

“No similar period in the world’s history has in any art shown so rapid development, so extensive and refined scientific study and experiment, so active invention, so varied application, such care and perfection in manufacture, as has taken place within the electrical field.” [12]

To be “modern,” a city wanted to have a panorama building, one that was to be lit by electricity.

## Rival Lighting Systems

The many building and electrical trade magazines in existence at the time published lists of panorama buildings to be erected, their architects, and costs, as well as the type of lighting, number of lights and the company that would supply them.

The list below is taken from electrical trade magazines: [13]

**Ft. Wayne-Jenney Electric Lights, arc lights:**  
Chicago, IL Missionary Ridge panorama

25 lights

Minneapolis, MN  
30 lights

Philadelphia, PA  
20 lights

Kansas City, MO Chattanooga panorama  
30 lights

New Orleans, LA Battle of Sedan panorama  
30 lights

Indianapolis, IN Battle of Atlanta  
30 lights

**Vandepoele Electric Light Company, arc lights**

Chicago, IL Battle of Gettysburg  
30 lights

**Thomson-Houston Electric Company, arc lights**  
Detroit, MI Battle of Gettysburg

50 lights

New York, NY Battle of Vicksburg  
N/A

**Ball Electric Light Company, arc lights**

Philadelphia, PA  
40 lights

Boston, MA Battle of Gettysburg  
25 lights

New York, NY Battle of Gettysburg  
40 lights

**Excelsior Electric Light, arc lights**

Chicago, IL Siege of Paris panorama  
30 lights

**Edison isolated plants, incandescent light**

Boston, MA Bunker Hill Cyclorama  
50 lights

Washington, DC Manassas Panorama  
250 lights

Chicago had a wide variety of lighting systems in use, and the panorama buildings reflected this. The *Electrician and Electrical Engineer* in 1885 wrote of “Rival Panoramas with Rival Arc Lamps,”

“A third panorama has just been inaugurated here, and was thrown open to the public on the first of August. The three are illuminated by arc lamps, and each by a different system. The “Battle of Gettysburg” is shown by

Van Depoele's, the "Siege of Paris" uses the Jenney, and at the last, the "Battle of Shiloh," the Excelsior people have placed their lights, so that comparative estimates of the efficiency of the three systems for similarly illuminated pictures may be made by anyone who desires, and he may view three grand battles, at 50 cents each, any day. "[14] (The *Siege of Paris* had previously been illuminated by the Excelsior Electric Light Company, which advertised in the 1884 catalog that the light "is void of the objectionable hissing and flickering in too many other systems, and is the only system where the Incandescent Light is successfully run in the same circuit as the Arc Light.")



Fig. 4. Excelsior Electric Light advertised in the *Siege of Paris* Catalog. Not in copyright.

The Van Depoele Electric Light Company advertised in that catalog as well, mentioning its use in the competing Gettysburg panorama. National Panorama Company in Chicago published this testimonial:

THE NATIONAL PANORAMA CO., CHICAGO, ILL., MAY 21<sup>st</sup>, 1884.

VAN DEPOELE ELECTRIC LIGHT CO., CHICAGO:

Gentlemen, -- We have used the Van Depoele system of electric light for the purpose of exhibiting our Panorama of the "Battle of Gettysburg" for the past seven months, and cannot state but with pleasure that we are highly pleased with it.

Yours very respectfully, THE NATIONAL PANORAMA CO.

EMILE GLOGAU, Manager. [15]

Paul Philippoteaux's *Battle of Gettysburg* was shown in Brooklyn before the painting and its pre-fabricated iron exhibition building were moved to 19<sup>th</sup> Street and Fourth Avenue in New York City. The passage to the stairs leading to the viewing platform was lit with gas, but the painting itself was illuminated by carbon arc lamps with reflectors placed under the platform. A viewer later recalled the novelty of seeing electric light at a time when nearly all city streets were lit with gas. When the

panorama moved to New York City, an isolated electric plant was constructed, reportedly at a cost of \$12,000. [16] This was a one-story brick boiler house, separate from the panorama building. When one hundred and twenty-three new electric lights were added, the *New York Times* took note. The *Times* also wrote about an attempted burglary at the cyclorama: two men were seen jumping over the fence by a man who alerted a policeman nearby. A suspect was captured, but he turned out to be a part of the faux terrain, a dummy of a dead soldier. Finally the cyclorama manager was sent for: he turned on the steam engine that operated the dynamo, and the colored lights on the outside of the building lit up, as did the interior. The burglars were found hiding at the top of the canvas and captured. [17]

Gerhardt Nielsen's panorama of Niagara Falls was shown in the building after Gettysburg closed. At the time, plans were being made for the falls to generate power, and the *Electrical Review* journal advised: "the panorama in this city will prove of especial interest in electric power circles." [18] The painting was said to be especially beautiful at night under the electric lights, which perfected the illusion of the water.

## Light as Entertainment

"Cyclorama parties" became popular with people in upstate New York: a train would allow them to arrive for the evening opening of the *Niagara Falls Cyclorama* in the city, and they could stay on for a few days to see other sights. [19] It must be remembered that in 1892, not everyone had seen electric light. Architect Frank Lloyd Wright wrote of arriving in Chicago in 1887: "Sputtering white arc-light in the station, the streets dazzling and ugly. I had never seen electric lights before. [20] A Maryland newspaper story told of a bridal couple who visited Baltimore and saw a battle cyclorama early in the evening: more sophisticated viewers were amused when the young woman told her husband that they should leave, as it looked like rain. "She mistook the flickering of the electric lights for lightning." [21] Railroads often organized excursions from rural areas into a nearby city, and often included a chance to see a cyclorama. So many excursionists visited New York's Vicksburg cyclorama in 1886 that two days of the week were set aside for them, and a special lecture given. The possibility of seeing a downtown shopping or theater district lit by electricity may have also lured some visitors to join an excursion. Light itself was becoming an entertainment.

When the panorama building at 19<sup>th</sup> Street and Fourth Avenue was advertised for sale in February of 1894, the electrical apparatus was listed: two 20-Arc Ball light



dynamos, one Southwark 40 Horse-power engine, 40 electric Arc lights, electric wires. [22]

Boston's cyclorama of the *Battle of Gettysburg* used Ball light in their building as well, with 25 lights. The proprietors advised that those who had seen the cyclorama by daylight should return to see it by electric light.

The monetary value of an isolated electric light plant led to an interesting incident in Philadelphia in late 1888. The cyclorama of the *Battle of Missionary Ridge* had recently closed, and shortly thereafter it was discovered that the engine, boiler, dynamo, and electric light plant had been stolen. Detectives were working to locate the components, which were worth several thousand dollars, but said they were confident that the thieves had come from New York. *Electrical Review* sarcastically commented that perhaps the fires should be kept burning at all times in Philadelphia, as it would be difficult to steal a bed of live coals. [23]

### Electricity Creates Novel Effects

As time went on, electricity was not only used for lighting the panorama, but also for new and novel effects. The *Siege of Paris* was exhibited in San Francisco, California, with "sham battle, artillery engagements, thunder-storm and other mechanical and electrical effects" added several times during the day. [24] The *Chicago Fire* cyclorama by Reed and Gross used incandescent lamps, and "novel mechanical and electrical devices." [25] The electrical effects used in the Kilauea Volcano panorama at Chicago's Columbian Exposition apparently overshadowed the painting. "While not without merit, it does not compare with the other [the *Panorama of the Bernese Alps*] as a panoramic painting, the effect being largely produced by electric lights, pyrotechnics, and other mechanical contrivances." [26] An arc light stereopticon produced many of the scenic effects. The *Battle of Manila* in Chicago was advertised as the ELECTRO-CYCLORAMA, "A scientific weaving of panoramic art, electric color blending, mechanical movement accentuated by cannonading, exploding bombs, etc." [27] A *Chicago Tribune* review of the spectacle described undulating waves, flashes of red light to indicate exploding shells; "the scenes will be transformed by means of the electrical apparatus." [28]

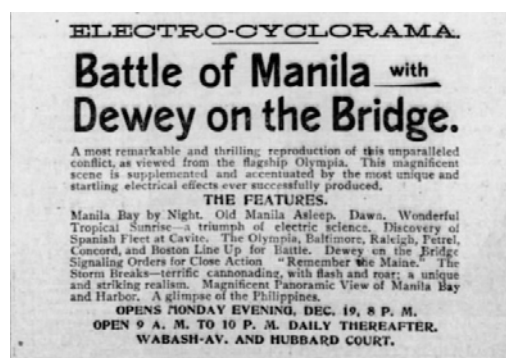


Fig. 5. Battle of Manila as Electro-Cyclorama. *The Chicago Tribune*: [www.fultonhistory.com](http://www.fultonhistory.com). Not in copyright.

### The Phonograph

Not all electrical apparatus produced visual results: reviews mention sound, the "booming of guns" in battle panoramas. In 1888, Boston's Gettysburg cyclorama had added a male quartet that sang old war songs on the platform. Another of Edison's inventions, the phonograph, replaced the male quartets who performed at some panoramas, and sometimes replaced the lecturer as well. The novelty of hearing the lecture or a popular song from a wax cylinder recording served as another attraction to visitors. New York's Gettysburg panorama in May of 1889 used the phonograph and "the exhibition was so successful that the management decided to make the phonograph a standard feature of the show." [29] The *Battle of Manassas Cyclorama* in Washington, DC, the Bernese Alps panorama in Chicago, the *Battle of Gettysburg* in Buffalo, New York, and *Jerusalem on the Day of the Crucifixion* in Philadelphia all used a phonograph as part of the exhibition. And large fans, operated by electricity, helped to cool the viewing platform of panorama buildings.



Fig. 6. Edison's Phonograph at Gettysburg cyclorama. *The New- York Herald*: [www.fultonhistory.com](http://www.fultonhistory.com). Not in copyright.

### Difficulties with Electric Light: Technical

Despite the acceptance of electricity for lighting the panorama, problems occurred: the opening of the Gettysburg cyclorama at Niagara Falls, New York, went well, except for the electric lights, as the current was not strong enough. [30] The Gettysburg cyclorama in Pittsburgh, from the Pierpont and Gross studio in Englewood, Illinois, used skylights only to light the painting during the day, and gas for illumination at night



because electricity was regarded as unreliable. [31] The Gettysburg in Salt Lake City, Nevada had a large number of visitors, but the panorama was to close earlier in the evenings: the electric lights weren't working well. "Daylight gives the grander effect" newspaper readers were told. [32] Electric-light wires caused a fire on the roof of the Boston *Gettysburg Cyclorama* when they set fire to a switch box. [33] A 1903 publication on fire insurance advised against insuring panoramas or cycloramas for large amounts, as "the electric-light wiring is usually unsafely arranged" and a fire could result in a claim for a large loss if the painting were damaged. [34]

### Difficulties with Electric Light: Financial

Lighting a panorama with electricity was expensive, and this could create financial difficulties for the management. Although the Vicksburg panorama was lit by electricity and open late, by January of 1887 the *New York Times* noted that the cyclorama would no longer be open in the evenings, due to an accident to the boilers. In April the painting was taken down, as the building was to be sold. Perhaps the evening lightning had been stopped to save money. In Los Angeles, an electric light plant was installed for the *Siege of Paris* panorama, and the cost of electricity was \$57.00 a week. When attendance decreased, in part due to competition from a *Battle of Gettysburg* panorama opened nearby, the electric lights were cut off. [35] The Thomson-Houston Electric Light and Power Company sued Buffalo's Queen City Cyclorama Company to recover unpaid costs for lighting, and won. When the Buffalo *Evening News* offered free admission to readers later in the year, they arranged a special contract with Thomson-Houston to light the *Cyclorama of Missionary Ridge and Lookout Mountain* for two nights. [36] And the Jenney Electric Light Company sued the Indianapolis Cyclorama Company, exhibiting the *Battle of Atlanta*, for unpaid lighting bills. The cyclorama's electric plant, valued at \$1,000, was sold by the sheriff for \$500, but this did not end the difficulties of the company, and the property was sold at auction. [37]

### The Electric Streetcar and the Amusement Park

Charles Van Depoele's electric arc light illuminated panorama buildings, and he was also one of many inventors who developed the electric streetcar. Horse-drawn streetcars, and then steam-powered trains had operated on city streets for decades; horses were expensive to feed and stable, and their manure littered streets. Steam-powered trains and elevated trains belched steam and cinders. Electric streetcars did away with those

problems, and allowed people to live farther from their place of work. Some cyclorama advertising mentioned the "car"-streetcar route-that viewers could take to reach the building. Trolley companies owned power plants that did not operate at capacity at night or on weekends, and in the 1890s, it was discovered that an amusement park built at the end of the line would attract riders and use the excess generating capacity for rides and often spectacular lighting displays, similar to those of the "Midways" of the World's Fairs. Some of these trolley parks initially featured cycloramas: Chicago's Riverview Park showed the *Monitor and Merrimac*, Lakeside Amusement Park in Dayton, Ohio had a Gettysburg Cyclorama, and Coney Island's Sea Beach Cyclorama showed *A Trip to Africa*, but most did not. (The Gettysburg Electric Railway Company, opened in 1894, allowed visitors to tour the actual battlefield by trolley.)

Frederick Thompson, one of the builders of Coney Island's Luna Park (called the "Electric Eden") was quoted as saying,

"Twenty years ago the cyclorama, showing the Gettysburg battlefield with the dead, the wounded, the fighters and the clouds, all still, was very well, and attracted great numbers of spectators, but it will not do now. Now the clouds must move, the men must be living, the whole scene must be full of action..." [38]

### "The Future of the Panorama"

Lighting the cyclorama with electricity had helped increase attendance and profits, but electricity now lit the competition as well-the new vaudeville theatres, pleasure gardens, rooftop theatres and restaurants, downtown city streets with their new "Great White Ways," giant advertising signs, and department stores-and made possible the cinema. It powered the streetcars that enabled the public to reach these places, and the amusement parks outside cities. There were attempts to add visual and sound effects to panoramas, but, as an 1896 newspaper article wrote, the panorama had "fallen in disuse, largely, no doubt because it is too unwieldy, and involves too much time, money and labor, to be profitable." The article went on to suggest that using projection equipment powered by electricity was the "future of the panorama." [39] *Chase's Electric Cyclorama* attempted just that, by using magic lanterns powered by arc light to project a 360-degree image onto the interior of a circular building. But the invention never progressed beyond the prototype stage, and Charles A. Chase later organized a company to produce electric signs and street advertising signs. [40]

The "future" did indeed use projection equipment powered by electricity to "make the whole scene full of action," but in the form of the cinema, not the painted

panorama. The power that had lit the panorama had helped to eclipse it.

## Notes

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2. *The Whole Truth*, January 29, 1883.
3. Stephan Oettermann, *The Panorama: History of a Mass Medium*. Zone Books, 1997, 57, 189.
4. *New York American*, July 27, 1849.
5. *Journal and Documents of the Board of Assistants, of the City of New York*, Volume 15, 1840, 293.
6. Nalleli Guillen, "The Humble, Though More Profitable Art": Panoramic Spectacles in the American Entertainment World, 1794-1840: 134.
7. *New York Sun*, May 22, 1873.
8. Hexamer General Surveys, Volume 11, The Colosseum, Plate 1052.  
<http://www.philageohistory.org/rdic-images/view-image.cf/HGSv11%2E1052>
9. Maury Klein, *The Power Makers* (Bloomsbury Press, NY, 2008): 110.
10. Negative effects of electricity would become apparent. Coal-burning power plants polluted the air and above ground wiring created a network of poles and wires that were the subject of complaints by the early 1880s.
11. Maury Klein, *The Power Makers* (Bloomsbury Press, NY, 2008): 53.
12. Maury Klein, *The Power Makers* (Bloomsbury Press, NY, 2008): 319-320.
13. List compiled from the following trade magazines of 1886, 1887: *Electrical Review*, *The Electrical World*, *The Electrical Engineer*, *Engineering Record*. It is not, nor is it intended to be, a comprehensive list of lighting systems installed.
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15. *Panorama of the siege of Paris/painted by F. Philippoteaux...; explanation, preceded by an historical introduction, with a plan of the battle of January 19<sup>th</sup>, 1871*. Chicago: S.D. Childs, 1884. Accessed via [www.hathitrust.org](http://www.hathitrust.org)
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17. *The New York Times*, July 11, 1889.
18. *Electrical Review: A Weekly Journal of Electric Light, Telephone and Scientific Progress*, Volume 20, April 23, 1892: 121.
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20. Harold Platt, *The Electric City: Energy and the Growth of the Chicago Area, 1880-1930* (The University of Chicago Press, Chicago and London, 1991): 26.
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22. *New York National Police Gazette*, February 1894.

23. *Colorado Daily Chieftain*, October 20, 1888.
24. *Electrical Review, A Weekly Journal of Electric Light, Telephone Telegraph and Scientific Progress*. Volume 13, December 1, 1888: 4.
25. *San Francisco Call*, February 8, 1891.
26. *American Bee Journal*, Volumes 29-30, 1892: 299. Ironically, the *Chicago Fire* panorama was damaged by smoke and water when the adjoining Chicago Athletic Club caught fire in 1892.
27. Hubert Howe Bancroft, *The Book of the Fair: Chapter the Twenty-Fourth: The Midway Plaisance*. (The Bancroft Company, Chicago, San Francisco, 1893): 854.
28. *The Chicago Tribune*, December 14, 1898.
29. *The Chicago Tribune*, December 19, 1898.
30. *The New York Times*, May 27, 1889.
31. *Buffalo Daily Courier*, May 27, 1887.
32. *Allegheny City Report Dispatch, A Quarterly Journal of Old Allegheny History and Lore*. Volume 1, No. 2. Winter 1996: 4.
33. *The Salt Lake City Herald*, November 3, 1888.
34. *Documents of the City of Boston*, (Boston: City Council, 1887) Volume 3: 65.
35. Francis Cruger Moore, *Fire Insurance and how to Build*, (New York, The Baker & Taylor Company, New York, 1903): 257.
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37. *Buffalo Evening News*, June 24, 1891.
38. *The Indianapolis Journal*, August 7, 1890.
39. Richard Snow, *Coney Island, A Postcard Journey to the City of Fire*. (The Brightwaters Press, New York, 1984): 48.
40. *The Champaign Daily News*, May 9, 1896.
41. Suzanne Wray, *Charles A. Chase and the Electric Cyclorama*, *Magic Lantern Gazette*, Volume 30, Number 3-4, Fall/Winter 2018.

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### **Author Biography**

Suzanne Wray has presented her research on panoramas and related “optical entertainments” at conferences of the International Panorama Council and the Magic Lantern Society. She is a past member of the board of directors of the Society for Industrial Archeology. She holds a BFA from the School of the Art Institute of Chicago.

# The Anatomy of a Moving Panorama: John James Story's *Ocean and Overland Journey Round the World*

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## Abstract

At the end of the *Garibaldi Panorama* painted by John James Story is a depiction of the Scottish missionary, David Livingstone, being mauled by a lion in 1844. This was copied directly from an engraving which appeared in Livingstone's 1857 book *Missionary Travels*. Its position on the panorama is an anomaly but provides a clue to the artist's next panoramic endeavor.

Between 1864 and 1885, Story travelled the length and breadth of Britain exhibiting a moving panorama entitled *Ocean and Overland Journey Round the World*, and a surviving descriptive program reveals that the subject of Livingstone's travels in Africa occupied a major portion of the first part. Using the titles of the different sections of this part, it has been possible to reconstruct the images based on additional engravings in *Missionary Travels*. Other sections of the panorama can be identified from the various sources listed in the program.

Two letters between Story and a potential venue provide insights as to how the artist planned his shows. Using newspaper advertisements, the journey of this panorama around Britain can be traced.

## Keywords

Moving panorama; Garibaldi; David Livingstone; Africa; Travel; Exploration; Impresario.

## Introduction

In late December 1860, John James Story, a provincial artist from Nottingham in the English midlands, exhibited a moving panorama of the life and campaigns of the Italian patriot, Giuseppe Garibaldi [1]. Measuring 1.44 m (4.75 feet) wide by 83 m (273 feet) in length and painted on each side in gouache on thick heavy paper, it depicted Garibaldi's life from a boy to a soldier and national patriot in forty-nine scenes (fig. 1). The artist copied engravings from illustrated newspapers and books to compose his scenes, and each panel was separated by small flashes of red paint or fabric in order to guide the persons operating the winding mechanism to stop so that the corresponding text could be



Fig 1. *The Garibaldi Panorama*. Anne S.K. Brown Military Collection, Brown University Library

read over the related picture by the narrator. [2] However, the panorama appears to have had a short life and within a few years, Story was advertising to sell it. [3]

The final scene illustrates Garibaldi and King Victor Emmanuel III entering Naples on November 7, 1860, and corresponds to the last entry in the surviving manuscript narration. Yet the physical panorama does not end there for immediately following this picture is a finished painting of a man being pinned-down by a large lion as his comrades' rush to his aid (fig. 2).



Fig. 2. *The Lion Attack*. Scene 50 on the *Garibaldi Panorama*. John James Story. Gouache on paper, 1860. Anne S. K. Brown Military Collection, Brown University Library

After this scene comes a large unfinished panel followed by four completed paintings of Garibaldi's subsequent life including the battle of Aspromonte in August 1862 where he was wounded.

How these additional scenes relate to the original forty-nine panels is unclear. Unrolling the panorama beyond the Naples scene may have created confusion among the audiences, especially the unfinished scene, unless the artist used it to explain his techniques of painting. While we may never know whether the final four pictures of Garibaldi's life were ever displayed, the lion scene may provide a clue to Story's thinking. In a bit of self-promotion, it is possible he was offering a trailer for his upcoming panorama of a journey around the world. As the applause died down at the end of each performance, the lion scene may have been unrolled as a preview of his forthcoming new panorama then in preparation. This scene depicts the Scottish missionary and explorer, David Livingstone (1813-1873), being attacked and badly injured by a lion in 1844 at Mabotsa in southern Africa.

### A New Moving Panorama

Indeed, within four years of the last known exhibition of the *Garibaldi Panorama*, Story was promoting his new entertainment "illustrating an ocean and overland journey round the world," which included scenes from Livingstone's life. It made its first appearance apparently in July 1864 at the Lecture Hall, Castle Donnington, Nottinghamshire, attributed to a "Mr. George." [4] Four months later, it was on display at nearby Grantham in the Exchange Hall, only this time the creator was listed as a "Mrs. James." In March 1865 in Nottingham, Story's home town, the panorama was shown as the work of "Mr. James." [5]

Interestingly, when Story exhibited the *Garibaldi Panorama* in Nottingham, he never used his own name. In fact, advertisements for it mention a "Mr. Bianco," no doubt a pseudonym, so it is quite possible that Story used a similar ploy when exhibiting in his home region. Thereafter, the panorama traveled extensively around the British provinces between 1864 and 1869, but usually Story is acknowledged as the artist and sole proprietor. There is an apparent gap of 3 years or so when the panorama does not appear in the record. Then in 1873, Story is once again promoting his panorama but now it appeared to be an updated version. He continued to exhibit it on and off until 1885 when he attempted to sell it, but not finding a buyer, he again advertised its availability for showing. [6]

## OCEAN AND OVERLAND JOURNEY AROUND THE WORLD

### FIRST TOUR

|                                       |                      |
|---------------------------------------|----------------------|
| Castle Donnington (Lecture Hall)      | July, 1864           |
| Grantham (Exchange Hall)              | October, 1864        |
| Farnsfield                            | March, 1865          |
| Hucknall (National Schoolroom)        | April, 1865          |
| Chippenham (New Hall)                 | November, 1865       |
| Bridport (Town Hall)                  | December, 1865       |
| Bideford                              | March, 1866          |
| Taunton (Castle Hall)                 | April, 1866          |
| Norwich (St. Peter's Hall)            | October, 1866        |
| Lowestoft (Town Hall)                 | October, 1866        |
| Yarmouth (Corn Exchange)              | October, 1866        |
| Ipswich (Corn Hall)                   | November 6-8, 1866   |
| Stowmarket                            | November 9, 1866     |
| Bury St. Edmund's                     | November 12-13, 1866 |
| Sudbury                               | November 14-15, 1866 |
| Colchester (Public Hall)              | November, 1866       |
| Leamington Spa (Royal Assembly Rooms) | December, 1866       |
| Worcester (Music Hall)                | January 15-19, 1867  |
| Stourbridge (Corn Exchange)           | January, 1867        |
| Carmarthen (Assembly Rooms)           | February, 1867       |
| Monmouth                              | February, 1867       |
| Bridgenorth (New Agricultural Hall)   | April, 1867          |
| Wrexham (Music Hall)                  | May, 1867            |
| Burslem (Town Hall)                   | November, 1867       |
| Kettering (Corn Exchange)             | January 1868         |
| King's Lynn (Music Hall, Athenaeum)   | February, 1868       |
| Norwich (Lecture Hall, St. Andrew's)  | March, 1868          |
| Haddington (Assembly Rooms)           | January, 1869        |
| York (De Grey Rooms)                  | November, 1869       |
| Long Sutton                           | December, 1869       |
| Ipswich (Lecture Hall)                | December, 1869       |

### SECOND TOUR

|                                  |                   |
|----------------------------------|-------------------|
| Liverpool (Queen's Hall)         | October, 1873     |
| Melton Mowbray (Corn Exchange)   | February, 1874    |
| Northampton (Town Hall)          | March, 1874       |
| Worcester (Music Hall)           | October, 1874     |
| Southampton (Philharmonia Rooms) | November, 1874    |
| Liverpool (Queen's Hall)         | December 8, 1875  |
| Blackburn                        | February, 1876    |
| Louth (Town Hall)                | April 24-28, 1876 |

[Two year absence]

|                                   |                    |
|-----------------------------------|--------------------|
| Loughborough (Town Hall)          | October 8, 1878    |
| Burnley (Mechanics' Institution)  | January 5-10, 1879 |
| Sheffield (Albert Hall)           | January, 1879      |
| Leamington Spa (Royal Music Hall) | November, 1879     |



Wolverhampton (Exchange Hall) January, 1880

[Two year absence]

Bristol (Athenaeum Hall) January, 1882  
Portsea (St. George's Hall) October, 1883  
Cheltenham (Corn Exchange) February, 1884  
Sheffield (Music Hall) December, 1884  
Huddersfield (Victoria Hall) January, 1885

Using documentary and manuscript evidence, it has been possible to reconstruct not only the life of this panorama but also how it was created, promoted and its content. And while it no longer exists, engravings in relevant texts suggest what the scenes may have looked like. In terms of what it depicted, a souvenir pamphlet survives for its exhibition at the Assembly Rooms in Haddington, near Edinburgh, Scotland in January, 1869 (fig. 3). [7]



Fig. 3. Souvenir pamphlet, 1869. Anne S. K. Brown Military Collection, Brown University Library

This provides considerable information on the content of the moving panorama as well as information about its creation. It stated that the entertainment covers “over 32,000 miles of the earth’s surface, from England, through Africa, the Holy Land, India, China, Japan, Central Asia, Tartary, Siberia, Arctic Regions, Vancouver’s Island, and the Vast Continent of North America.” It included ‘the recent discovery of the Source of the Nile’, and concluded “with a grand dioramic view of the Crypt of the Holy Sepulchre” with various lighting effects for day and night. Exhibited just a few months after the conclusion of the British military expedition to Abyssinia in 1868, the artist also included scenes from the conflict “from sketches taken on the spot by Major Baigrie.”

The panorama was a timely addition to the corpus of similar entertainments travelling around Britain in the mid-19<sup>th</sup> century. It contained seventy images in two sections and performances lasted around two hours. One notice stated that it took five years to paint. [8] Story was transparent about how he created the scenes. At the end of the program, he noted that “the whole series [is] copied from drawings of the various places delineated.” To further add to the voracity of the work, the first page of the pamphlet (fig. 2) listed no fewer than 37 authors, explorers and travel writers including such heavyweights as Charles Darwin, Livingstone, John Hanning Speke, James Augustus Grant, Sir Samuel Baker, and Alexander von Humboldt. There were naval captains, French and Russian authors, a lady travel-writer, Lucy Sherrard Atkinson. “and a host of other eminent authorities.” Their writings informed his “comprehensive lecture” which accompanied each scene. It is apparent that Story also used illustrated newspapers and issues of *Le Tour du Monde* for inspiration (no fewer than 20 images came from this journal). How he procured such an array of sources is unclear. It is doubtful he owned copies and more likely borrowed them from his local subscription library at Bromley House in Nottingham. He may also have spent some time in London visiting the recently-opened British Museum Reading Room.



Fig. 4. Souvenir Pamphlet, pages 2-3: Programme of Route and Scenery. Anne S. K. Brown Military Collection, Brown University Library

Why the artist chose the subjects he did might reveal current interests and sensibilities of the British populace at the time (fig. 4). He eschewed the classical sites of the Mediterranean focusing instead on Africa, Asia and North America. Obviously, the explorers who were capturing the imagination of the Victorians as they opened up vast areas of the globe especially Africa, figured prominently, but there was a strong emphasis on North America. The Civil War was raging in the United States when the panorama was unveiled and the country was clearly a topic of conversation. To the north, the loss of Sir John Franklin's expedition in the frozen wastes of the Arctic was still a mystery and expeditions in the 1840s and 1850s had found tantalizing clues. In Asia, Britain had recently concluded another war with China, while neighboring Japan was emerging from centuries of isolation thanks in part to Admiral Matthew Calbraith Perry's expeditions of the early 1850s. Livingstone himself continued to be a source of fascination and his 'disappearance' for almost six years (1866-1871) in pursuit of the source of the Nile only added to his aura. Yet he is the only named personality to make an appearance in the panorama. All the other subjects are either geological wonders such as Niagara Falls and the Yosemite Valley, cultural and historical places like the Pyramids and the Great Wall of China, and ethnographic tableaux including a Japanese lady "at her toilet," Eskimos in skin boats, and native American chiefs. If the whole panorama encompassed 32,000 miles of the earth's surface, the revised version which toured in the 1870s was increased to 56,000 miles with the addition of scenes from Australia and the South Polar Regions. [9]

All these themes and subjects lent themselves to dramatic visualization and Story took full advantage. It was also fortuitous that many of the books he sourced had been published recently.



Fig. 5. Souvenir Pamphlet, page 2 (detail): First Section. Anne S. K. Brown Military Collection, Brown University Library

## David Livingstone's Expeditions

A search through the volumes written by the various named authors reveals illustrations that match the titles of the scenes in the panorama exactly, and it would be entirely possible to recreate the lost panorama. As an example, the first part of the First Section (fig. 5) included eight scenes from Livingstone's explorations in southern Africa, such as "Dr. Livingstone in his canoe" (fig. 6), "Elephant hunting" (fig. 7), "Livingstone's canoe upset by an enraged Hippopotamus," (fig. 8), and "The Beautiful Victoria Falls."



Fig. 6. Dr. Livingstone in his canoe (Wood-engraving from David Livingstone, *Missionary Travels and Researches in South Africa*, London, John Murray, 1857)



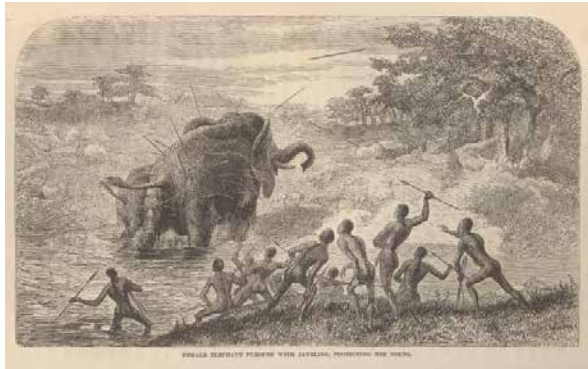


Fig. 7. Elephant hunting. (Wood-engraving from David Livingstone, *Missionary Travels and Researches in South Africa*, London, John Murray, 1857)



Fig. 8. Livingstone's canoe upset by an enraged Hippopotamus. (Wood-engraving from David Livingstone, *Missionary Travels and Researches in South Africa*, London, John Murray, 1857)

and "The Beautiful Victoria Falls." Each of the eight scenes are identical copies of engravings published in Livingstone's *Missionary Travels* published in 1857 after drawings by Joseph Wolff. Indeed, the same volume contains the picture of the Scotsman being attacked by the lion (fig. 9).



Fig 9. The Missionary's escape from the Lion (*Missionary Travels*) Compare this with the panoramic scene in Fig. 1

Yet surprisingly Story did not include this dramatic incident in the *Round the World* panorama.

## Letters to Alnwick, Northumberland

Once the painting was complete, Story began to contact local authorities to solicit their interest in displaying his work. Two original letters written by Story survive (fig. 10). [10] Written from Portobello near Edinburgh just prior to the showing of the panorama at Haddington on January 18 and 19, 1869, the artist wrote to the proprietors of the Corn Exchange in Alnwick, Northumberland in north-east England. The stationary bears a letterhead printed in red. Next to an image of a ship in full sail is the title 'Tour Round the World Panorama. Including the discovery of the Source of the Nile, by Capt. Speke and the recent explorations of Dr. Livingstone'.

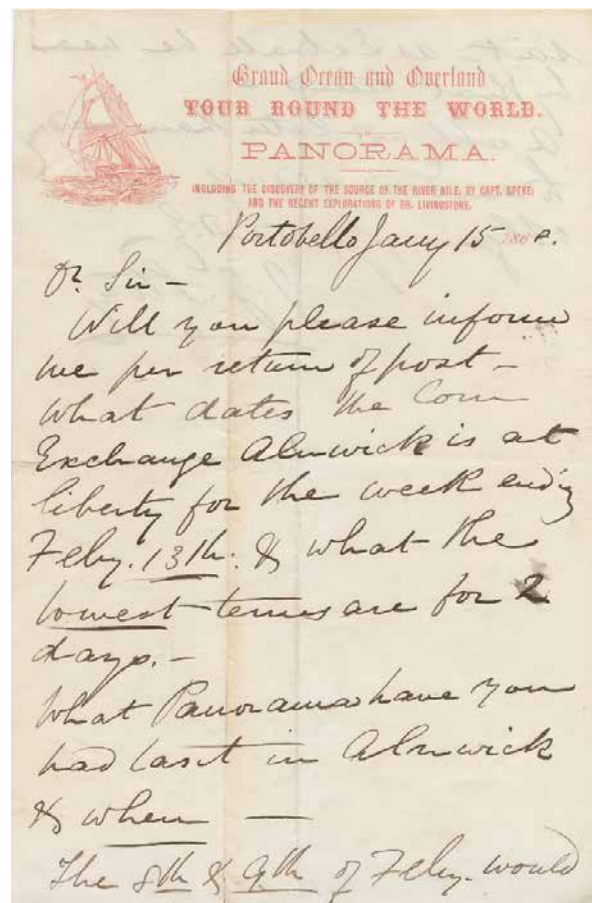


Fig. 10. John James Story, first letter to Alnwick, January 18, 1869. Anne S. K. Brown Military Collection, Brown University Library

The first letter dated January 15 reads:

“Dr. Sir –

Will you please inform me per return of post what dates the Corn Exchange Alnwick is at liberty for the week ending Feby. 13<sup>th</sup> & what the lowest terms are for 2 days.

What Panoramas have you had last in Alnwick & when – by what means –

A reply not later than Monday to enclosed address will oblige.

Yours obedly.

J.J. Story”

On the 18<sup>th</sup>, Story wrote the following from Haddington in response to a reply:

“Dr. Sir –

I am in receipt of yours of Jany. 16. If the Corn Exchange Alnwick is at liberty for Wednesday & Thursday – Jany [sic] 10 & 11 or following dates I will engage it on receipt of yours. Thursday & Friday Feby 11 & 12 will suit me best if room is at Liberty.

Yours obedly

J.J. Story”

It is not known whether the panorama was actually exhibited in Alnwick on those dates (a search of the local paper did not locate any advertisements) but these letters offer a glimpse into the way the artist generated business for himself. Based on the advertisements, he would target an area and solicit interest. He probably moved the rolled panorama and frame by train or by local carrier on a wagon. It was an exacting business. If it was on the same scale as the *Garibaldi Panorama*, it would have required four persons to carry the two long, circular cylinders, one bearing the rolled canvas, the other empty, and others to carry the display apparatus. While he appears to have travelled alone, he had to hire various persons to augment the entertainment. On the Haddington pamphlet, the lecturer is listed as J. Russell Gothard. At Burslem near Stoke-on-Trent in November 1867, a review noted that “Mr. Parleet played some appropriate music on the pianoforte during the evening...” [11]; while a note of the performance at the Town Hall, Northampton on March 2, 1871 stated that “Captain W.H. Fuller is a very agreeable lecturer, Mr. Ernest Vivian presides very efficiently at the pianoforte, while Miss Lotie Clare (serio-comic) and Mr. J.W. Everett (comic), enliven the audiences with some good songs.” On August 31, 1873 appeared the following advertisement in *The Era*:

“Wanted for Mr. J.J. Story’s Panorama “A Tour Round the World,” an Efficient Lecturer; also a Solo Pianist. Must be good Accompanist. To save

time send lowest terms, testimonials, and when disengaged. Two days’ silence a respectful negative.”

In February 1876, he advertised in *The Era* for “a Good lecturer...also a Comic Vocalist (Gentleman)”; while on September 26, 1880, the following appeared in the same publication:

“Wanted for Story’s Panorama, an Active, Experienced Advertising Agent...also a good Harmonist.”

In addition to the panorama display, the narration, the songs and piano accompaniment, Story also employed some latest inventions to woo his audience. At St. Peter’s Hall, Norwich in October 1866, for example, the advertisement noted that at the conclusion of the panorama,

“the newly discovered Magnesium or Great Solar Light will be exhibited to the audience. It is the most pure light known.” [12]

Later at a performance in 1882, Story gave a display of Thomas Edison’s phonograph.

“The machine last night was made to wish the audience a happy and prosperous new year, and repeat the nursery rhymes, ‘Dickory dickory dock’ and ‘Mary had a little lamb’.” [13]

Though not a fine work of art (based on the surviving *Garibaldi Panorama*), Story’s panorama nonetheless appears to have captivated the audiences who attended the entertainments in the small provincial towns and a few cities. Reviews suggest large audiences attended, along with special showing for schoolchildren. [14] Story’s stated aim was clearly laid out on the souvenir pamphlet:

“The teachings of this Panorama are at once educational with regard to ethnology, physical geography, animal and vegetable life, manners and customs, history, natural and artificial products, religious creeds and superstitions, climatology and geology, volcanic and atmospheric phenomenon, combined with the most varied scenery in all parts of the world. Forming a series of illustrated readings from the Great Book of Nature, which is closed an unknown to millions in this country.”

On the back page of the pamphlet, he printed “Opinions of the Press & Testimonials” to validate his claim that “more information may be gained by visiting this Panorama than by devoting months to the perusal of books.”

What of the artist himself. Story was born in Nottingham in 1827. His father George was a ‘cordwainer’ (shoemaker). Little is known of his early life. In December 1858, he was listed as an ‘artist’ and that his wife had died the previous month aged 28. Clearly aware of the numerous panoramas that were being displayed up and down the country, he decided upon a career as a panorama impresario. Being a widower, he was free to travel around displaying the panoramas he created. It was probably a difficult livelihood as a journeyman panorama impresario, although if the

reviews of the *Ocean and Overland Journey* are to be believed, he may have made a decent livelihood.

He tried to sell the panorama in February 1887 but finding no buyer, began advertising for engagements by years' end. [15] Thereafter, there is no mention of this item. Nothing more is heard about Story until a note in the *Morning Post* for Saturday, July 19, 1890 on the International Exhibition at Edinburgh, mentioned a panorama by him of the Battle of Trafalgar but no other details can be found. The only other reference to a panorama by Story appeared in *The Era* in December 1880 when an advertisement announced that a panorama of the Indian Empire including the Zulu and Afghan Wars, and Polar Regions was available for rent. While the artist's name does not appear on the page, Story sued the man who rented it for failure to return it the following year. [16] He died in 1900 and the fate of the *Ocean and Overland Journey round the world* panorama is unknown.

### Notes

1. For a discussion of this panorama, see Ralph Hyde, 'The Campaigns of Garibaldi': A look at a surviving Panorama, in Gabriele Koller (editor), *The Panorama in the Old World and the New* (Anberg, Germany, Buero Wilhelm Verlag, 2010, pages 46-51. See also Erkki Huhtamo. *Illusions in Motion. Media Archaeology of the Moving Panorama and Related Spectacles*. Cambridge, MIT Press, 2013, page 372, No. 4. The Garibaldi Panorama is in the Anne S.K. Brown Military Collection, Brown University Library, Providence, USA A full digital version of this moving panorama, can be viewed at: <https://library.brown.edu/cds/garibaldi/>
2. The manuscript narration survives in the Anne S.K. Brown Military Collection, Brown University Library. It can be viewed at: <https://library.brown.edu/cds/garibaldi/resources/manuscript.php>
3. *The Era*, Sunday, January 11, 1863. See: [https://library.brown.edu/cds/garibaldi/img/ads/panorama\\_ad.jpg](https://library.brown.edu/cds/garibaldi/img/ads/panorama_ad.jpg)
4. *Nottinghamshire Guardian*, July 8, 1864, 8.
5. *Grantham Journal*, Saturday, October 8, 1864, 2; *Nottinghamshire Guardian*, Friday, March 31, 1865, 5.
6. *The Era*, Saturday, Feb. 26, 1887; *The Era*, Saturday, December 10, 1887.
7. In the Anne S.K. Brown Military Collection, Brown University Library, Providence, USA.
8. *Norfolk News*, Friday, February 29, 1868, 1.
9. *The Sheffield Daily Telegraph*, Tues, Jan. 21, 1879, 7.
10. Anne S.K. Brown Military Collection.
11. *The Era*, November 10, 1867, 12.
12. *Norfolk Chronicle and Norwich Gazette*, Saturday, October 13, 1866, 1.
13. *Bristol Mercury and Daily Post*, Tuesday, Jan. 10, 1882

14. Not all reviews were positive. For example, the *Grantham Journal* for Saturday, October 8, 1864, noted 'the programme of scenery was such as to lead to the expectation of a highly interesting and intellect treat, and in all probability the children present thought it so, but those of larger growth confessed to disappointment, and the audience was not by any means a large one, yet we very much question whether a second visit would be any better patronized'.

15. *The Era*, Saturday, Feb. 26, 1887; *The Era*, Saturday, December 10, 1887.

16. *Nottinghamshire Guardian*, Friday, September 9, 1881, 5.

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### Author Biography

Peter Harrington, a native of Manchester, England, is Curator of the Anne S.K. Brown Military Collection at Brown University Library in Providence, Rhode Island, USA, where he has worked since 1983. His principal area of research is artists and images of war, and he has written, taught classes and lectured extensively on the subject. His other area of research is conflict archaeology of the English Civil War, Harrington has written on British military panoramas. His current research focus is on the art and mural programs in US military training camps between 1940 and 1945.



# Fiat Looks at the Panoramic Cinema in the Sixties

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## Abstract

Virtual reality may be cutting-edge technology, but people's predilection to feel as if they are immersed in an image is nothing new. That urge was first seriously probed in the late 18th century with the invention of the pictorial panorama, patented by Robert Barker in 1787. Just over a century later, another fundamental stage on this journey towards ever fuller immersion occurred: Raoul Grimoin-Sanson's *Cinéorama*, presented at the 1900 Paris Exposition. This circular projection method is considered the precursor to widescreen film which took off in the 1950s, culminating with IMAX technology premiered at Osaka Expo in 1970. In this long history, permeated by a profusion of international cultural exhibitions and world fairs, Expo 1961 in Torino stands out as performing a pivotal role. Here Fiat, foremost Italian automobile manufacturer, presented its *Circarama* technology, on top of that, only a couple of years later, it invested its energies into an even more groundbreaking version named *Totalrama*.

This article will focus on *Circarama* and *Totalrama*, two pioneering 360-degree film techniques from Italy which were among the first modern technologies to embrace the idea of immersive film footage. Whilst mechanically quite diverse, they shared quite similar goals.

## Keywords

Panoramic Cinema, Expo, Widescreen, *Circarama*, Automobile Industry, Immersion, Dead End, *Totalrama*, Film Preservation

## Introduction

The research presented here falls within the overall theoretical framework of *film and media studies* and, more specifically, *screen studies* which has focused upon analyzing all aspects of *screenology* for a number of years. It examines the screen itself in all its variations, directing attention to its status, genealogy and transformation; assessing form, use and function. On an exponential ascendancy throughout the twentieth century, screens and, more recently, displays have become predominant features of our everyday lives, transforming our perceptive practices, the forms and rhythms of our attention, as well as our spatial relations.

Within this field of study the object of analysis is *Circarama*, a panoramic film device filed for patent in 1956

by Disney. It was already included among the attractions of Disneyland, California, the very first of the franchise's theme parks which had opened the previous year. Over the following decade it was also paraded around several international exhibitions to great acclaim. The moment that I will focus on is 1961, when it was demonstrated in Torino in a special exhibition celebrating the centenary of Italy's unification. Moreover, the role that a major Italian car manufacturer, Fiat, played in the further development of this spectacular 360° device will be explored, as well as the involvement of the transport sector generally within this particular historical juncture.

Firstly, to briefly delineate the coordinates useful for contextualizing the development of this panoramic apparatus by outlining the historical and cultural framework of the period, paying close attention the media and the friction with the project that it generated. Then I will summarize its technical characteristics and the traits that make it particularly intriguing as an object of study, revealing Fiat's interest in its development. Then I will examine and contrast it with an alternative system, *Totalrama*.

The automotive industry and the film industry seem to be poles apart, yet in the conclusion of my analysis, I aim to substantiate quite the contrary, the fact that they share many converging interests.

## The 1960s: Between Widescreen and Mobility

Even though a desire for a fuller immersion in images has quite distant roots which can be traced back to 1787, the year in which the panorama was first patented by Irish painter Robert Barker, it had nonetheless undergone several evolutions over time whilst maintaining its essential characteristic. One of the shortcomings recognized early on was that of movement, remedied with the development and dissemination of moving panoramas, [1] albeit with a subsequent loss of spatial scale and thus a lessening of the physicality of immersion typical of panoramic theaters of the period. Indeed, the twin concepts of *visuality* and

mobility are key. [2] The first time that they come together successfully is in *Cinéorama*, a panoramic cinematographic show devised by Grimon Sanson for the 1900 Paris Expo. This circular projection can be considered as the first step towards what would eventually become the widescreen revolution, influencing the film industry for two decades, starting from the 1952 screening of *This is Cinerama* (by Merian C. Cooper) at the Broadway Theater, New York, in *Cinerama* format.

It was the first moment in the history of cinema in which the aspect ratio of the screen radically changed, passing from a universal format tending to the square ( $4:3=1.33:1$  or the Academy's  $1.37:1$ ), to take on new dimensions, expanding horizontally, sparking prolific experimentation that would result in a sort of “patent war” between nations. The solutions put forward were many and may be classified into three groups from a technical perspective: [3] *multi-camera* devices (*Cinerama*, *Cinemiracle*, *Circarama*, etc.) which film a panoramic image by synchronizing different cameras with each other; *anamorphic* devices (*CinemaScope*, *Cinépanoramic*, *Totalvision*, etc.) which capture said image using a special optical complex; *large format* devices (*Todd-AO*, *VistaVision*, *Technirama*, etc.) which photograph said image using an exceptional negative surface. The end of this period culminates with IMAX, on show at the 1970 Osaka Expo.

This transformation was due in great measure to the proliferation of the television set, which from 1949 onward began to establish itself as a fixture of home entertainment, first in The United States and then across Europe. From this moment on, cinema has had to rethink. It decided to focus on the element of spectacle, specifically by investing in the augment of screen dimensions in order to launch novel vistas which might entice out its audiences. [4] The projection in *Circarama*, for example, offers an immersive experience thanks to a synchronized multiscreen system,

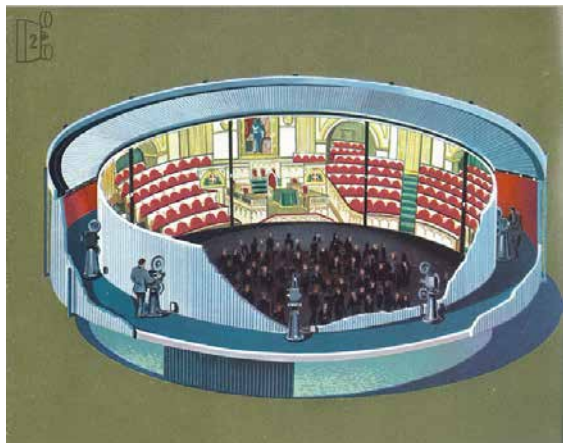


Fig. 1. *Circarama* Booklet for “Italia ‘61.”

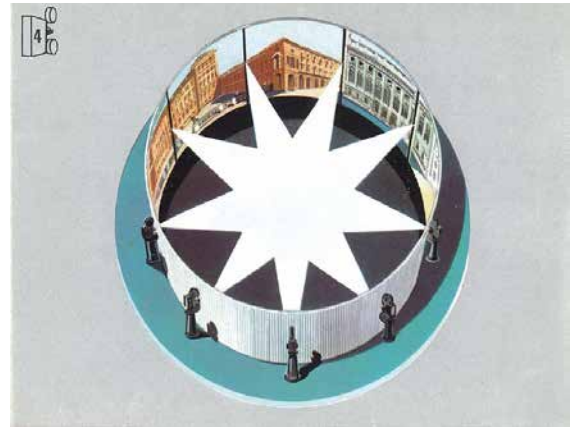


Fig. 2. *Circarama* Booklet for “Italia ‘61.”

organized around a circular space in which the viewer is completely engulfed by a flow of images. (fig. 1, 2)

Italy also went through an economic boom, gaining traction throughout the 1960s, yet already evident by the end of the 1950s and the initial phase of post-war reconstruction, facilitating prosperity and technological advancement. As this buoyant decade continues, modernity spreads and refurbishes Italian lifestyle. Car ownership—initially a status symbol—becomes commonplace, allowing Italians to travel more independently, now able to venture away from the predefined routes of public transport, as well as kindling the unexplored concept of free time, eventually leading towards to the type of tourism that we know today.

“A further corollary of cinema’s intervention in our notion of time is that it was closely aligned with changes in people’s sense of space, location, and locomotion, of movement and mobility, and with the associated means of transport and propulsion, i.e. the railways, the automobile, the airplane, and the ocean liner. This would be the other paradigm of “modernity” complementing the trope of the city, [...]” [5]

This new type of mobility introduced something else too, it taught travelers to look at new landscapes in motion, as seen through a windshield, effectively a frame through which to watch reality, very similar to a screen.

### Expo ‘61: A Showcase for Fiat’s *Circarama*

The Paris Exposition of 1900 was neither the first nor the only such event to display technological innovations and showcase the products of modernity as the fruits of progress, but it is certainly the first to present a high proportion of attractions which related to the moving image. Indeed, some of the key innovations that have shaped the history of cinema had first been seen in the great exhibitions

of the day, that assortment of international fairs that galvanized the major cities of the world throughout the twentieth century, so much so that the epoch was widely heralded as “the century of exhibitions”.

Among these, one is fundamental for the evolution of the panoramic technology *Circarama*: Expo '61 in Torino, Italy. The *Palazzo del Lavoro* (Palace of Labour, also known as Palazzo Nervi after its designer) was purpose-built for the event, hosted displays themed around work, the space being divided into sections, each entrusted to a succession of major Italian corporations. Fiat was allocated the section on transport. It would theme its exhibition space upon the evolution of various means of transport, utilizing a “land–sea–air” axis. Around these motifs it focused on a further three fundamentals: speed, safety, economy. This is the juncture in the designed layout where the *Circarama* pavilion takes over, a cinematic innovation that will make it possible to “show what in the collective, sectioned exhibition would not be possible to visualize” [6] and which would be built next to Palazzo Nervi.

The first *Circarama* had been realized in Disneyland, then a subsequent stop-over at the Brussels Expo 1958 with the film *America the Beautiful* flaunting “the American way of life”. Fiat representatives were able to attend this immersive show to take note. The Italian response *Italia '61*, filmed by the well-known director Elio Piccon, follows that same formula, presenting itself as a journey through Italy: historic places of culture, scenic beauty, yet also interspersed by images of burgeoning industries, by now an integral part of the nation. To shoot the footage the camera block had to be mounted upon various forms of transport; a car (fig. 3), a gondola, a C-119 Flying Boxcar (kindly made



Fig. 3. Images from Lightman Herb A., “Circling Italy with *Circarama*”, *American Cinematographer*, vol. 43, n. 3, march, pp.162-163.

available by the Italian air force) and even a hydraulic elevator.

Indeed, as can be seen from the *Circarama* patent itself (fig. 4), the active role of the automobile is fundamental seeing that the group of cameras had been envisioned as ready-mounted on a vehicle, allowing it to capture reality whilst on the move.

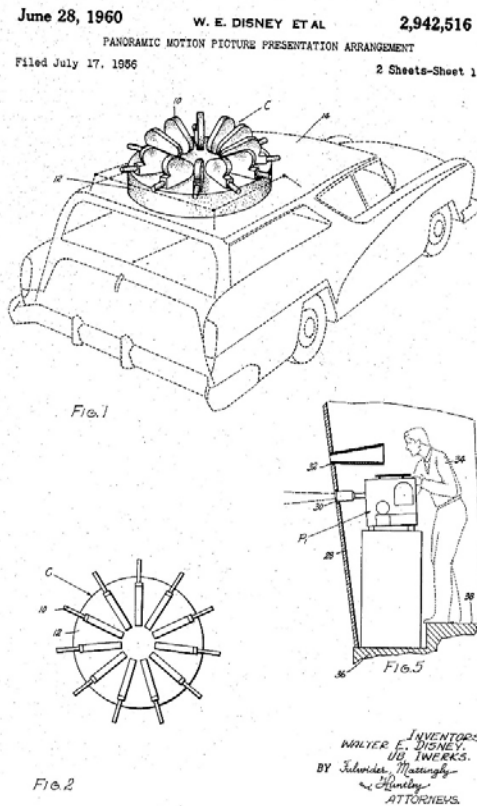
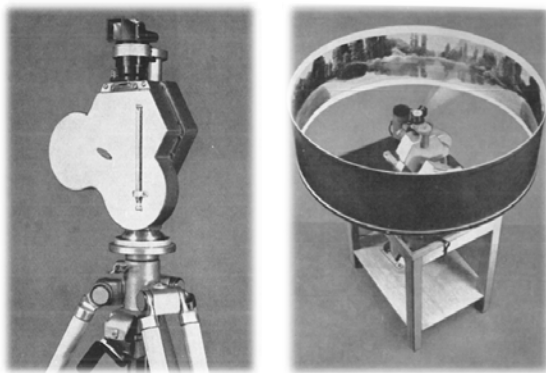


Fig. 4. *Circarama* Patent.

This Italian stage of *Circarama*, made feasible thanks to agreements forged between Fiat and Disney for the use of the patent, not only represents a geographical achievement for the panoramic device, it also marks the beginning of its evolution. In fact, the *Circarama* showcased in Italy presents significant innovations and improvements from a technical standpoint: the number of cameras, and consequently cinema projectors, is reduced from eleven to nine; the camera group for the shooting phase is equipped with mirrors and thus able to achieving angles that would otherwise have been impossible to shoot; the adoption of Arriflex 16mm (rather than 35mm film stock) with the film subsequently being blow up to 35mm for projection.

In Italy too, *Circarama* garnered its long-anticipated success. It was so acclaimed by both visitors and press throughout the opening weeks of the exhibition that the following year Fiat took it on tour to Milano and Bari as a tie-in with these cities' own trade fairs. In this way a greater diversity of the Italian population would have their chance to be awed by such a spectacle.

In the wake of this triumph, Fiat decided to continue investing in the panoramic film industry, this time in anticipation of the 1964-65 New York World's Fair. A select committee made up of Fiat, chemicals giant Montecatini and IRI (Industrial Reconstruction Institute) was in charge of operations, together embodying a large sway of Italian enterprise. They took the desire to present an upgraded *Circarama* as their objective, necessitating further negotiations with Disney in order to renew the use of the patent and thereby, it was hoped, the creation of a new type of film-making. However, Disney royalties were deemed too high so plans were afoot to find another similar system to develop. It was at this point that Fiat discovered *Totalrama*. This was an all-Italian technology patented by the multifaceted engineer Vico D'Incerti (who had worked in various industries; film equipment company Ferrania, food brand Motta, automotive supplier Magneti Marelli). It eventually had its debut in 1962 with a presentation at the 14th International Congress of Cinema Technology in Torino. (fig. 5, 6)



Figs. 5 and 6. Images from D'Incerti Vico, "Nuovo sistema di cinematografia per la ripresa e la proiezione senza limitazione del campo", in *Atti del 14. congresso internazionale della tecnica cinematografica: psico-fisiologia nella tecnica di registrazione e di riproduzione delle informazioni*. Artigraf: Milano 1962, pp. 59-66.

Here the aim remained the same, to get the viewer immersed in the images, but the technical mechanism behind that goal changed. In fact *Totalrama* works with only one camera, the film is arranged horizontally, not vertically, and above the camera there is a turret composed of an arrangement of prisms. This represents the crux of

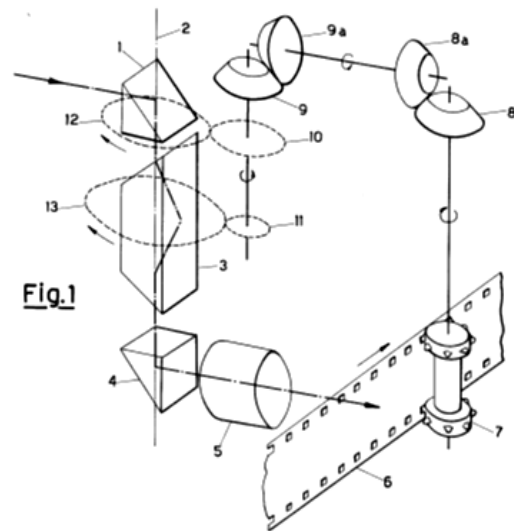


Fig. 7. *Totalrama Patent, shooting system.*

innovation! The arrangement consists of three prisms: two total-reflection rotating prisms and one rectangular isosceles prism (an Amici's or Dove's prism or Wollaston's prism), positioned on the same vertical axes and they rotate on themselves. To better convey the idea, the construction of the optical unit is similar to that of a periscope. (fig. 7)

For the projection, the system is the same but in reverse: the projected light passes through the film, then is redirected through the assembly of prisms and finally strikes the circular screen. The movement of the projection turret is comparable to a lighthouse, as it turns it progressively illuminates portions of the screen, guaranteeing the sensation of consistent images due to the phenomenon of retinal persistence. (fig. 8)

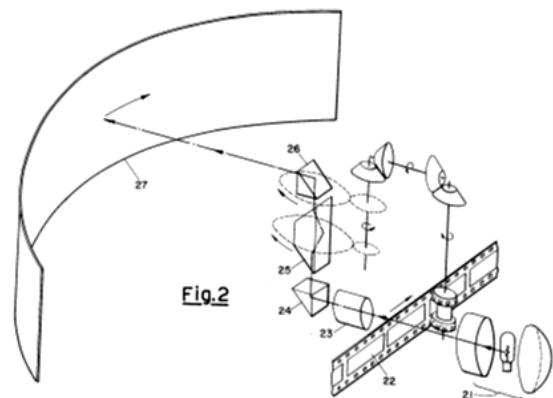


Fig. 8. *Totalrama Patent, projection.*

Unfortunately, films that were shot in *Totalrama* would never be edited, nor would it form part of Italy's participation in the New York World's Fair of 1964–65. All that remains today are the 35mm negatives kept at the National Film Archive for Industrial Film (l'*Archivio Nazionale del Cinema d'Impresa*), located in Ivrea, Torino. Like the film *Italia '61* in *Circarama*, it was to have been a travelogue through Italy, once more affording sweeps of landscape, sites of cultural heritage and obviously views of modern industry too. (fig. 9)



Fig. 9. Frame from item n°09335P, negative B/W, internal footage of the Fiat assembly line. Author's Photo.

Although *Totalrama* was an abortive project, if inserted into film history from a media archeology stance it might well be understood as “not just the excavation of manifold pasts but also generating an archeology of possible futures”. [7] This is precisely what this Italian proposal demonstrates: the study of *dead ends*, of media products which were ultimately unsuccessful, that have died prior to completion, that have been abandoned, neglected, forgotten; yet they still have crucial stories to tell. [8]

## Conclusion

The panoramic technologies of *Circarama* and *Totalrama* examined here form part of a history of patents and technical innovations developed in the 1960s, but are also strongly connected to past experiences—of which they display recognizable features and dynamics—and at the same time are indicative for future technological developments. This is not as great a leap as it may first seem, because contemporary technologies, like experiences in virtual reality, would not have been conceivable if they had not undergone successes and failures in the past, including those highlighted in this article. To this end, attention to any medium's past can be seen to be a fundamental aid in understanding today's panorama.

As we have seen, however, it is pertinent to analyze these devices in context in order to understand their deeper dynamics. In fact, cinema goes of the 1960s were the same people inhabiting a world in transformation, committed to modernity, who, through experiencing ever more rapid movement, become used to looking at reality with different rhythms and “frames”, such as that of a car windscreen. They are thus ever more receptive to the panoramic widescreen cinema experience such as *Circarama*, they perform the double function of opening out onto the world

as well as that of imposing a limit because they hide part of reality, that which is delimited beyond the frame of vision. The windows-screens thus appear to be access doors—gateways—for moving images: “The window can be opened, literally and figuratively, so that the spectator can gain visual as well as virtual access to the world that lies beyond it.” [9]

But what becomes important in this dynamic is not so much what you see, but the experience of the journey itself and the movement that can be recreated, stimulating the viewer's attention and managing to reinstate a feeling of immersive participation. The moving landscape, visible through the windshield of a moving vehicle, may be considered in terms of a virtual window:

“[...] providing a framed, visual access to moving images. The comparison between highway panoramas and mobile screens, however, is bi-directional: the concern with the design of highway panoramas for the car window as an interface is only a recent example of a longer history of panoramic desire. Panoramic desire, I argue, is the desire for perceptual, not physical, immersion.” [10]

In modern cities, where cars are ubiquitous, travelers can move more freely and therefore develop a new aptitude of creating their own routes, just as spectators, standing in the circular *Circarama* space, are free to choose where to look, regaining a similar faculty that their forebears might have cultivated when visiting the rotundas of nineteenth-century pictorial panoramas. They are thus able to attain a higher degree of involvement, causing them to become co-participants in the creation of meaning from the images that flow on the screens all around them.

## Notes

1. The phenomenon of *moving panoramas* it is extensively analyzed in *Illusion in motion: media archaeology of the moving panorama and related spectacles* where the scholar Erkki Huhtamo considers it to all intents and purposes a “multimedia” show, worthy of attention and in which some important dynamics of future cinema can be found by carrying out an analysis in line with the themes and methodologies of *media archaeology*.
2. Cf. Byerly, *Are We There Yet?*; Bruno, *Atlante delle emozioni*.
3. Cf. the specialist literature: Carr, Hayes, *Wide Screen Movies*; Limbacher, *Four aspects of the film*.
4. See: Belton, *Widescreen Cinema*; Belton et al., *Widescreen Worldwide*; for an Italian example Vitella, *L'età dello schermo panoramico*.
5. Elsaesser, *Media Archaeology*, 27–28.



6. *Diari della direzione Stampa e Propaganda* by Fiat, n. 19, from 28 June to 11 July 1960.
7. Elsaesser, *Media Archaeology*, 25.
8. Huhtamo and Parikka, *Media Archaeology*.
9. Verhoeff, *Mobile Screens*, 21.
10. Verhoeff, 21.

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## Author Biography

After a three-year degree in Economics and Management of Cultural Heritage at Ca' Foscari University of Venice, Silvia Mascia obtained her master's degree in Film and Audiovisual Studies at the University of Udine, with the thesis: *Circarama's Journey: the panoramic vision between the film and automobile industries during Italy's economic boom*. Currently, she is a PhD student at the University of Udine, aiming to expand her master's research on *Circarama*, looking at the various stages of its technological development in various world fairs and expositions during the 1960s. She had taken part at the Belfast 2019 IVRPA Conference (International Virtual Reality Professionals Association) and in addition, she has been co-editor of the Sergio Amidei Award catalog for a number of years and collaborates in other capacities with the organization.

# Twenty Years Hidden in Plain Site

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## Abstract

Founded in the year 2000 on Hollywood Boulevard in Los Angeles, the Velaslavasay Panorama (VP) repurposed the iconic Tswuun-Tswuun Rotunda, originally constructed as a Chinese food take-out restaurant in 1968. The panorama relocated in 2004 to its current site, the historic 1910 Union Theater on 24th Street. Comparing the respective histories of these structures, including their architecture, cultural use over time, and adaptation as sites of panoramic attraction, shows that the Velaslavasay Panorama project inverts the paradigm in which spectacular structures have been purpose-built for visitors of immersive 360-degree panoramas since the late nineteenth century.

This history connects the panoramic impulse to the linear cinematic landscapes of Los Angeles as portrayed and imagined in films such as *Once Upon a Time...In Hollywood* (2019) and *Boogie Nights* (1997). The experience of cinematic techniques, such as the tracking shot, are paralleled to the Velaslavasay Panorama's exploration of panoramic forms as visitors are guided through levels of displacement in time, space and mind, street exteriors to building interiors, and finally to the imagined realm of urban representation in film and the painted panorama.

## Keywords

Vernacular Architecture, Scripted Environments, Panoramas, Cinematic Landscape, Lateral Tracking, Streetscapes, Velaslavasay Panorama

## Introduction

In 2017, Sara Velas and Ruby Carlson, Co-Curators at the Velaslavasay Panorama, travelled to Shenyang, China, to behold a spectacle typically reserved for nineteenth century showmen. They came to inspect and review the newly completed *Shengjing Panorama* by artists Li Wu 李武, Yan Yang 晏阳 and Zhou Fuxian 周福先—legend has it the painters applied the finishing touches just hours prior. After 15 years of studying the panorama phenomenon in China and developing a friendship and bond over the medium, Sara Velas and the Velaslavasay Panorama commissioned expert panorama painters Li, Yan and Zhou to paint *Shengjing Panorama*. Nearly six feet tall and over ninety feet long, the panorama was suspended from a metal frame

that sat in the indoor basketball court of the Tiexi School for Hearing Impaired Students (Fig. 1).



Fig. 1. “*Shengjing Panorama*” in Gymnasium of Tiexi School in Shenyang, China, 2017 Photo: Ruby Carlson.

As the panorama hung against the rectilinear walls beneath a basketball hoop, Velas, Carlson and a select group of others attending this special event were able to experience the panorama as though it were a scroll painting. [1] As Yomi Braester writes, “In the beginning was the scroll. A genealogy of panoramic imaginary in China...must go back to the traditional scroll and, in particular, the long horizontal paintings used to portray progressions through the city.” [2] Because the painting was designed to be installed against the curved walls of a 360-degree rotunda, this was a rare glimpse of *Shengjing Panorama* not “in the round” but “in the flat,” as if it were a two-dimensional object. The painting, which depicts a realistic, historically informed yet fictional view of Shenyang, China, circa 1910-1930, would soon be transported to the Velaslavasay Panorama in Los Angeles, California, where it would be displayed as it was designed, in the round and embellished with sculptural terrain, transforming *Shengjing Panorama* into a three-dimensional work of art.

This transition, from the two-dimensional scroll painting to the three-dimensional immersive panorama, is usually only witnessed by panorama painters and technicians. As installers, curators and collaborating artists, Velas and

Carlson took hold of *Shengjing Panorama* as a two-dimensional representation that day in the basketball court—noting its scroll-like demeanor and the way it stretched out from one end of the court to the other. [3] The painting depicts a cityscape, so streets stretched from one end of the court to the other as well. To see the whole painting, Velas and Carlson had to walk along it, moving slowly along the perimeter of the gymnasium like passengers riding in one of the 1920s cars depicted in the painting (Fig. 2).



Fig. 2. “*Shengjing Panorama*” detail with automobiles, 2017 Photo: Sara Velas.

Although the painting was displayed indoors, the scenes on the canvas were of the outside—a bustling city street, clouds changing in the sky, leaves falling to the floor, and fishermen on the banks of a river. Panoramas traditionally play with the barrier between inside and outside as viewers are ensconced in both simultaneously. Whether the subject be a battle, a faraway city, or an Arctic terrain, panoramas traditionally depict exterior landscapes. [4] Panoramas are special in that their structure determines the architecture that surrounds them, which is rare for a painting. The rotunda, the spiral staircase and the long, dark, approaching hallway (Fig. 3) are dictated by the panorama and they shape the panorama viewing experience.



Fig. 3. Hall and spiral staircase entrance to panoramic viewing hall at the Velaslavasay Panorama, 2017 Photo: Forest Casey.

Examining the relationship between interior-exterior structure and interior-exterior imagery shows how the curators of the Velaslavasay Panorama engineer a panorama encounter informed not just by the dictates of the panoramic medium but also by the subject matter depicted, the past and future of the panorama phenomenon, the historic dialectics of art acquiescing to architecture and vice versa, and the very city of Los Angeles as the geographic site of *Shengjing Panorama*. We go so far as to argue that whereas *Shengjing Panorama* is a representation of Shenyang, the Velaslavasay Panorama is a representation of both panorama history and Los Angeles itself.

### The Cinematic Frame and the Moving Panorama

In the summer of 2010, the Velaslavasay Panorama presented a theatrical staging of the *Grand Moving Mirror of California*, a script and moving panorama written in 1853 by a “Dr.” L.E. Emerson that originally toured New England (Fig 4). [5] A broadside announcement declared, “CITIZENS! Improve this opportunity of beholding the LAND OF GOLD” (sic) and invited all to enjoy “A Through Ticket to the Americas” by way of a moving panorama—a canvas scroll depicting a continuous landscape. Though the

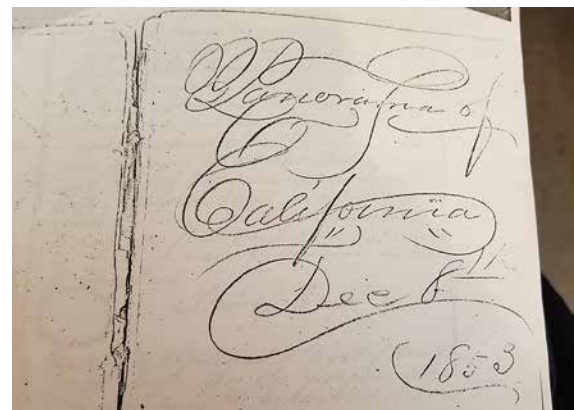


Fig. 4. “*The Grand Moving Mirror of California*” 1853 script photocopy. Collection of the Saco Maine Museum.

archival script served as the production’s guiding force, the original painting had been lost to the ages, giving opportunity for a new interpretation. Collaborating with Sara Velas and others at the Velaslavasay Panorama, Guan Rong painted a new 275-foot-long canvas taking inspiration from American folk art, nineteenth century vernacular engravings, and the linear works of self-taught artist Henry Darger. Erik Newman and Oswaldo Gonzalez used historical technical knowledge to create a period correct wooden frame—a box structure that shrouded the spooled

canvas on either end with a proscenium in the center where the painting could be viewed by an audience (Fig. 5).



Fig. 5. *Grand Moving Mirror of California*, Guan Rong, Sara Velas, Rosco Posada, Erik Newman and others, 2010. Photo: Sara Velas.

In the nineteenth century moving panorama heyday, the script was performed as the painting was advanced in its wooden frame, typically in a lecture hall, theatre or church accompanied by live music and foley sound effects. The Velaslavasay's production included a theatrical narrator reading an adaptation of the script, crankers advancing the painting, a pianist, foley artists and stage lighting technicians. The show was performed on the Velaslavasay's theater stage and the moving panorama stood directly in front of a silver screen. The positioning of the moving panorama as such, obstructing cinema, creates a conversation between the panorama as a precursor to cinema and the act of the Velaslavasay Panorama (located inside a purpose-built cinema from 1910), making a modern-day mission out of giving panoramas precedence over film—an act counter to the trend that played out when cinema stole the show, so to speak, from panoramas in the early twentieth century.

In *The Painted Panorama*, Bernard Comment claims that the moving panorama “brought about a radical shift in relation to the circular panorama, a shift that involved another logic.” [6] This new logic set the stage for what was to come. Borrowing Charles Musser's phrase, Erkki Huhtamo writes about the moving panorama as “screen practice” working to establish dynamics of viewing inherent in the moving panorama that segued into cinema—viewing a succession of linear images in a fabricated frame, or window, the industrialization of image-viewing, and the commercialization of spectatorship. [7]

Urban cities, architecture, and landscapes were popular subjects depicted in moving panoramas throughout the nineteenth century. Voyaging or travelling were also popular themes, as evidenced by the *Grand Moving Mirror of California* and others like *The Trans-Siberian Railway Panorama*, *Panorama of the Monumental Grandeur of the Mississippi Valley*, and *London to Hong Kong in Two*

*Hours*. [8] If moving panoramas can be seen as “screen practice” for cinema viewing in general, it is reasonable to argue that moving panoramas were also practice for the cinematic frame and a particular technique in filmmaking—the lateral tracking shot.

## Lateral Tracking Shot and Vehicle

As Dr. Hunter Vaughn remarks in a paper on tracking shots, “The cinematic frame is a most enigmatic character. Perhaps because it never moves, yet is the site of all movement; it never changes, yet is where all change takes place.” [9] Dr. Vaughn could very well be speaking of the moving panorama, so similar is it to the cinematic frame. When discussing the Chinese scroll painting and its relation to the panorama method, Braester writes, “the painting employs a birds'-eye view, at a steady height and a constant distance from the central axis. Maintaining the same position, facing northwest, the scroll feels as if the viewer engages in a high-angle tracking shot.” [10]

The lateral tracking shot, otherwise known as a “dolly shot” or “travelling shot,” is a technique of the cinematic frame achieved by placing a camera on a dolly and the dolly on rails, like that of a train track. The camera moves alongside a subject or a view and, similar to moving panoramas, the most frequent images of a lateral tracking shot involves cityscapes, landscape and architecture. They are both techniques of depicting motion, movement and travel. Their subjects are façades and exteriors and because of this the visuals are sometimes flat, as if two-dimensional. In fact, the first example of a moving camera was in a film titled *Panorama du Grand Canal pris d'un bateau* (Promio 1896), a panoramic view and lateral tracking shot of the Grand Canal in Venice, which one could imagine closely resembling Samuel Waugh's moving panorama *Mirror of Italy* (1849). [11]



Fig. 6. Driving down Hollywood Boulevard in “*Once Upon a Time...In Hollywood*” 2019. Quentin Tarantino, Director.

Renowned filmmakers have employed the lateral tracking shot in some of their most iconic works—Orson Welles in *Touch of Evil*, Jean Luc Godard in *Weekend*, Paul Thomas Anderson in *Boogie Nights* (Fig. 8), Wes Anderson



in *Darjeeling Limited*, Jia Zhangke in *Touch of Sin*, and Quentin Tarantino in *Once Upon a Time...In Hollywood* (Fig. 6). In all of these examples, cars and locomotives are leading figures in the scene, often serving as the impetus for the moving cinematic frame.

Lynne Kirby, in the book *Parallel Tracks: The Railroad and Silent Cinema*, describes how through the travelling shot film doubles the act of train travel, highlighting the condensation of space and time and customs of the observation car. John Edmond makes the point that the “mere movement of the travelling shot helped evoke the pan of the panorama” while “the movement of the pan or the tracking shot has become cinematic, abstracted from their vehicular inspirations.” [12] Jakob Isak Nielsen notes that the “train was the most popular camera support in the 19th and early 20th century and two sub-categories of train mobility already indicated a branching out of two functions: mobile shots filmed from the side of the train were known as ‘panoramas’ whereas mobile shots filmed from the front of the train were known as ‘phantom rides.’” [13]

Shooting from the vantage point of a vehicle affords the audience a visual metaphor for following the narrative arc of a subject while creating space for the characterization of the surrounding landscape. For filmmakers Paul Thomas Anderson and Quentin Tarantino in particular, vehicle tracking shots create an opportunity to highlight an often overlooked character in their films—Los Angeles.

### Los Angeles as Subject and Object

*“The view through the windshield determines the impression of the city’s image; it is characterized not by church steeples but by neon advertising signs.”* [14]

In 2018, filmmaker Quentin Tarantino turned one block of Hollywood Boulevard—from Las Palmas to Cherokee—into a film set for *Once Upon a Time...In Hollywood*. As the film took place in 1969, the project involved a complete overhaul of storefront façades based on archival images of the time (with some stretches of the imagination) including recreating two neon signs and marquees for both the Vogue and the Pussycat theaters, recreating bus and movie advertisements and re-installing signs of former businesses such as Peaches Records & Tapes (Fig. 7) and Larry Edmunds Cinema and Theatre Bookshop. [15] As a result of the detailed and extensive work, the block became a portal into Hollywood’s past, offering LA tourists and natives an immersive streetscape experience with a world that no longer exists. When the film was released in theaters viewers watched a series of tracking shots as Brad Pitt drove down the block at night with neon and glittering signs all aglow (Fig. 6). [16]



Fig. 7. “Peaches” recreated on Hollywood Boulevard for “Once Upon a Time...In Hollywood” 2018. Photo: Chris Nichols



Fig. 8. Cruising the San Fernando Valley in “Boogie Nights” 1997. Paul Thomas Anderson, Director.

In 1997, Paul Thomas Anderson restored a corner block of Los Angeles’ Reseda neighborhood in the San Fernando Valley back to its former glory circa 1977 for the film *Boogie Nights*. The opening scene features a long tracking shot (though not a lateral one) beginning at the Reseda Theatre (Fig. 8), whose blue neon marquee had been repaired for the film after sitting dormant for nearly a decade, and ending at the neon sign for Hot Traxx Disco, a made-up name for what at the time of filming was the Reseda Country Club, “an underachieving music venue attempting to recapture its glory days from the ‘80s,” that was in the process of being sold. [17]



It is perhaps not a coincidence that The Pussycat Theatre façade was recreated for both *Once Upon a Time...In Hollywood* and *Boogie Nights* (though they were different locations of the adult film theater chain) as both directors are Los Angeles natives whose films draw inspiration from the look, feel and people of the city. In addition, the theaters had massive curb appeal with their fanciful massive lettering, backlit panels and globe lights. Neon signage is another tool for attracting attention and luring in business after the sun goes down. Though many of Los Angeles'

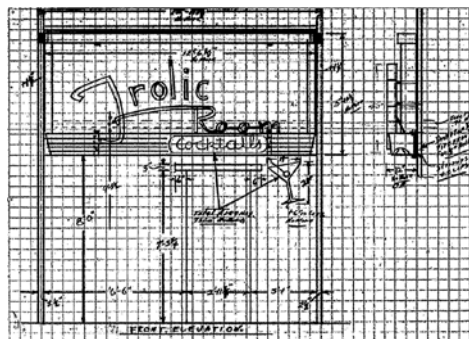


Fig. 9. Detail from Frolic Room signage permit 1948. LADBS permit number 1948LA26169.

neon signs have disappeared over the years, some iconic examples remain such as the 1948 sign for The Frolic Room (Fig. 9) at 6245 Hollywood Blvd, which can be glimpsed in a tracking shot in *Once Upon a Time...In Hollywood* and in Ed Ruscha's Hollywood Boulevard photography projects. [18] Los Angeles architecture "required a car-friendly environment; mandatory were acres of convenient parking right in front, gigantic signs, and flashy architecture that caught a driver's eye with enough time to pull in." [19] The aesthetics of the city is interlaced with the act of viewing the city from the car window, a fast-moving parade of neon and bright lights when travelling down Hollywood Boulevard at night. This is then represented in films where Los Angeles is either subject, setting or both, commonly by way of a tracking shot.



Fig. 10. Hollywood Boulevard, 1973: Roll 23: Argyle headed east: Image 0136, Edward Ruscha. Getty Research Institute, Los Angeles (2012.M. 1).

## The Tracking of the Tswuun-Tswuun Rotunda

Film is not the only art form making use of the lateral tracking shot evocative of the moving panorama to document the landscape and architecture as seen from a moving vehicle. In 1966, artist Ed Ruscha self-published the book *Every Building on the Sunset Strip*, a fold out 760.7 cm long continuous print of developed 1,006 cm Ilford FP-4 black & white 35mm film documenting a 2.5 mile stretch of Sunset Blvd. For the project, Ruscha mounted a tripod to a pickup truck and shot both the north and south side of the street. Ruscha used this methodology to explore streetscapes throughout Los Angeles and documented the entire 12 mile stretch of Hollywood Boulevard in 1973, 2004 and 2010, showing incidental changes to architecture, urban development and even automobile style over four decades. [20]

In part to contextualize this decades-long project of Ruscha, Steidel published *THEN & NOW, Ed Ruscha Hollywood Boulevard 1973-2004*, noting that "the original 1973 North side view is shown along the top of the page and juxtaposed with its 2004 version underneath. Along the bottom of the page, you find the original 1973 South side view shown upside down, also juxtaposed with its 2004 version. The panoramics face each other and they are aligned." [21] Featured amongst the "panoramics," on the 5500 block page of the book, is the Tswuun-Tswuun Rotunda seen both in its heyday as the Chu-Chu Chinese restaurant in 1973 (Fig. 10), when it was surrounded by a large U-shaped apartment complex, and as the Velaslavasay Panorama in 2004, with the sign "PANORAMA" clearly visible on the façade.



Fig. 11. Tswuun-Tswuun Rotunda at 5553 Hollywood Boulevard, 2004. Photo: Larry Underhill.

Ruscha revisited the project again in 2010 and captured the vacant site after the demolition of the 1968 rotunda structure (Fig. 18).

The Tswuun-Tswuun Rotunda followed the LA tradition of a building designed to seize the attention of passersby, whether on foot or by car. Dr. David Chu built the “Tiki-Chinese-funk” rotunda in 1968, after he purchased a horseshoe-shaped apartment building built in 1911. [22] The eye-catching Chu-Chu Chinese, a green stucco cylinder with a blue tiled roof topped by a glowing orange ball, surrounded by Canary Island date palms and luxurious tropical foliage, took advantage of its 5553 Hollywood Boulevard location, just east of an entrance to the 101 Freeway. [23] The take-out restaurant expanded on the Chinese food empire created by the husband and wife team Dr. David and Dorothy Chu at the nearby Shanghai Restaurant, which in the late 1960’s was also expanding its banquet halls upstairs. [24] Located east of the rotunda site at 4916 Hollywood Boulevard, Shanghai Restaurant held a spectacular façade—bright reds and blues with a swaying dragon to invite you forward, replete with backlit signs crafted in 1962 by Wong’s Neon (Fig.12 & Fig. 13). [25]



Fig. 12. Matchbook showing Shanghai Restaurant Façade Collection: Eric Lynxwiler.



Fig. 13. Hollywood Boulevard, 1973: Roll 5: Begin of Hollywood Bd. Headed west: Image 0171, Edward Ruscha. Getty Research Institute, Los Angeles (2021.M. 1).

The eye-catching sensibility of these vernacular structures played an integral role in the genesis of the Velaslavasay Panorama. In March of 2000, Sara Velas was driving down Hollywood Boulevard in search of a specific address. Looking to her left, she spotted the abandoned rotunda structure sticking out amongst a plot of vacant land—the U-shaped apartment building no longer extant as it was condemned after the Northridge earthquake in 1994 and subsequently demolished. Velas immediately noticed the uncanny resemblance the structure had to Catherwood’s

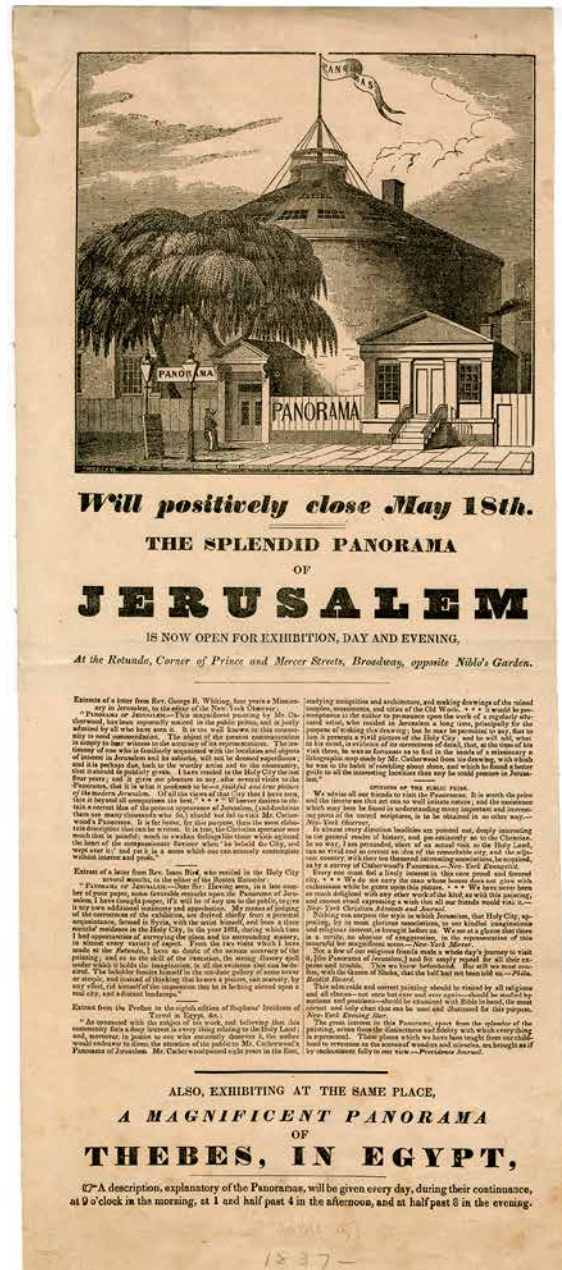


Fig 14. Catherwood's Panorama Broadside. 1887. Collection: The New-York Historical Society Library, SY 1837 no.21.



panorama which once stood at the corner of Prince and Mercer Streets in New York City (Fig. 14 & Fig. 16). Less than a year later a broadside announced the introduction of the Velaslavasay Panorama to the neighborhood and beyond with a comparison of Catherwood's and the Tswuun-Tswuun Rotundas. (Fig 15).



Fig. 15. *Impending! Broadside for Velaslavasay Panorama*, 2000. Design: Sara Velas.

Whether on foot or by car, the “tracking shot” approach to the entrance of the structure was an integral part of one’s experience with the panoramic painting inside. In contrast to the flashy (but confusing) “South Seas” themed structure and accompanying pizza sign, many visitors felt underwhelmed by the decidedly “low key” panoramic painting. [26] Created within the Tswuun-Tswuun rotunda, *Panorama of the Valley of the Smokes* inverted the panoramic spectacle of the nineteenth century.

The early 2000s era in East Hollywood specifically (and in many areas of Los Angeles generally) was marked by growing investment interest in large-scale development projects, spurred in part by zoning changes in areas close to Metro (subway) transit lines. [27] This kind of speculative investment interest led to the sale of the entire plot of land

at 5553/5555 Hollywood Boulevard, forcing the Velaslavasay Panorama to relocate in mid-2004. The Tswuun-Tswuun Rotunda was torn down in 2005 (Fig. 17).



Fig. 16. *Sidewalk view of the Tswuun-Tswuun Rotunda at the height of its use as a panorama venue*, 2003. Photo: Sara Velas.



Fig. 17. *Imminent demolition of the Tswuun-Tswuun Rotunda*, 2005. Photo: Sara Velas.



Fig. 18. *Hollywood Boulevard, 2010: Roll 53: Ivar Ave headed east: Image 0175*, Edward Ruscha. Getty Research Institute, Los Angeles (2012.M. 1).

## Repurposing the Union Theatre

In an interesting twist for a museum dedicated to the creation of panoramas and other entertainments popular before the invention of film, in 2004 the Velaslavasay Panorama moved into one of Los Angeles' earliest purpose-built cinema halls—the Union Theatre. Built in 1910, the structure was originally called the Union Square Theatre in reference to the name of the neighborhood at the time. [28] Close to the University of Southern California (USC, established 1880), the location of the movie theater took strategic advantage of the Los Angeles Inter-Urban Railway Company Street Car System—the University Main line passed immediately in front of the building on 24th Street. [29] In close proximity to the fashionable and expensive St. James Park subdivision, over the years the neighborhood around the Union Square Theatre would be home to luminaries and high-powered businessmen including the Doheny family oil barons, Theda Bara, and Curly Howard of Three Stooges fame. [30]

The theater went through various owners and names during the first half of the twentieth century as it served the public as an entertainment venue, including being a part of the Fairyland chain of Southern California film theatres from 1915-1926. In 1935, former screen vamp Louise Glaum opened an acting school and playhouse, calling it Louise Glaum's Little Theater at Union Square. In 1951, the building at 1122 West 24th Street goes dark as a movie theatre and was obtained by Tile Layer's Local #18 to use as their union headquarters. [31]



Fig. 19. *Union Theatre Façade*, 2004. Photo: Sara Velas.

When Sara Velas began the Velaslavasay Panorama relocation to the Union Theatre site, the structure had lost much of its street-side allure. It looked abandoned. The neon was gone and most of the exterior was bland, beige and white (Fig 19). Storefront improvement funding from the Community Redevelopment Agency in 2004 enabled the process of reigniting the “curb appeal” with a complete overhaul of the neon signage and a repainting of the building to highlight the moderne turquoise tile in the façade.

The relocation of the Velaslavasay Panorama prompted a huge difference in context for a visitor's experience. Whereas one would previously approach a “curious hut” surrounded by gardens visible from the street that did not have an embedded “obvious” use, the Union Theater location set the visitor's framework for approaching a structure that signaged itself as the location of entertainment. This building was obviously a theater and, with its (analog) letter-changeable marquee, this building most likely was a “movie theatre.” The Velaslavasay Panorama subversively put a 360-degree statically painted panorama into one of Los Angeles' earliest movie theatres.

## Doubling the Illusion

Moving from the outside, a place designated for the “natural world” and filled with people, trees, birds, flora and fauna, to an interior space, a human-made place, an “artificial” place, brings out the question of artifice and authenticity. We have talked so far about the exterior façade of the Velaslavasay Panorama alluding to both the moving panorama and the lateral tracking shot in cinema, and how this idea extended to the previous home of the Velaslavasay, the Tswuun-Tswuun Rotunda in Hollywood, but what of the interior space?

Hollywood has made a custom out of repurposing façades and interior spaces for art, altering exteriors and interiors to fit the vision of the director. Buildings and interiors are manipulated for the sake of cinema, but in the case of the



Fig. 20. *Union Theatre Façade*, 2017. Photo: Ornate Theatres.

Velaslavasay Panorama, a cinema house is manipulated for the sake of the painted panorama, a reversal of a trend that has been the status quo for the past 100 years. In the panorama viewing hall of the Velaslavasay Panorama at the Union Theatre, down the darkened hallway and up the spiral staircase, one finds *Shengjing Panorama*, an elevated view of the city of Shenyang 100 years ago (Fig. 22). And similar to how Quentin Tarantino and Paul Thomas Anderson manipulated city blocks for the aesthetic and historic purposes of their films, the painters of *Shengjing Panorama*



manipulated the geography of the city to give the viewer a more complete and aesthetically pleasing picture. [32] We are inside a manipulated structure and placed in an illusion of the outside world in its manipulated form.



Fig. 21. Union Theatre/Velaslavasay Panorama interior, "Shengjing Panorama" Grand Opening, 2019. Photo: Forest Casey.

In fact, the interior manipulation of the Union Theatre was done so that the illusion of the space as untouched and a relic is so convincing visitors believe the panorama is original to the space. [33] Not only are viewers experiencing a manipulated view of Shenyang, China circa 1910-1930 in the round, they are also experiencing the Union Theatre circa 1910 as it never was (Fig. 21 & Fig. 22). There is an artistry, a human-made mirage of time and place that is created and experienced as something real. This is similar to the craft of a film director. For instance, Quentin Tarantino in *Once Upon a Time...In Hollywood* cares deeply about the historical accuracy of his depiction of the façades and interiors of Hollywood in the era when his film takes place and uses the film as a vehicle to discuss the real life story of the murder of Sharon Tate. Except, in his version of history Tate, by a twist of fate, does not die.

The manner in which the Velaslavasay Panorama is both an experience of cinema and of the panorama phenomenon is uniquely bound to its location—Los Angeles, the home of the Hollywood Industry. Just as areas of Los Angeles are filmed and made to look like such far off places as New York City, Chicago, Miami or Tel Aviv, a little room in the historic district of West Adams, Los Angeles, is made to look like Shenyang, China one hundred years ago.



Fig. 22. "Shengjing Panorama," 2019. Photo: Forest Casey.

## Notes

1. The writers are likening the experience of seeing *Shengjing Panorama* flat to scroll paintings such as *Along the River During Qingming Festival*, a well-known landscape/cityscape subject depicting vignettes of everyday life, first created by Zhang Zeduan in the 12th century and reinterpreted by various artists over hundreds of years.
2. Yomi Braester, "Panorama as Method," *Prism* 16, no. 2 (October 2019): 300.
3. Sara Velas, who originally conceived of the project, worked on the sculptural faux terrain, painting touch-ups, sound and light installation, construction, curation, planning and development in collaboration with several other artists.
4. From the IPC database online list of immersive 360-degree panoramas worldwide, over 95% depict exterior landscapes. See "Panoramas and related art forms [database]", International Panorama Council, November 12, 2020, [https://panoramacouncil.org/en/what\\_we\\_do/resources/panoramas\\_and\\_related\\_art\\_forms\\_database/](https://panoramacouncil.org/en/what_we_do/resources/panoramas_and_related_art_forms_database/).
5. Script was loaned to Sara Velas of the Velaslavasay Panorama via Peter Morelli in 2005, when a photocopy was sent by postal mail from the collection of the Saco Museum in Maine.
6. Bernard Comment. *The Painted Panorama*, (New York, NY: Abrams, 2000), p. 65.
7. Erkki Huhtamo, "Global Glimpses for Local Realities: The Moving Panorama, a Forgotten Mass Medium of the 19th Century," *Art Inquiry. Recherches Sur les Arts* 4 (2002):193-228.
8. In the IPC database on moving panoramas, 18 out of 38 listed are directly related to travel, cityscapes and landscapes. See "Panoramas and related art forms [database]."
9. Hunter Vaughn, "The Travelling Frame: The Tracking Shot in Resnais and Godard" in *Framed!: Essays in French Studies*, ed. Lucy Bolton (New York: Oxford University Press, 2007).
10. Braester, "Panorama as Method," 301.



11. John Edmond, "Moving Landscapes: Films, Vehicles and the Travelling Shot," *Studies in Australasian Cinema*. 5.2 (2011): 28.
12. See John Edmond.
13. Jakob Isak Nielsen, "Camera Movement in Narrative Cinema - Towards a Taxonomy of Functions" PhD diss., University of Aarhus, Aarhus, Denmark, 2007, ISBN 87-92052-25-8, 28. This paraphrases Barry Salt's claims in "Film Style and Technology: History and Analysis" (2009).
14. Thomas W Gaehtgens, "Studying Los Angeles's Urbanism," in *Overdrive: L.A. Constructs the Future 1940-1990*, eds. Wim de Wit and Christopher James Alexander (Los Angeles, CA: Getty Research Institute, 2013).
15. Alison Martino, "Quentin Tarantino Is Filming on Hollywood Boulevard, and It Feels like a '60s Time Machine," *Curbed LA*, July 2018. Retrieved from <https://la.curbed.com/2018/7/25/17614416/quentin-tarantino-once-upon-a-time-in-hollywood>. The Pussycat Theatre at 6656 Hollywood Blvd opened in 1974, whereas the film took place in 1969.
16. In 2001, Brad Pitt visited the *Panorama of the Valley of the Smokes* at the Velaslavasay Panorama while walking down Hollywood Boulevard. See Ed Leibowitz, "Panorama Mama," *Smithsonian Magazine*, May 2004.
17. Bill Locey, "Time Warp: '80s Rock On at Reseda Country Club," *Los Angeles Times*, June 10, 1999. <https://www.latimes.com/archives/la-xpm-1999-jun-10-ca-45970-story.html>.
18. See LADBS Building Permit Number 1948LA26169, Frolic Room signage permit. The marquee of the Union Theatre includes elements of historical signage which were re-illuminated with neon by the Velaslavasay Panorama in 2004. The exterior marquee signage was restored again in 2016 and included painting by Oscar Rospide who worked on the restoration of the Al Hirschfeld murals inside The Frolic Room in 2012 and who also painted the original PANORAMA lettering on the Tswuun-Tswuun Rotunda home of the Velaslavasay Panorama in the year 2000. See "The Friendly Frolic Room," <http://onlyinhollywood.org/friendly-frolic-room/>.
19. Chris Nichols, "Everyday Entertainment: Post-Postwar Life in the San Gabriel Valley," in *Overdrive: L.A. Constructs The Future 1940-1990*, eds. Wim de Wit and Christopher James Alexander (Los Angeles, CA: Getty Research Institute, 2013), 202.
20. Edward Ruscha, *Then & Now: Ed Ruscha, Hollywood Boulevard 1973-2004*. Göttingen: Steidl, 2005. See Getty Research Institute Edward Ruscha photographs of Sunset Boulevard and Hollywood Boulevard, 1965-2010 Collection <https://www.getty.edu/research/collections/collection/100001?tab=about> Ruscha's exhaustive approach of documenting the everyday through a Hollywood Boulevard streetscape resonates with *Shengjing Panorama's* historic reference to the iconic scroll painting subject *Along the River During Qingming Festival* focused on detailed visuals of everyday city life.
21. Ruscha, see <https://steidl.de/Books/Then-Now-0814233344.html>.
22. Chris Nichols as quoted in Howser, Huell. Season 19, Episode 2: Panorama Update "Visiting...With Huell Howser," Initial broadcast on PBS July 29, 2011. [https://www.imdb.com/title/tt2096305/?ref\\_=ttep\\_ep2](https://www.imdb.com/title/tt2096305/?ref_=ttep_ep2). See Los Angeles Department of Building & Safety (LADBS) Building Permit Number 1968LA71827.
23. The roof of the Tswuun-Tswuun Rotunda bears curious resemblance to the Hall of Prayer for Good Harvests structure in the Temple of Heaven complex in Beijing, China.
24. "Shanghai Adds Room for Buffet Dining Upstairs." *Los Angeles Valley News*, August 8, 1969.
25. LADBS Building Permit Number 1962LA24626.
26. Karen Pinkus. "Research and Debate - Hollywood Panorama," *Places Journal: A Forum of Design for the Public Realm*, Volume 18, Number 3, October 15, 2006. <https://placesjournal.org/assets/legacy/pdfs/hollywood-panorama.pdf>.
27. Just blocks from the 5553 Hollywood Boulevard rotunda site, the Hollywood/Western Metro Redline station opened in 1999.
28. The City of Los Angeles currently refers to the neighborhood as "University Park." See LADBS Building Permit Number 1910LA07066.
29. Young, *Leon Young's 1904 Los Angeles Cal. City Railway Directory*, <http://www.erha.org/youngs.htm>. See USC Communications <https://about.usc.edu/history/founders/>.
30. Maginnis, Duncan <https://stjamesparklosangeles.blogspot.com/>. See Angel's Walk L.A. [https://www.angelswalkla.org/wp-content/uploads/AWLA\\_FIG\\_GUIDEBOOK.pdf](https://www.angelswalkla.org/wp-content/uploads/AWLA_FIG_GUIDEBOOK.pdf)
31. LADBS Building Permit Number 1951LA22628.
32. Li Wu and the painters created three composition variants for *Shengjing Panorama* with varying degrees of mapping accuracy. Ultimately, the collaborative team selected a view with manipulated geography in order to simultaneously show relevant scenes, iconic neighborhoods, and streets.
33. Megan Koester, "Old Oasis in Transient Town," *Exclusive Content*, October 25, 2020, <https://exclusivecontent.substack.com/p/old-oasis-in-transient-town>.

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Velaslavasay Panorama; the painters of *Shengjing Panorama*—李武Li Wu, 晏阳Yan Yang, 周福先 Zhou Fuxian; colleagues Dr. Jonathan Y. Banfill, Dr. Dydia DeLyser, Dr. James Fishburne, Laurene Harding, Nicholas Lowe, Eric Lynxwiler, Chris Nichols, and Larry Underhill; Eleanor Gillers and The New-York Historical Society Library; Karen Ehrmann, Tracey Schuster, and the Getty Research Institute; Mary Dean and Ruscha Studio; John Hough and OrnateTheates.com; the International Panorama Council, the 29th IPC Conference Committee, and conference hosts Panorama 1326 Bursa Conquest Museum and the Bursa-Osmangazi Municipality in Turkey.

### **Author Biography**

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# A View of Sydney: The Taylor Panorama Reassessed

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## Abstract

In the 1820s British society had the opportunity to experience life in Sydney, New South Wales through the publication of a panorama of the military officer, Major James Taylor (1785–1829). The 1823 aquatints of his watercolours presented views of Sydney from the military area on the present-day Observation Hill. As well as communicating Governor Lachlan Macquarie's progressive vision for a colony that was advancing beyond its status as a penal settlement, it presented its audience with narratives of life in Sydney. Taylor's panorama survives through four preparatory watercolours and the three elegant aquatints. This publication drew sufficient interest to prompt subsequent editions in France and Britain. By the early twentieth century the work was valued in Australia as a record of the fabric of colonial Sydney, with later researchers discussing Taylor's representation of various participants' roles in the fledgling settlement. Analysis of Taylor's study and its publication in Europe provides further insight into his composition and its reception, as well as furthering our understanding of life in New South Wales at that time.

## Keywords

Panoramas, Sydney, James Taylor (1785–1829), Lachlan Macquarie, John Thomas Bigge, Robert Burford, Augustus Earle

## Introduction

The location of the city of Sydney is the traditional land of the Gadigal people of the Eora nation. Indigenous Australians have occupied this country for at least 30,000 years. Following James Cook's journey to Botany Bay in 1770, Sydney was established as a penal colony eighteen years later. By the 1810s, views of Sydney that showed the harbour and settlement, strange animals, convicts and Aboriginal people attracted much attention in Europe.

In April 1820 while visiting Britain, the Sydney merchant, Alexander Riley wrote to his brother in New South Wales that "a Panorama exhibited in London of the Town of Sydney and surrounding Scenery would create much public interest and ultimately be of service to the Colony by drawing towards it public consideration and attention..." [1] He added that Mr Barker of the Leicester Square Panorama had indicated that he was keen to show such a work. Riley asked his brother to reward or engage an artist who could produce a detailed 360° view that would meet Barker's requirements. As the proprietor of the

Leicester Square business that had been founded by his father three decades earlier, Henry Aston Barker may have had personal interest in showing the colony. He was the son-in-law of the late Vice-Admiral William Bligh, who had been Governor of New South Wales between 1806 and early 1808, and his sister-in-law, Mary O'Connell had lived there until 1814.

## Taylor's Panorama of Sydney

By the time Riley had written his letter, Major James Taylor (1785–1829) of the 48<sup>th</sup> (Northamptonshire) Regiment had begun a series of views showing the three-decade old colony at close quarters. He was stationed in New South Wales between August 1817 and February 1822. [2] About 1820 he completed his series of views from sites on Windmill Hill (Observatory Hill), of which two survive (Figs. 1 & 2).



Fig. 1. *Cockle Bay now Darling Harbour*, ca. 1819-20. James Taylor, watercolour, ML 941, Mitchell Library, State Library of New South Wales.



Fig. 2. *Paramatta River Sydney Harbour*, ca. 1819-20. James Taylor, watercolour, ML 942, Mitchell Library, State Library of New South Wales.



Fig. 3. *The entrance of Port Jackson and part of the town of Sydney, New South Wales.* R. Havell & Son, engravers; after James Taylor, 1823. Rex Nan Kivell Collection NK259/A. National Library of Australia.



Fig. 4. *The town of Sydney in New South Wales.* R. Havell & Son, engravers; after James Taylor, 1823. Rex Nan Kivell Collection NK259/B. National Library of Australia.



Fig. 5. *Part of the harbour of Port Jackson, and the country between Sydney and the Blue Mountains, New South Wales.* R. Havell & Son, engravers; after James Taylor, 1823. Courtesy of Beat Knoblauch Collection. Sydney, Australia.

In a letter to his friend Alexander Berry on 28 February 1820, as Berry was departing for Britain, Taylor wrote that he already envisaged publishing this work in London:

I am getting on with my second drawing of Sydney[.] I think better than my first attempt, I should feel greatly obliged to you (should you find time) to send me a few lines how they would take me in London. I do not mean by this, that you should think I have any money interested view before me[.] only if by publishing them that I might not lose money. I think they may in some slender measure be of service, to the Colony—which is my object. [3]

After his arrival in Britain in July 1822, Taylor's views were copied by a different hand in watercolour, two of which survive in a private collection. [4] The reworked watercolours, which show more cultivated shrubbery than appears on Taylor's surviving views, formed the basis for the three hand-coloured aquatints by Colnaghi & Co. of London that were published by Robert Havell and Son in August 1823 (Figs. 3, 4 & 5). [5] The first two panels were orientated toward the built-up area of the township as viewed from the town's military area, while the third looked toward Cockle Bay (Darling Harbour), Pyrmont and the Paramatta River mouth. With a combined length of approximately 1.75 metres, this vista has been described by Tim McCormick as "one of the most ambitious of all such nineteenth-century depictions of the settlement." [7]

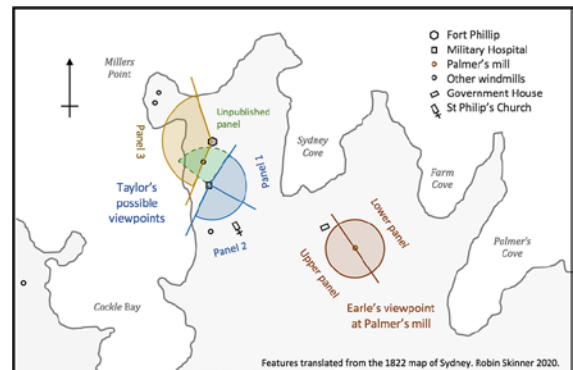


Fig. 6. Taylor's possible viewing positions near Fort Phillip and the Military Hospital, and Earle's viewpoint at Palmer's mill. Author's drawing.

Analysis of the composition of the panels, the 1822 map of Sydney [8] and the wider topography (including windmills) reveals that the panorama spans an arc of 310° and was probably drawn from two principal viewpoints. The first two panels and the unpublished watercolour each survey a sweep of 90° from a position very near the Military Hospital, while the third panel looks westwards from the high vantage point near, or possibly on, Fort Phillip to encompass a wider arc that looks down upon Millers Point (Fig. 6). We may speculate that Taylor drew the first two panels and the unpublished watercolour looking out from the upper verandah that surrounded the hospital on four sides, later introducing foreground objects—including the hospital—to the scene. (Fig. 7) [9]



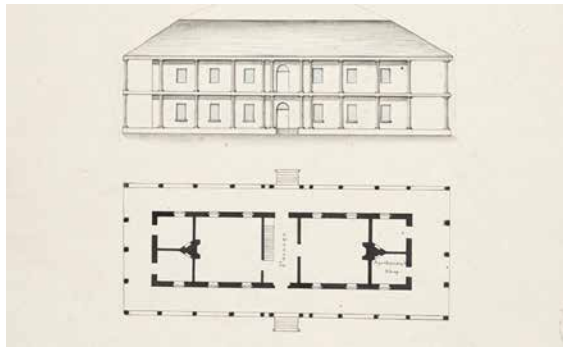


Fig. 7. Taylor's possible four-sided viewpoint: the Military Hospital. Ink drawing. Harris, "Report & Estimate," 18.

The unpublished watercolour that showed Fort Phillip and the government windmill may not have been reproduced due to a perception that it held insufficient interest for the British audience, or that its production did not justify the required expenditure. In 1988 Joan Kerr observed that Sydney Harbour remained "the most popular single signifier of Australia to the rest of the world for almost 200 years." [10] Yet without the fourth panel, when arranged in its correct sequence Taylor's view gives a false impression that Cockle Bay and Sydney Harbour were separate bodies of water.

Taylor's panels present a site largely inhabited by military, convicts and indigenous peoples, without showing members of the commercial class, religious leaders or government officials. Surveyed from a military area, the urban panels are dominated by the close proximity of the Military Hospital and a building that Edwin Barnard has identified as the medical officers' quarters, [11] while the area westward towards Millers Point is occupied by Aboriginal people, farmed sheep and convicts. In the second panel, cloaked Māori from New Zealand and loin-clothed people from the Pacific stand in the hospital grounds which pointedly serves to emphasise the diversity of Sydney's population in the 1820s (Fig. 8). During Taylor's appointment in Sydney, newspapers record Māori, Marquesans and Tahitians working on ships docking there, with the Māori chiefs Tītore and Tui passing through the settlement in 1819 on their return journey from London.

Bernard Smith considered Taylor's view to be one of contrasts. He saw the military officers and hospital convalescents wandering in the hospital grounds as signifying the rise of civilised arts, which he contrasted to the activity of the Aboriginal people in the adjacent panel (Figs. 4 & 5). He also considered that the civility of the officers' cultivated garden was juxtaposed with cleared pastures and the "monotonous brush" in the distance. [12] Terry Smith made similar observations identifying a series of compositional opposites that reinforce the order and transformational quality of the setting. [13]

Features illustrated on the 1822 Sydney map show how Taylor modified elements of the composition. Standing in the middle distance of the second panel near the military windmill, St Philip's Church (1810) has been rotated to show more of its principal elevation. To emphasise the substance of the town's architecture, Taylor rotated the Military Hospital (1815) to present its Georgian front elevation to the picture plane, and moved it to the left in deference to the military windmill standing on the right. The hospital had been designed by Lieutenant John Watts following a standard design of the Royal Engineers. [14] It seems likely that the medical officers' quarters were also placed at the centre of the first panel to develop a symmetrical composition with a prominent foreground object. Although not appearing in the privately held watercolour of the second panel, the 1823 engraving shows St James' Church in the distance with its post-1820 roofed superstructure and tower, but not yet with its copper spire.



Fig. 8. Detail of Fig. 4 showing convalescents, Māori and in the hospital grounds with Pacific Islanders nearby.



Fig. 9. Detail of Fig. 3 showing people outside the medical officers' quarters.

Additional works of architectural merit are shown. The government's Rum Hospital and convict barracks appear in the middle distance, while further away the recently completed lighthouse (1818) designed by the convict architect, Francis Greenway, can be discerned rising above the skyline. In the heart of the town his Obelisk of Distances



(1818), an architectural affectation from which mileages from Sydney were calculated, stands in prominent position.

As a military officer, Taylor would have resided near Observatory Hill, which may explain his selected viewpoint. Describing the uniforms of the 48<sup>th</sup> regiment, Clem Sergeant states that only officers of the rank of major and above wore epaulets on both shoulders, which indicates the seniority of the two figures in the first panel (Fig. 9). [15] These men wear the officers' bell-shaped shako with its 12-inch plume that would have been red and white. The figure in the longer tail-coat with the turned-back skirts may be wearing the coatee that was adopted in 1821 although this apparel was unlikely to have been worn when Taylor was stationed in New South Wales. Only two women are shown in the view: a woman with a parasol and a servant who appear standing outside the medical officers' quarters. It is possible that one of the officers illustrated may have been Taylor himself, with the woman, child, servant and nearby pet kangaroo making up his household. [16] If this were the case, then this panel can be considered to be a family portrait.

### In Defence of Macquarie

Showing an urbane European environment transplanted to an antipodean location, Taylor's vista was testament to the vision and achievement of Lachlan Macquarie, who was Governor of New South Wales between 1810 and 1821. In her description of his achievements in the colony the 37<sup>th</sup> Governor of New South Wales, Professor Dame Marie Bashir listed aspects of his life and character which continue to carry through to modern Australia, including community inclusiveness, the wellbeing of indigenous people, the health of the people and the importance of architecture and urban planning. [17] Features of Taylor's panorama that have already been listed in this paper provide evidence of a community that functioned harmoniously in a tidy, orderly and well laid-out settlement.

Macquarie had a more lenient attitude towards convicts, which ran counter to the views of many in the colony and at home. Convicts who had served their time were admitted into society, while others such as Greenway—who had skills that were useful to the government—were given early pardons. In response to criticism regarding these and other matters, in January 1819 Lord Bathurst, the Secretary of State for the Colonies, appointed John Thomas Bigge as a special commissioner who would journey to New South Wales to examine the efficacy of penal transportation and the operation of Macquarie's government. [18]

Bigge undertook his inspection and interviews between September 1819 and February 1822, which encompasses the period when Taylor produced his watercolours. Taylor was on good terms with Macquarie; he joined his farewell

tour of Van Diemen's Land in mid-1821 and they were to return to Britain on the same ship the following year. Therefore, as has often been suggested, Taylor probably prepared his panorama as a peremptory defence against Bigge's expected finding. [19] While he had some sympathy for Macquarie's situation and his plans for improvement, Bigge was critical of the management of incarcerated convicts, the pardoning of others and Macquarie's building programme which he thought extravagant. [20] His three reports were tabled in the House of Lords in August 1822, February 1823 and March 1823, some months prior to publication of the aquatints. These prints may have been produced as presentation sets for officials. [21] Certainly, they provided a visual counter to Bigge's criticism of Macquarie's governorship. Regrettably, they were not accompanied by a published commentary.

Building projects, such as the Government House stables (1821) that had particularly incensed Bigge, are seen at a distance. The masts of ships rising above the skyline of the Rocks area are emblematic of the connection to the Tasman world and beyond. However, little else visible shows the commercial activity of the town. The distant view of homes of successful merchants—including the three-storey residence of the former convict, Simeon Lord—do not overwhelm the view.

Convicts are seen resting the third panel, which may have irritated some home viewers. Nearby, Aboriginal people stand with spears and shields beside their lean-to shelter and smoking hearth. Whereas Bernard Smith saw the Aboriginal people as "foreground motifs" in this and many other works [22], it is argued here that in his original watercolour Taylor picked out these people signifying their autonomy in their land (Figs. 1 & 10). This is not the case in the aquatint where the artist and watercolourist have treated them in a way similar to that of the surrounding vegetation (Figs 5 & 10). This prompts speculation on how Taylor would have treated the figures in the now lost, first two watercolour panels.



Fig. 10. Details of Figs. 1 & 5 showing the respective artists' treatment of Aboriginal people.

As Dame Marie Bashir noted, Macquarie was better disposed toward Aboriginal people than were many other governors: he established an institution for Aboriginal children, settled adults on farms, housed others at a reservation at Elizabeth Bay and instituted an annual gathering at Parramatta. [23] However, as John Ritchie

observes, he was aware how degrading contact with Europeans had been for these people. [24] Flour mills nearby foreshadow further incursions. Nevertheless, Taylor's watercolour presents Aboriginal people—with their habitation and fire—as occupying their own land which accords with Macquarie's then radical position of respect and responsible provision for these people.

Presumably Taylor's prints gave Macquarie some gratification at what was for him a difficult time; however, less than a year after publication he had died.

### Reception of the Panorama

Taylor's letter to Alexander Berry, which is quoted at the opening of this paper, indicates that Taylor prepared his watercolours with an expectation that they would be published in London. In June 1823 the Sydney auctioneer, John Paul, announced that he had received several sets of "a Panorama View of Sydney, from Designs by Major Taylor of the 48<sup>th</sup>" which was "now exhibiting in London at Barker's Panorama." [25] At that time Henry Barker ran panoramas at two locations. In 1816 he and John Burford, had taken over the panorama in the Strand in open partnership, while Barker continued to run the twin-drummed panorama in Leicester Square (Fig. 11). [26]



Fig. 11. *A Model of the Panorama Leicester Square in London by Robert Mitchell, 1793* (after Mitchell, *Plans and Views*, pl. 14). Model by Alice Desamais and Orane Hilbert. Courtesy of Dr. Susanne Stacher, ENSA-Versailles.

Through 1823–24 the Strand Panorama showed a view of Corfu followed by one of Pompeii. The panoramas shown at Leicester Square included the Coronation of William IV in the larger drum followed by another view of Pompeii, while Lausanne was displayed in the smaller drum. Although no evidence has emerged to indicate that Taylor's images were translated to a full-scale canvas in either of these locations, if John Paul's announcement were correct

then perhaps the engravings were displayed at one of Barker's London locations. [27]

A little comment survives regarding how the aquatints were received in New South Wales. The public servant and amateur watercolourist, George Boyes, who also planned to dispatch some of his Sydney views to London, was dismissive of Taylor's work, writing to his wife back in England in May 1824 that Taylor's drawings had "very little merit" as prints of his work were "so deficient in perspective and local character that they lose all effect." [28] Despite declaring these deficiencies, Boyes owned copies of Taylor's prints which may indicate some begrudged regard.

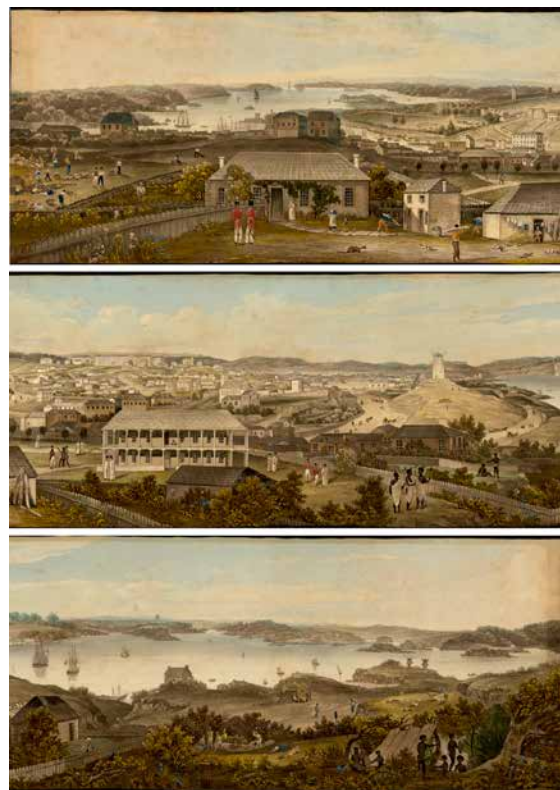


Fig. 12. *Panorama du Port Jackson et de la ville de Sidney* [i.e. Sydney]. Engraved by Frederick Salathé. Paris: chez Nepveu et chez Rittner et Goupil, [1834]. Courtesy of Barry Lawrence Ruderman Antique Maps Inc. <https://www.raremaps.com>

### Subsequent Publication

While no published review has been located in the British press of the 1820s, they nevertheless appear to have attracted interest. About this time Colnaghi and Company dispatched some of their engravings to France, which may have included Taylor's view. [29] In 1834 Frederick Salathé engraved Taylor's scene as a 95cm long continuous image that was published by Chez Rittner & Goupil and Chez Nepveu [30] (Fig. 12). This print remained largely faithful

to the original publication, to the extent that it followed its precedent to illustrate the shirts of the resting convicts in some prints in multi-colours, while in others showing the yellow shirts that signified a convict's first penitential year (Fig. 13). [31] This print has previously been dated as early as 1824; however, Adolphe Goupil would have been only 17 or 18 years old at that time and he did not form his partnership with Henry Rittner until 1829. [32] The *Bibliographie de la France* of 15 February 1834 lists the print being published by Goupil and Rittner. [33] Auguste Nicholas Nepveu, who also published the print, operated at 26 Passage des Panoramas until his bankruptcy in 1828; whereafter his wife operated the business until 1834. [34]



Fig. 13. Detail of Fig. 9 showing convicts in their first year of servitude.

The publication of the French print may have been prompted by the success of Robert Burford's panorama of Sydney which ran for a long season from December 1828 to late 1830 in the upper drum of the Leicester Square business that was formerly run by Henry Barker (Figs. 10 & 14). This view was based upon sketches by the travelling artist, Augustus Earle that he drew from Palmer's mill in the domain in the present-day Botanic Gardens, some 900 metres eastwards of Taylor's viewpoint (Fig. 6). [35] Comparison with the Earle panorama emphasises the disposition of Taylor's scene towards military and convict activities. Earle's prospect gazes across the settlement's commercial and government activities, with less emphasis on the military installations, which are only seen in the distance. He identified houses of prominent citizens, showed Governor Ralph Darling and his private secretary together with the well-known Aboriginal man, Bungaree. Without naming the architect, Burford's commentary listed over twenty projects by Greenway. [36] Burford's commentary frequently referenced Macquarie's contribution to the colony's present prosperity. [37]



Fig. 14. *Explanation of a View of Sydney, Exhibiting in the Panorama, Leicester Square*. From Robert Burford, *Description of a View of the Town of Sydney*, 1829. Woodcut. nla.obj-135783763, National Library of Australia.



Fig. 15. *Sidney [Sydney]*. Printed from zinc by C. Chabot. Published by J. E. Pattison, [1839]. Rex Nan Kivell Collection NK5306, National Library of Australia.

McCormick lists a further 79 cm wide lithograph from a zinc plate later produced by Charles Chabot in London that was based upon the French edition (Fig. 15). [38] Previously dated as early as 1824, the print originates over a decade later, as on 15 March 1839 a publisher's fortnightly magazine listed it as being recently published. [39] Issued by J. E. Pattison, it was "Dedicated to the merchants and traders of Australia" and sold for 10 shillings and sixpence uncoloured or at double that price for a hand-coloured version. Joseph Cross of High Holborn also issued prints from Chabot's plate. [39] Chabot's print shows a more picturesque view with people assuming more relaxed poses in a park-like setting. The right hand part with the view towards Millers Point with its Aboriginal occupants was not included (Fig. 16). Produced almost two decades after the Bigge review, the imperative to show the military order of the colony was now not so pressing and Aboriginal people had been increasingly alienated from their land near the town, which may explain the truncated view. The publication may have been prompted by the success of the 1834 French edition or from memories of Earle's Sydney panorama of a decade earlier. Interest may also have been generated by Earle and Burford's more recent antipodean panorama of the Bay of Islands, New Zealand that was shown at Leicester Square between late 1837 and 1839.



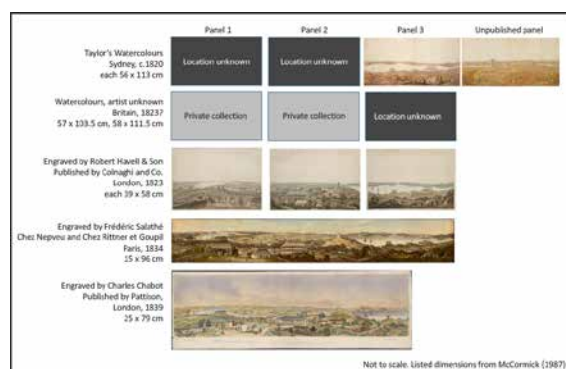


Fig. 16. Lineage of reproduction, c. 1820–1839.

## Conclusion

The publication of Taylor's view between 1823 and 1839 shows a sustained interest in New South Wales (Fig. 16). Through the twentieth century the panorama has become highly valued as a record of the past. In 1904 the prints were described as "very quaint and interesting historical records." [40] A dozen years later a newspaper reported the features visible in the view, and in the following decade the prints were exhibited alongside drawings of current architecture in an annual exhibition. [41] In 1988, in partnership with the State Library of New South Wales, Aleto Editions reprinted Taylor's images from the original copper plates in a hand-coloured limited edition. [42]

Details of Taylor's view are frequently reproduced and discussed in publications and on websites. The image projects a community dominated by martial activity, with evidence of commercial activity and the liberal operation of government suppressed. Furthermore, it shows a snapshot of a society where indigenous people were seen for a time to be autonomous on their own land near an urban centre.

Compared to the large audience who viewed the Burford/Earle panorama of Sydney in its two year run, relatively few in the 1820s saw Taylor's prints. Nevertheless, frequent reproduction and increased virtual accessibility has resulted in Taylor's work eclipsing that spectacle on canvas.

## Notes

1. Letter from Alexander Riley, 15–18.
2. *Dictionary of Australian Artists*, 779–80.
3. Letter from James Taylor, 37–38.
4. McCormick, *First Views of Australia*, 202–08, 279–80.
5. *Dictionary of Australian Artists*, 780; Barnard, *Capturing Time*, 18–21.
7. McCormick, *First Views of Australia*, 279.
8. "Plan of the Town and Suburbs."

9. Mapping of Taylor's vista on a reprint of Meehan's 1807 map of Sydney, Sir William Dixon determined a viewpoint immediately south of the Fort Phillip. He also marked sites to the west of Fort Phillip, near the military windmill, at the entrance of St Philip's Church, in front of houses near the obelisk, at Palmer's mill, and at the gardener's house within the Botanic Gardens. These latter two sites may indicate that his study partly extended to Earle's panorama. "A map, annotated by Sir William Dixon."

10. Kerr, "Views, Visages, Invisibility," 25.

11. Barnard, *Capturing Time*, 20. This identification may be based upon a drawing in Harris's 1824 report. Harris, "Report & Estimate," 19.

12. Smith, *European Vision in the South Pacific*, 235.

13. Smith, *Transformations in Australian Art*, 24.

14. "Site History."

15. Sargent, *Colonial Garrison*, 176–77.

16. Taylor and his son returned to Britain, although his wife's location is uncertain.

17. Bashir, "Lachlan Macquarie," 97.

18. Thompson, *Earl Bathurst*, 189–90.

19. McCormick, *First Views of Australia*, 279. Hunt and Davidson, *Sydney Views 1788–1888*, 73.

20. Ritchie, *Lachlan Macquarie*, 194–98, 200–02.

21. Smith, *Transformations in Australian Art*, 23.

22. Smith, *European Vision in the South Pacific*, 220.

23. Bashir, "Lachlan Macquarie," 103.

24. Ritchie, *Lachlan Macquarie*, 132.

25. "Panoramic View of Sydney."

26. Corner, "Panorama," 47; Andrews, "Leicester Square and Strand Panoramas," 61, 75.

27. No evidence has been for a large Taylor panorama. Colligan, *Canvas Documentaries*, 33; Barnard, *Capturing Time*, 19. Kerr thought Burford had reproduced Taylor's view and also speculated that the figures were added by another hand. Kerr, "Somersaults in the Antipodes, 1993," 38–39.

28. Chapman (ed.), *Diaries and Letters*, 197.

29. "Certain valuable prints."

30. *Catalogue des Principaux Livres*, 27.

31. Burford, *Description*, 11. This observation on colour is based upon prints held in collections in Sydney, Canberra and Dunedin.

32. "Notice de personne."

33. "Goupil."

34. *Bibliographie de la France*, 120.

35. Skinner, "... Dreamt of, Indeed," 381.

36. Skinner, "... Dreamt of, Indeed," 383, 384.

37. Burford, *Description*, 5, 7, 8, 9, 11.

38. McCormick, *First Views of Australia*, 316.

39. "Works Lately Published."

40. "Some Mitchell Pictures."

41. "Early Australia"; "Architecture."

42. Taylor, *Three panoramic views of Port Jackson*.

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Robin Skinner lectures at Te Herenga Waka—Victoria University of Wellington, where he teaches and researches aspects of Pacific and colonial architecture. His work principally focuses on postcolonial studies and New Zealand architectural history. He has recently written on the Australasian panoramas of Augustus Earle.



# Passing Through: Ernest Hüpeden's Painted Forest

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## Abstract

In 1897 the itinerant artist Ernest Hüpeden wandered into Valton, a small town in the Hidden Valleys region of western Wisconsin. Hüpeden had left his homeland, Germany, by steamship, and arrived in New York City in 1878. Details of his life in Germany, or his travels from New York to Wisconsin are unknown. In Valton he was hired by a chapter of the fraternal order, the Modern Woodmen of America, to paint the stage curtain in their recently-built lodge hall. Although he was just passing through town, he remained in Valton for two years, creating a floor-to-ceiling, wall-to-wall painting that illuminates the convergence of ritual fraternal history and the history of panoramic representation in turn-of-the-last-century America. Named *The Painted Forest* years later, scenes in Hüpeden's all-around mural reveal their actual and symbolic directions, illustrate key moments in the mysteries of the initiation ritual, and allude to points in time, presenting the past and present and predicting the future.

## Keywords

Ernest Hüpeden, Itinerant, Immigrant, German, Artist, Landscape, Painting, Panorama, Fraternal Orders, Wisconsin

## Introduction

In 1897 the itinerant artist Ernest Hüpeden (c. 1861-1911) wandered into Valton, a thriving town in the Hidden Valleys region of western Wisconsin. Hüpeden had left Germany for New York on the steamship *Herder* in October 1878. The name "Ernest Hüpeden" appears on the passenger manifest with the occupation "Kaufmann," or merchant. His birth is listed as "circa 1858." All that's known about his next twenty years is that he traveled from New York to Wisconsin, walking and painting in exchange for room and board. People who knew him describe a well-educated man, who had been married, had a son, and had worked as a banker in Germany. An oft-repeated account states that Hüpeden was falsely accused of embezzlement at the bank and spent seven years in prison, where he taught himself to paint. As the story goes, Hüpeden was exonerated and set free. Broken and alone, he shipped off to America. The exact year of his birth is unknown, so he would have been about 18 to 22 when boarding the *Herder*, which belies a prior banking career and seven years in prison. Hüpeden's claim to imprisonment may have been a cover for evading the "sentence" of German conscription [1], as he was

strongly opposed to the rising militarism in Germany. In a 1957 letter to a local newspaper, Judson Erwin of La Farge, Wisconsin recounted his own memories of Hüpeden, who had stayed with his family in 1904:

His father educated him in Germany, and he also attended two or three different colleges, he told us. He was married and had one son—he left them and came to America. He left because of some trouble with his wife and father, and he hated the German military machine. He said it would come in "Gods own time," but sooner or later we would have to fight Germany, and he wished he could help to crush the German military power. [2]

Regardless of facts of his life in Germany, Hüpeden shared what he wished with the people of western Wisconsin. It's possible that he encountered the atelier of German panorama painters brought to Milwaukee, Wisconsin in 1884 to create cycloramas. [3] Milwaukee had a large German-speaking population and a cultural environment in which the German painters felt right at home. As a wandering German artist, his path to Valton likely would have taken him through the very German city. As a painter looking for work, he could have gravitated to the panorama company. As a self-taught artist, the elite, academically trained painters would not have hired him, and there's no evidence that he worked at the American Panorama Company. [4] However, the popularity of the painted panorama in late nineteenth century America, and possibly experiences with them in Milwaukee or elsewhere, likely inspired him to create his own all-around painting. He seized the opportunity in 1898.

## South

Ernest Hüpeden's outstanding, original, and fortunately extant painted panorama, known since the 1960s as *The Painted Forest*, was created in a vernacular building built in 1898 as M.W.A. Camp #6190, a Modern Woodmen of America (M.W.A.) fraternal lodge hall. The simple frame exterior belies the complex room within, which is entirely painted with scenes depicting the principles and activities of the M.W.A., a fraternal order that provided life insurance for its members. From the clouds in the treetops on the vaulted ceiling to the wildflowers in the wainscoting, every

square inch of the walls and ceiling, as well as the canvas stage curtain, are painted in a symbolic all-around landscape. Known as “Wood Hall” to the locals, [5] *The Painted Forest* is Hüpeden’s *gesamtkunstwerk*.



Fig. 1. Exterior of building housing *The Painted Forest*. Photo: Lisa Stone, 2005.

Hüpeden was hired by the M.W.A. to paint their stage curtain in exchange for room and board in a local hotel. The stage curtain, framed with *trompe l'oeil* drapery swept open, reveals a patriotic scene: the USS Olympia sinking the Spanish fleet in Manila Bay, in the decisive May 1, 1898 battle in the Spanish-American War. The painted curtain portrays an important current event and underscores the solvency of the Modern Woodmen of America as an insurer, as M.W.A. benefits were paid to widows of this conflict. At a glance the maritime scene appears incongruous in a room enveloped in a pine forest, but it suggests south as surely as the Germanic castle on the opposite wall signifies north.



Fig. 2. Ernest Hüpeden, *Painted Forest*, stage curtain. Photo: Michael McGinnis, 1982.

Having painted the curtain, Hüpeden apparently convinced the M.W.A. that he could give them a truly remarkable, painted interior space, and spent two years doing so. Upon completion he signed and dated the stage

curtain, 12/20 1899. Unlike the other panoramas of the time, which were public entertainments, M.W.A. Camp #6190 was not a public space. It was made as the setting for secret ritual initiation and other fraternal activities, where the performers and the audience were one and the same.



Fig. 3. Ernest Hüpeden, *Painted Forest*, East (left) South (center) and West (right) view. Photo: Michael McGinnis, 1982.

*The Painted Forest* is a sequential narrative unfolding in a metaphorical landscape that reflects the actual surrounding landscape and local history and culture. Each scene reveals its actual and symbolic direction. While he is described as a self-taught or folk painter, and his other paintings fall into these genres, with this masterwork Hüpeden stepped into the larger historical sphere of fraternal history and spaces, in which fundamental philosophical tenets are transmitted in ritual enactment through symbolic floorplans. Rather than giving his patrons a grand pastiche in the historicized Egyptian or Moorish styles, common to many fraternal lodge halls, Hüpeden created a singular space for the M.W.A. to enact their mysteries enveloped in renditions of their home landscape—Valton, in the past, present, and future.

Each wall of the painted interior contains episodes of the journey of the candidate through the initiation ritual. The narrative begins in the southwest corner with a candidate for initiation riding a wide-eyed goat, heading west toward the setting sun, the symbolic direction of death. The candidate’s terrified expression is unforgettable. His injured arm is wrapped in a sling. The goat and sling reference the M.W.A. initiation ritual. As in other fraternal orders, the candidates endured a blindfolded ride on a goat on wheels. Prior to the manufacture of elaborate “hoodwinks,” the M.W.A. used a sling to blindfold the candidate for the ride. Deprived of sight, disoriented, and at the mercy of not-yet-fellow initiates, the candidate straddled—literally—the primitive animal realm, with all its erotic, earth-bound associations, from which he will be bucked off or survive.



Fig. 4. Ernest Hüpeden, *Painted Forest*, goat rider.  
Photo: Lisa Stone.

Hüpeden may have embedded more into this image. As an artist, a loner, a homeless itinerant, he stood out from the tight-knit community. Various local accounts emphasize his identity as a drinking man. He was known as the “bum painter.” Valton and environs were strictly “dry,” so an artist who painted in exchange for alcohol may have been trusted but was ever stigmatized. Dolores Nash wrote a dramatized account of Hüpeden’s entry into Valton, describing a small, insular village where everyone knew everyone else as “kin,” when in came the drifter: “*This man was a TRAMP!*” [6]

Itinerants—people who wandered and did work in exchange for room and board—were common in America at the turn of the last century. Historical accounts conveyed (or fueled) condescending attitudes about jobless people who were untethered to property and to the moral values presumed to accompany a life centered at home and by extension, to the community. *Tramping With Tramps* (1899), a study of itinerants in America, categorically frames itinerants as criminals, focusing on their (presumed) physical and moral degeneracy, as contrasted with the accepted norms of conventional, home-based life. [7] Hüpeden walked into town a stranger and apparently never quite shook the identity of the “bum painter,” a term stigmatizing his status as both itinerant and artist.

## West

The west and east walls are each divided by three windows. The first section of the west wall features an untamed conifer forest. A lecture from the M.W.A. *Official Ritual* outlines the metaphorical backdrop of the forest, beginning with “How typical of a great forest is life,” describing the tempests and adversity in the forest of life, and the M.W.A. as a forest of brotherly love, ending, “Thus we behold the fraternity of nature.” [8]



Fig. 5. Ernest Hüpeden, *Painted Forest*, West view.  
Photo: Michael McGinnis, 1982.

In the central panel on the west wall the candidate for initiation is dragged into the scene by masked men in unidentified ritual costumes, forced to witness a tumultuous event. In a clearing between vertiginous, collapsing hills, masked men burn an M.W.A. member—still very much alive—in a roaring bonfire. A man in street clothes is stabbed to death by one of the bandits. This gruesome scene corresponds to the place in the lodge where the mortality ritual—underscoring the need for life insurance—took place. Hüpeden satisfied his patrons with an imaginative image, warning of the need to be conjoined in fraternity, the better to survive the perils lurking in both nature and society.



Fig. 6. Ernest Hüpeden, *Painted Forest*, burning scene.  
Photo: Lisa Stone.

In the last vignette on the west wall the candidate, still visibly shaken, is led by his M.W.A. Escort to a darkened forest clearing under a blazing sunset. Skeletons are strewn in the woods. Death, the “inevitable initiator,” is ever-present, but they approach the safety of a campfire, surrounded by Modern Woodmen. The gray-robed Forest Patriarch—the M.W.A. figure of wisdom and authority—officiates in a scene signifying the promise of safety in the bonds of fraternity.





Fig. 7. Ernest Hüpeden, *Painted Forest*, campfire scene. Photo: Michael McGinnis, 1982.

### North

The north wall is painted as a lofty expanse of forest, with a billowing fire and an imposing castle. The candidate, who has survived initiation, is guided by the Forest Patriarch, who points to the castle, an M.W.A. outpost with pennants flying from the turrets with the M.W.A. mottoes “Peace Light and Safety,” and “M.W. of A. Valton Camp #6190.” The Forest Patriarch was stationed here, where the mural symbolizes the solidity found in fraternity after surviving the initiation ritual, while also representing the compass point, north, and Germany, the homeland Hüpeden left behind.



Fig. 8. Ernest Hüpeden, *Painted Forest*, North view. Photo: Michael McGinnis, 1982.

### East

The east wall brings daylight, the present, and the future. Departing from the emotional and philosophical imagery on the west and north walls, the first scene on the north end of the east wall features industrious M.W.A. members splitting logs in a domesticated forest setting, reflecting the M.W.A. rhetoric, “...to clear the forests and let civilization, commerce, and the arts occupy the ground.” [9] A mother with her infant stands in the doorway of a log cabin, experiencing the security that accompanies diligent labor and an ordered, insured life. Hüpeden borrowed this image from a stock M.W.A. engraving, and added a young boy, said to be Royal Forest, the son of a charter member, whose name was also the password to the lodge.



Fig. 9. Ernest Hüpeden, *Painted Forest*, East view. Photo: Michael McGinnis, 1982.



Fig. 10. Ernest Hüpeden, *Painted Forest*, cabin scene. Photo: Lisa Stone.

The center scene on the east wall presents a leap from daily life into the future, Hüpeden’s vision of Valton in one hundred years, 1999. The diligent labor and ambition depicted in the previous vignette evolves into a cityscape cleared of every single tree. Hüpeden imagined an urban future in which civilization and commerce have flourished. Buildings recede into the vanishing point. There’s little human activity within this endless city: two men in conversation on a corner, a horse drawn delivery cart, and a barkeep and two patrons at the town’s saloon.



Fig. 11. Ernest Hüpeden, *Painted Forest*, Valton in 1999. Photo: Lisa Stone.

In Hüpeden's city of the future the M.W.A. Bank of Valton looms in the foreground. It was here, in the M.W.A. ritual, that the Candidate and his Escort approached a banker for aid and are predictably denied. Hüpeden, however, projects the solvency and success of the M.W.A. Bank of Valton in the future: a cut-away view of the bank's interior reveals a widow in mourning dress cashing in her M.W.A. insurance policy for \$2,000—quite a sum to imagine at the turn of the last century. A death has occurred, but no M.W.A. members surround the widow in her time of need, as was promised in insurance literature. While flattering his patrons with an imagined, grand city, Hüpeden predicted the evaporation of fraternity—the M.W.A. eventually abandoned their fraternal trappings and evolved into an insurance company only—and the ascendancy of the commercial insurance policy. Behind the tellers' wickets Hüpeden painted an amorphously-formed map of the United States. A clock's pendulum is suspended mid-swing, adding compositional rhythm while conjuring a moment frozen in time.



Fig.12. Ernest Hüpeden, *Painted Forest*, widow scene.  
Photo: Lisa Stone.

A list of the Bank's *Rates of Exchange* envisions trading with New York, Chicago, San Francisco, St. Louis, London, Liverpool, Hamburg, Berlin, Paris, and Vienna, predicting the globalization that indeed occurred. His iconography on the entire east wall implies that commerce and growth do not ensue without implications to the social, political, and natural landscape. The imagined future is grand, lonely, abandoned. When Hüpeden arrived in Valton, it was "... a thriving community with two-story framed schoolhouses, three blacksmith shops, several warehouses, three doctors, a lawyer, three grocery stores, two department stores, two barrel stave shops, two churches, a post office, hotel, two mills, furniture store, creamery, wool packing house, shoemakers, hat shop, sorghum manufactory, and lime

burning kiln." [10] Valton dwindled considerably; today it's an unincorporated village with two churches, a cemetery, *The Painted Forest*, and The Painted Forest Studio, with a few blocks of houses set amid rolling hills. Valton retains inestimable charm, having escaped Hüpeden's, and no doubt the late nineteenth century town fathers' development dreams.



Fig.13. Ernest Hüpeden, *Painted Forest*, detail, bank scene.  
Photo: Lisa Stone.

On the final section of the east wall Hüpeden painted a meadow of flowers interspersed with tree stumps and young growth birch and popple—varieties of succession-regrowth trees that follow deforestation. Here, devoid of ritual overtones, Hüpeden painted the actual *future* of his imagined future, bathed in early morning light. It is here that the ritual ends and the landscape continues, as if recovering peacefully after a harrowing drama. *The Painted Forest*, as a sequential, narrative panorama, reverses the life cycle, beginning with the goat rider heading toward the setting sun and death, and arriving at the future as it is today, on a spring morning.



Fig.14. Ernest Hüpeden, *Painted Forest*, meadow scene.  
Photo: Lisa Stone.





Fig.15. Ernest Hüpeden, *Painted Forest*, signature. Photo: Lisa Stone.

Ernest Hüpeden spent the last chapter of his life wandering and painting in western Wisconsin. His commonly commissioned paintings of “home places,” a local term for farmsteads, capture their singular features: neat farm houses anchor tidy landscapes on bright summer days. He painted from a vantage point at the edge of, not quite *in*, his farm scenes. He was at the edge of, not quite *in*, the social scenes he passed through and lingered in. As far as we know, he was itinerant for 33 years, never savoring the comfort and security of his own home. He imbued his home place paintings with a utopic sense of order and security, perhaps out of longing, perhaps not. As a transient man he had an intimate sense for the landscapes he traversed and painted. He was found frozen in the snow at the Leatherberry farm in Hub City, on December 8, 1911, and buried in a paupers cemetery in Richland County, Wisconsin. [11]

M.W.A. Camp #6190 disbanded after about 20 years, and was then used as a community hall. Dolores and Ronald Nash purchased the building in the 1960s, renamed it The Painted Forest, and preserved it for community entertainments. It was acquired by Kohler Foundation, Inc. (KFI) in 1980. KFI funded the major preservation of the building and mural. It was gifted to Edgewood College (Madison, Wisconsin), which fosters its role in educating students, artists, researchers, and the general public. KFI purchased property nearby and built a studio and residency facility to facilitate activities generated by the College and The Painted Forest.

## Notes

1. *Encyclopedia Britannica*, s.v. “conscription,” accessed March 5, 2020, <https://www.britannica.com/topic/conscription>. Germany

had a conscripted army from 1870-71, and Hüpeden may have feared it would be reinstated.

2. Judson Erwin, *Wisconsin REA News* (Madison, WI: Vol. 18—No. 4, October 1957), page unknown.

3. In this paper, paralleling usage of the American Panorama Company, the terms “panorama” and “cyclorama” are interchangeable.

4. Wisconsin art history and Milwaukee Panorama scholar Tom Lidtke, Email to the author, August 26, 2020; Gordon L. Jones, PhD, Senior Military Historian and Curator, Atlanta History Center, Email to the author, August 25, 2020; American Panorama Company scholar, Michael Kutzer, Email to the author, August 25, 2020.

5. David Rhodes, “Wood Hall,” (Valton, WI, unpublished manuscript, April 1981), 6.

6. Dolores Henderson Nash, *The Saga of “The Painted Forest* (LaValle, WI, undated manuscript, c. late 1960s), 2.

7. Josiah Flynt, *Tramping with Tramps Studies and Sketches of Vagabond Life* (New York: The Century Company, 1899).

8. *CONSUL Official Ritual (Fourth Revision) of the Modern Woodmen of America 1915 Containing the Opening and closing Ceremonies, and Ceremony of Adoption. Prescribed by the Head Camp.* (publication location unknown: 1959), 66.

9. *CONSUL Official Ritual (Fourth Revision) of the Modern Woodmen of America 1915 Containing the Opening and closing Ceremonies, and Ceremony of Adoption. Prescribed by the Head Camp*, 67.

10. Rhodes, 6.

11. Erwin.

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# Remote Viewing: Panorama Narrative, Landscape Experience and Heritage

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## Abstract

This paper opens an investigation into the relationships between the panorama narratives of colonial America and the subsequent development of American landscape narratives and tourism. In guide books, maps, and settler diaries of the 1840s and 1850s, numerous landscape features are described alongside narratives of encounters with “Plains Indians.” A number of locations appear to receive greater attention than others, and two sites in particular along the Platte River stand out: a group of Pawnee earth lodges and a Sioux funeral site. These locations are featured prominently in James Wilkins’s 1849 drawings and travel journal, and evidence suggests that they appear to have been included in his panorama narrative too. *The Immense Moving Mirror of the Land Route To California* has perished, but in Wilkins’s diary his accounts are vivid. Amongst other sources the same locations are prominent too: both places are noted on maps from before and after that time and are reflected also in many journal accounts. The representation of pre-colonial life on the plains appears to have been anticipated by audiences as part of panorama presentations, building towards narratives of manifest destiny. The mythology and experience of westward travel and the overland panoramas have played their part in securing an American sense of landscape and heritage.

## Keywords

Panorama, Cultural Landscape, James Wilkins, Storytelling, Folk Performance, Heritage, Great Plains, North America.

## Remote Viewing

In guidebooks, maps, and settler diaries of the 1840s and 1850s, numerous landscape features are described. A number of locations appear to receive greater attention than others, and two such places along the Platte River stand out: first, a group of Pawnee earth lodges and the second, a Sioux funeral site. These locations are featured prominently also in the 1849 landscape studies made by James Wilkins in preparation for his panorama, *The Immense Moving Mirror of the Land Route to California*. While the panorama itself no longer exists, the evidence of archival materials that do survive suggests that Wilkins’s intention to feature both places in his panorama narrative was clear.

Wilkins’s writing states clearly that one of his aims in making a panorama was to “represent faithfully that hitherto unknown portion of our vast continent, to combine instruction with amusement to the present as well as to the rising generation.” [1] In defining his work as being a combination of instruction and amusement, Wilkins’s aspirations are revealed as being broadly in touch with the mood of his time and very much connected to the foundational aims that are evident in the major encyclopedic museums of the nineteenth century. At a time when new continental spaces all over the world were opening up to western colonial interests, it seems of little surprise that panoramas and dioramas became a suitable format for capturing and representing these previously unknown and unimaginable landscapes. In his essay “Intimate Immensity,” Gaston Bachelard demonstrates that the comprehension of immensity is situated in the imagination “within ourselves” as dream-space. [2] To be living and working in the Midwest in the mid-nineteenth century was to be very much on the edge of the immense continental interior, and on the vanguard of a developing nation. The western border of Missouri in 1849 was the frontier; crossing the Missouri River meant leaving the United States, to pass into a largely unknown and wild new territory.

Aside from their portability and entertainment value, to a large degree the scroll panoramas gained their immense popularity because they satisfied a certain hunger for news, bringing forth details of the frontier and the vast landscapes that lay further west. Driven by a sense of discovery but also by an entrepreneurial spirit, the presentation of landscape exhibitions proved to be a very lucrative prospect for a number of artists. While James Wilkins had aspirations and some moderate successes as a studio artist, it is largely on the presentation of his panorama that his reputation stands today. [3]

Having arrived in the United States via New Orleans in 1837, Wilkins moved first to Peoria, Illinois and then to St. Louis where early in 1845 he was reported to be taking commissions for miniature portraits from a studio that he

shared with the renowned landscape artist Henry Lewis. Lewis himself is now known both for his career as a landscape painter and as a panorama maker and presenter. By the time Wilkins and Lewis met, Lewis had already conducted painting trips along the Mississippi River upon which his reputation is made. This may well have been an inspiration to Wilkins. Of the number of panorama impresarios in St Louis at that time, Lewis and another contemporary, John Banvard, were well known for the integrity of their work. Although Lewis laid claims to being the originator of this journey-based approach in North America, both men contributed significantly to the panorama as a popular entertainment. Each having created and toured their own versions of Panoramas of the Mississippi, their contributions to the development of popular knowledge of the Mississippi, the frontier, and the landscapes further west is indisputable. [4] The only surviving example of one such panorama is by another artist called John Egan: *The Panorama of the Monumental Grandeur of the Mississippi Valley* (c. 1850), which is on permanent display at the Saint Louis Art Museum.

### Epic narratives

The undoubted appeal and popularity for depictions of travel and landscape as narrated scroll performance didn't simply arrive out of the blue, fully formed, as if from the forehead of Zeus. As an artform, the panorama has a longstanding precedence in ancient epic story telling traditions. The epic narrative qualities and drama of scroll panorama presentations appear to have been well suited, and even ripe for rediscovery, at that particular time in North American popular culture. [5]

There is a strong resemblance to many nineteenth century landscape panoramas both in their content and their form. Traditional scroll storytelling and traditional shadow puppet show performances recall stories of battles, journeys, and epic struggle, and these are propelled through a series of episodes. The narrative is fixed in a linear format, arriving at a dramatic conclusion that favors the protagonists—as a linear narrative constitutes the conceptual formation of a line in space, and as a line on a map resonates significantly with the experiences of emigration in the nineteenth century. The journey was something to be endured: crossing the ocean from Europe and then committing to the cross-continental land journey, both of which came with acknowledged hardships. The particularity of landscapes of the American continent and especially the concept of the pioneer landscape is well acknowledged in this respect as epic. In thinking again about the land and landscape in poetic terms, as spaces that become enlarged through imagination to exceed their epic proportions and that contain minute detail, again might be conceptually described as panoramic: the panorama is an array of images

that is contained by an image of its own immensity. Narratives of journeys across the Great Plains equally have been likened to crossing a vast ocean. When speaking to the idea that concepts of landscape are as much informed by imagination, the literary scholar John Milton offers this citation from Paul Klee: “The landscape grows beyond its appearance through our knowledge of its inner being, through the knowledge [that the landscape] is more than its outward aspect suggests.” [6] The reputations of the wilderness west of Missouri was very much preceded by descriptions of its vastness. In support of this reputation, again Milton points out that: “The spaciousness of the plains landscape leads to certain kinds of reactions that may be less common in other landscapes ... we expect the plains to be described in terms of the sea.” [7]

In Herman Melville's novel *Moby Dick* just such a comparison is activated to create an emotional link between the prairie and the ocean: “Go visit the Prairies in June, when for scores on scores of miles you wade knee-deep among tiger-lilies—what is the one charm wanting?—Water—there is not a drop of water there! ... It is the image of the ungraspable phantom of life; and this is the key to it all.” [8] *Moby Dick* was published in 1851, at precisely the same time that the unbroken expanse of the prairies and the great plains was entering the wider popular imagination. The experience of crossing the Atlantic Ocean for all recently arrived immigrants retained a certain cultural currency as much as it still holds a place in the foundational narratives of American nationalism in the arrival of the pilgrim fathers.

The scroll panorama then as a storytelling medium appears particularly suited to hyperbolic representations of vastness. Up to the task, as it were, of handling the emergence of such a new image of the epic. By producing something analogous to the journey itself, the enormity of the space being conflated with the enormity of the task of traveling across it. [9] The nineteenth century moving panoramas built their reputations on depicting both the perils and the grandeur of wild nature. Representations were sometimes as much idealized as they were aspirational. Wilkins acknowledges how the perceived needs of audiences for sensational and vivid storytelling might be tempered with accurate representation, based on first hand observations. Even so, as he writes his journal, Wilkins is evidently conscious of what would make a good subject with a dramatic narrative, interesting enough to parade before an audience.

From the surviving details of scroll panoramas of the mid-nineteenth century, a series of narrative tropes and phrases present themselves. Wilkins's narrative and those of the Mississippi Panoramas all appear to relate in this respect. Perhaps the most common of these tropes revolves around the representation of pre-colonial life on the plains.



The landscapes to the West are initially depicted from the safety of a pastoral parkland on “this side” of “the river.” For Wilkins the Missouri River is featured, whereas for Lewis and Banvard, it is the Mississippi. Views of modest “American” settlements are shown in detail along the river banks. On the far banks, the threshold to the wilderness, there are occasional glimpses of wild animals and indigenous people in colorful garments. There is frequently the feeling that “we,” the viewer, are overlooking the scene from a high bluff. A slightly separated upper vantage point is suggested, giving the figures a diminutive and even distant quality. On the far horizon the hint of a mountain range can often be seen, emphasizing the promise of grandeur up ahead.

### An episodic spectacle of the wild and the savage

A detail in John Egan’s *Panorama of the Monumental Grandeur of the Mississippi Valley*, created in the early 1850s, depicts just such a view of “Spring Creek Texas.” [10] In the foreground, on “our” side of the river, a male and female deer are seen in a state of pastoral repose.



Fig. 1. A detail of John Egan’s *Panorama of the Monumental Grandeur of the Mississippi Valley*, c.1850, Saint Louis Art Museum.

On the other side of the river, in the wilderness, on the planes outside the United States, we see a disorderly array of buffalo who appear to be charging about wildly. There are representational echoes between this and an image on the title page of Joseph Ware’s *The Emigrants’ Guide to*

*California*, published in 1848. Once across the threshold of the nation, the landscape is demonstrated as a place peppered with oddity, curiosities, unique landmarks, and brimming with potential.

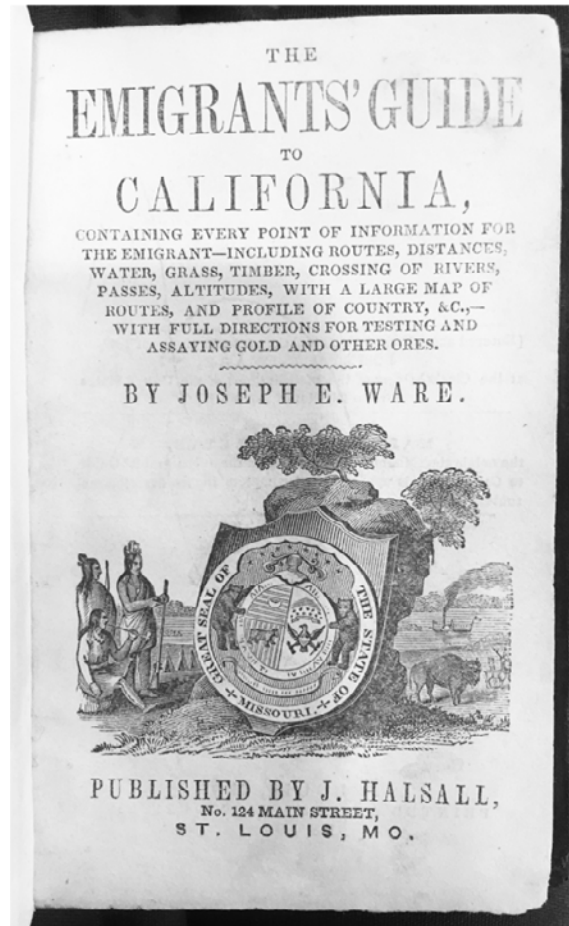


Fig. 2. Detail of the title page to Joseph Ware’s *Guide*, 1848, Newberry Library, Chicago.

An 1848 playbill from London announcing Banvard’s “Grand Moving Painting of the Mississippi and Missouri Rivers” describes the features on display in a hierarchy, always placing the grand or most refined in counterpoint with the most basic, simple or primitive. For example, “The endless variety of watercraft...” from “...the majestic steamer...” to “...the light canoe.” Or “The various kind of animals including, “...the rugged bear, the graceful deer, the snowy swan, and the gaudy paroquet [sic]- in fact, all the diversified scenery and objects that change of latitude would produce on this ‘Inland Sea.’” [11] And here again is an allusion to the place depicted as if it were an expanse of water.

The narrative of a scroll panorama is functionally episodic. Each scene is rolled into view and an expository narrative is presented as an interpretation of it. Stories are

told to create an impelling sense of progression through each of the views. A range of events is featured, from the spectacle of natural land formations, to encounters with wild beasts and with indigenous people. It is informative also to reflect on how guidebooks of the time were also organized through a series of locational and episodic descriptions. Travelers were guided along their way by following a litany of creek crossings, descriptions of vegetation, grass types and trees, descriptions of soil and underfoot conditions, or the turn of a ridge, the shape of a hillside or a line of rocks. There are notes to assist travelers in finding places that would be suited well to camping, where good grazing for haulage animals might be found or where to source wood from which to build a fire for cooking. Corresponding reflections on the journey are presented when reading any number of the travel journals, offering a related and likewise punctuated narrative flow. These notes perhaps again confirm the applicability of the scroll panorama through its episodic scene by scene reflections, as an ideal form for vicarious encounters with the wild. Panoramas were promoted for their ability to offer access to the experiences without the dangers that were associated with the journey. In his journal Wilkins likens watching his exhibition to “witnessing” emigrants’ “distresses” as if viewed remotely from “an air balloon,” emphasizing the “comfort” a viewer might find in this entertainment. In her essay on John Stevens’s *Sioux War Panoramas*, Bertha L. Heilbron draws the comparison further as an anticipation of twentieth century mass entertainment. “Like modern movies, panoramas provided for the hordes who saw them as vicarious experiences of travel and adventure.” [12]

John Stevens produced successive versions of his *Panorama of the Indians Massacre of 1862 and the Black Hills*, which proved to be massively popular well into the 1870s. The deeply charged subject standing in sharp contrast to the optimism and wonder that is expressed by Egan, Wilkins, Banvard, and Lewis nonetheless captured the mood of its time. The panorama represents the events that led up to the execution of thirty-eight Dakota men following a series of violent exchanges with American settlers. When exploring the details of this performance, the puppeteer and historian of popular performance John Bell eloquently unpicked the depictions of this tragedy. He explains how the “power of this mythic history depended on its reception as a compelling national narrative, as, manifest destiny.” [13] The message is clear. When the wild beasts are all either tamed or destroyed the land will be yours to use for the growth and productivity of a higher born and advanced version of human existence, for the foundation of a great new nation. The epic qualities of the Sioux Massacre are arguably recognizable in landscape interpretations up to the present time, that as “a version of ‘landscape violence,’ [are] an extension of the tendency towards violence that

pervades American society.” [14] Between the guidebooks, which for many were their first point of contact with the landscape, and then the plethora of corresponding published journals, alongside the performance of the panoramas themselves, the habits and general tone of North American landscape interpretations appear to have been very much set in stone in this mid-century period.

A precedence for depicting the dominion of culture over nature cannot be ignored in the many iterations of Edward Hicks’s painting, *The Peaceable Kingdom*. In the foreground Hicks’s composition consistently shows a group of wild beasts that are pacified to the degree that small children are safe in their company. On a distant river bank in the background we see a crowd of human figures. A number of them are dark skinned partially clothed figures. They appear to be in conversation with paler skinned figures in Euro-American dress. Hicks’s allegory foretells a future when children are safer in the company of wild beasts than they might be with indigenous people. In all events, and through many versions of landscape representation in North America, from the 1820s the animals and the people are always wild and savage, but the people in particular are “savages.” Stories of the endurance of the good natured emigrants is always predicated on their superiority over savage nature. Native people, like animals, possess an inherent naïveté supported by their proximity to nature – nature is innocent, amoral and simple, whereas culture is learned, moralistic and sophisticated. These ideas are backed up by the swift deployment of evidence of higher brain function symbolized by appropriate clothing and up to minute technology. In the Sioux War panoramas this was demonstrated in the fire power of more advanced weaponry and in this and other panoramas by a moral authority that is itself ordained from a higher force.

The mythology and experience of westward travel and the overland panoramas have, as John Bell argues, played their part in securing an American sensibility of mythic history. In exploring these ideas in relation to James Wilkins’s work, his depictions of pre-settler life on the Great Plains take on a very different complexion.

## Two Prominent Locations

In the extant fifty drawings by James Wilkins, as previously suggested there are two images that demand attention. Both depictions are in close proximity to the emigrant route as it passes along the Platte River, and both places are situated in present day Nebraska. The first is a group of earth lodges; the second is a funeral site. Both places are noted on maps of the region from the early 1840s and in a number of the guidebooks of the early 1850s. There are corroborating details in journal accounts from the 1840s and ’50s too. Both places are noted by Wilkins in his journal and so both encounters can be precisely dated. The narrative text

of the performance, if there was one, and the panorama itself have perished, but in the final pages of the journal, Wilkins outlines a narrative flow of the journey and this confirms that both of these elements were included in the panorama. One such passage is reproduced almost word for word on the playbill. In this text he mentions the earth lodges but not the funeral site (though in a preceding journal paragraph a string of places and events are listed, and while very much in note form, both sites are included).

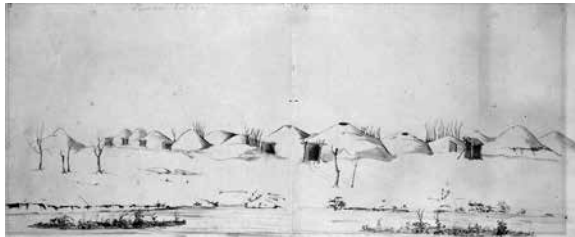


Fig. 3. Wisconsin Historical Society, James Wilkins, Wilkins 11: Pawnee Village, Image, IM1842, 1849. Viewed online at <https://www.wisconsinhistory.org/Records/Image/IM1842>

An analysis of elements included in both drawings can be read consistently with the power dynamics and constructions of mythic history outlined above. Wilkins has added a handwritten title to most of his drawings, and in the center at the top of the first drawing he wrote, "Pawnee Village." The use of the word "village" appears at first to be a fair description of what is depicted. Though in his journal and on the playbill, the addition of the word "deserted" suggests a more diminished sense of place that is additionally emphasized by the presence of animal bones. Images of skulls and bones are widely understood as emblematic of death, and in relation to interpretations of the West and the frontier, the steers skull is a longstanding visual trope.

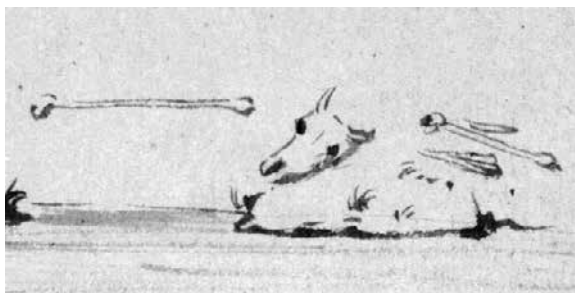


Fig. 4. Detail - Wisconsin Historical Society, James Wilkins, Wilkins 11: Pawnee Village, Image, IM1842, 1849. Viewed online at <https://www.wisconsinhistory.org/Records/Image/IM1842>

A drawing by Joseph Goldsborough Bruff (dated June 12, 1849) appears to depict the same location in a greater state of deterioration. Made just a few days after Wilkins was there Bruff portrays the dishevelment of this habitation in much more detail, and indeed he repeats the presence of animal bones.

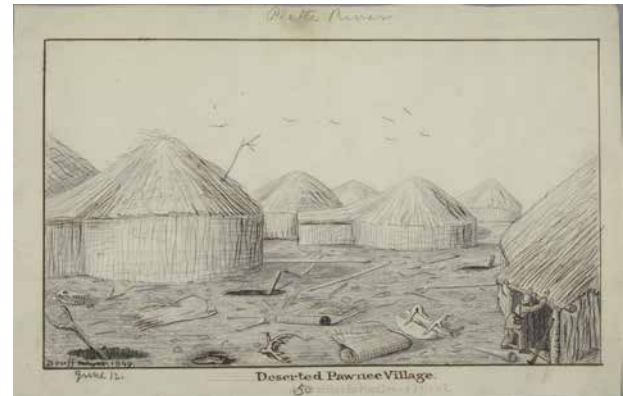


Fig. 5. Deserted Pawnee Village, June 12, 1849, Joseph Goldsborough Bruff, Journal and drawings of J. Goldsborough Bruff, 1849-1853, [mssHM 8044 (10)] The Huntington Library, San Marino, CA.

In my own research into this location and of Pawnee cultural activities, I was guided through a reading of Wilkins's images by Roger Echo-Hawk, a scholar whose expertise concerns Pawnee architecture and storytelling traditions. He revealed to me how his own family history directly connects him to the above images. The earth lodges along the Platte River, Roger explained, are part of an extended network of places that were understood by Pawnee inhabitants to be a metropolitan center. This place is a city known as Marsh Town. Our conversation leads me to scrutinize every application of scale as a value in interpretation of this material. Roger offered a response to Wilkins's drawing that represents a very different context. "My great-grandfather's mother dwelt there. Her name was Kaasariwa, Things Lying Nicely Inside, and she and her two siblings were born at Marsh Town, and she must have been about age twelve in 1849." He continued: "Marsh Town was a rambling metropolitan center built by the Chau Pawnees. Nearby dwelt the Real Kitkahahki and the Little Kitkahahki. In those days the only city of comparable size for hundreds of miles around was another Pawnee

metropolis, Pahaku, at the far eastern edge of Pawneeland. And earlier that month, in May 1849, the Pawnees left Marsh Town to build a new multi-band metropolitan center farther down the Flat River, closer to Pahaku; and that year in Pawneeland people starved; cholera struck; and just a couple months after the Pawnees left Marsh Town, a large Sioux / Cheyenne military expedition rode into the ruins of Marsh Town and they set fire to everything, destroying everything that had happened in that Pawnee city." [15]

In Andrew Child's 1862 guidebook, the location is again referred to using the same diminutive language. In this and other guidebooks, the route is described through a long list of locational descriptions, literally an itinerary of places. It is easy to imagine travelers checking off one place after the next. Given the slow progress and monotony of travel, the encounter with this and other kinds of landmark must have offered some relief. These punctuations read like the beginnings of tourist destinations, echoing with road trip guidebooks of the twentieth century. The sheer volume of emigrants who had passed along the Platte River route in the early 1850s supports this assumption to some degree. [16] The recognition of individual places grew in stature as places to see and were still being visited up to recent times. Ephemera and sight-seeing tchotchkes in the museums along the trail routes today vividly demonstrate the levels of the popularity of a number of places including Jail and Court House Rocks, Fort Kearney, Chimney Rock, Ash Hollow, and Scotts Bluff.

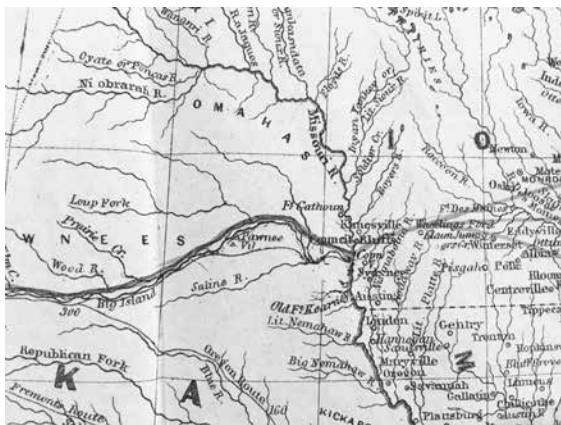


Fig. 6. Horn's Guide to California, 1852, New York, J. H. Colton, Newberry Library, Chicago.

Many of the maps from the mid 1840s onward mark a location that appears to be the one depicted by Wilkins and Bruff. Close to the Loup River Fork of the Platte it is identified by a graphic image that resembles a stylized group of tents. The same location can be verified by descriptions in the guidebooks and there are echoes in the descriptions in many journals too. It seems remarkable, given the details of its destruction, then, that Marsh Town

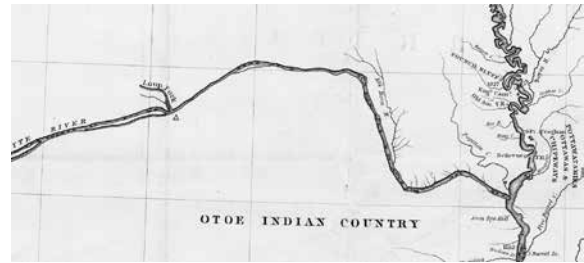


Fig. 7. Hydrographical Basin of the Upper Mississippi River, 1843, J. N. Nicollet, David Rumsey Map Collection

continued to be included in maps and noted in descriptions for a number of years after 1849. Perhaps it is a speculative suggestion of its popularity as a place to see. Today it is a relatively easy drive out from Iowa and Missouri to visit this area, and the faded architectural heritage from the 1940s and '50s along that route really speaks to the former mid-century popularity of many of the locations depicted by James Wilkins. As already suggested by the residue of twentieth century objects in museums, many of the locations between Council Bluffs and Scott's Bluff became sight-seeing destinations with relatively easy access to them once the roads were paved.

The second location included by Wilkins is marked further along the route, on the way to Scotts Bluff and close to the foot of the steep decline in the trail at Ash Hollow, in present day Nebraska. Again, going by the evidence of many accounts of the late 1840s and early 1850s, an island in the river was acknowledged as an Indian burial ground. Many of the accounts and guidebooks erroneously call this a "burial" site, whereas in actuality it was an active Sioux funeral site. The drawing Wilkins made on June 18<sup>th</sup> is titled simply "lone tree." At that time in this area, it was not at all common to see tall trees, and for this reason alone any tree might have warranted some attention both as an oddity and as a way marker.

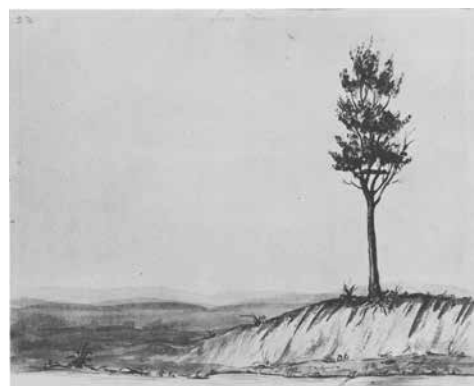


Fig. 8. Wisconsin Historical Society, James Wilkins, Wilkins 14. Lone tree With Indian burial IM31446, 1849. Viewed online at <https://www.wisconsinhistory.org/Records/Image/IM31446>



What is significant about the tree in Wilkins's drawing is that it holds a platform upon which there appears to be a human body. Research will reveal that while Sioux funeral traditions more usually placed the deceased on platforms raised above the ground on four sturdy posts, some have also been noted in trees.

One of the most vivid accounts of the tree can be found in James M. Hutchings's journal, in an entry he made just nine days prior to the date Wilkins made his observations. Hutchings's account describes how he saw "a singular-looking object in a small group of trees on an island in the Platte." He then describes wading and swimming through the deep channels of the river until he "reached the island with the group of trees, and climbed up the tree with the curious object in it, found it to be an Indian grave, a nicely constructed and interwoven kind of basket, flat on the bottom, oval at the top, egg-shaped, four feet long and two and a half feet wide. It was made of buffalo hide and peeled willow sticks. Inside was an Indian Body Wrapped up in fine buffalo robes, a bow and arrows, a pair of finely worked mockasins, [sic.] and a very beautifully worked frontlet, with several other trinkets...My curiosity might have led me to stealing, but my respect for the creed of the Indian bade 'hands off,' so after a second look. I replaced and left them." [17]

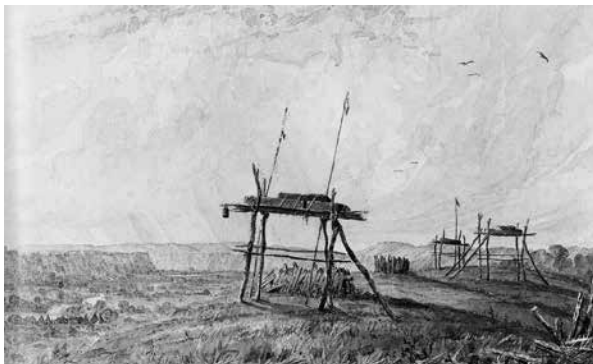


Fig. 9 Minneapolis Art Institute, Seth Eastman, Indian Burial Ground, 1849-1855. <https://collections.artsmia.org/art/36163> (2014.31.23)

Encounters with Sioux funeral grounds were noted often across the plains. In a particularly respectful manner, a vivid visual record of life on the northern plains has survived in the paintings by Captain Seth Eastman. [18] One painting known as *Indian Burial Ground* depicts a place that is considered sacred by Dakota people. [19] As a landmark today, it is called "Pilot Knob" in Minnesota. It is known in Dakota language as "O'héyawahe," meaning, "the hill much visited." Around 1847 the painting was acquired by Henry Lewis who hung it in his St. Louis studio. A studio that James Wilkins and he shared until the late 1840s. [20] It seems safe to assume then that Wilkins had some familiarity

with such funerary practices. Finally, though, a painting by Richard Lorenz from 1904 depicts a similar platform funeral structure. The image however speaks to a very different set of concerns and is very much pointing to the demise of traditional life on the Great Plains. The title, *Solitude (or Prairie Twilight)*, [21] suggests such a sense of imminent disappearance and yet the mood is framed by the poetics of the light, specifically, "twilight." As the light fades, the demise of both the "wild" and the "savage" is confirmed here as a tragic certainty.

## Notes

1. James Wilkins, *Journal of overland trip from St Louis MO to Sacramento CA* (San Marino: Huntington Library, 1849).
2. Gaston Bachelard, *The Poetics of Space* (Boston: Beacon Press, 1958), 183-185.
3. Wilkins's biography is explored in detail John F. McDermott's *An Artist Of The Overland Trail: The 1849 Diary and Sketches of James F. Wilkins* (San Marino, California: Huntington Library, 1968)
4. See John F. McDermott, *The Lost Panoramas of the Mississippi* (The University of Chicago Press, 1958) and *An Artist Of The Overland Trail: The 1849 Diary and Sketches of James F. Wilkins* (San Marino, California: Huntington Library, 1968)
5. See Max Von Boehn's *Dolls and Puppets* (Boston, 1932), and John Bell, ed.'s *Puppets, Masks, and Performing Objects* (Cambridge: MIT Press, 2001).
6. John Milton, "Plains Landscapes and Changing Visions," *Great Plains Quarterly* 2, no. 1 (Winter 1982): 57.
7. Milton, 56.
8. Herman Melville, *Moby Dick; or, The Whale*. (New York: Harper and Brothers, 1851).
9. See chapter 6 of Erkki Huhtamo's "The Mid-Century Moving Panorama Craze," in *Illusions of Motion* (MIT Press, 2013).
10. John Egan, *Panorama of the Monumental Grandeur of the Mississippi Valley*, c.1850, Saint Louis Art Museum, <https://www.slam.org/collection/objects/841/>.
11. Huhtamo. See figure 6.10, p.186.
12. Bertha L. Heilbron, "Documentary Panorama," *Minnesota History* 30, no. 1 (March 1949): 14.
13. Bell, ed.
14. Robert Z. Melnick, "Considering Nature and Culture in Historic Landscape Preservation," in *Preserving Cultural Landscapes in America* (Baltimore: Johns Hopkins University Press, 2000), 26.
15. Roger Echo-Hawk, as quoted in the author's blog post "The Journey: 2 where the plains begin," *Itinerary Landscape Process* (blog), *Wordpress*, September 20, 2017, <https://ruftydogblog.wordpress.com/2017/09/20/the-journey-2-where-the-plains-begin/>.

16. Merrill J. Mattes, *The Great Platte River Road* (Lincoln, NE: University of Nebraska Press, Bison Book Edition, 1987), 5.
17. J. M. Hutchings, [1849]. 1980, 117-118.
18. Captain Seth Eastman served as the commander at Fort Snelling between 1833 and 1840. See Marybeth Lorbiecki, *Painting the Dakota: Seth Eastman at Fort Snelling* (Afton Historical Society Press, Afton, MN, 2000).
19. Seth Eastman, *Indian Burial Ground*, 1849-1855, watercolor, (Prints and Drawings 2014.31.23) Minneapolis Institute of Art.
20. McDermott, *An Artist Of The Overland Trail: The 1849 Diary and Sketches of James F. Wilkins*, 45.
21. R. Lorenz, *Solitude (or Prairie Twilight)*, 1904, oil on canvas, (Layton Art Collection, L199.) Milwaukee Art Museum.

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### Author Biography

Nicholas Lowe is an interdisciplinary artist, curator, author, and teacher. Significant curatorial projects include *goat island archive – we have discovered the performance by making it* (2019) and *Roger Brown: Calif U.S.A.* (2010). His visual and performance works explore archival detail and museum display contexts as research-based iterative practices. Lowe joined the faculty at The School of the Art Institute of Chicago in 2003 where he is Chair of the Department of Historic Preservation.

# Panopticum Berlin: Panorama of the Panoptic

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## Abstract

Panorama buildings are strikingly similar to so-called panoptic prisons. The panoptic prison, invented around 1800, is a circular domed building, with a central tower in the middle from which one guard can survey all inmates, just like visitors in a panorama can see all around from one central observation point. Strikingly, the word “panopticon” changed during the nineteenth century from its original meaning (a prison) to denote certain exhibition venues where “one could see everything.” Both the panorama and the panopticon stem from an era that seems to have been obsessed with creating mighty displays. Whether for didactical reasons in a museum, entertainment in a panorama, or control of prisoners in a jail, it was all about a universal desire to see all (pan-optics). There is something beautiful as well as suffocating to all this. A fascination for this ambiguity was the starting point for *Panopticum Berlin*, an art project created by the authors Wim Hardeman and Onno Schilstra, a Dutch artist duo. *Panopticum Berlin* is a poetic attempt to capture both the appeal and the darkness of the panoramic/panoptic culture.

## Keywords

Panopticum Berlin, Panopticon, Cyclorama, Surveillance Society, Entertainment, Museums, Perspective, Bentham, Phantasmagorias, Nineteenth Century

## Panopticalities

Our panopticum would be a mock-scientific psychological portrait gallery, using antique optical devices of wonder, like stereoscopes, dioramas and zoetropes.

The idea was born around 2006, out of an inspiration we had to found an odd museum of our own making, referring to the panopticons (or as the English say: panopticons) that had been popular in the nineteenth and early twentieth centuries in Europe and the United States—venues, often sensational and slightly pathetic, where one could “see everything”: eccentric collections, anatomical preparations, pornographic images, stuffed animals, wax sculptures of criminals, photographs of “freaks of nature”, and even indigenous subjects from colonial realms, exhibited as in a human zoo.

We started to search for what we called, with a word of our own, “panopticalities”: places, buildings, objects, books and images that we thought had that peculiar “panoptical” feel to them, and we started to make precise drawings of all these. Gradually, we focused in on panoptical interiors and

portraits of people. The meaning—if any—would have to reveal itself to us as we went along.

One day in 2007, we paid a visit to the famous Panorama Mesdag in The Hague, a panoptical work of art close to where we live in The Netherlands. In the souvenir shop, we bought a small, scrolled reproduction of Hendrik Willem Mesdag’s magnificent 1881 circular painting: one hundred and twenty meters of moody impressionism condensed in a hundred centimeters of cheap color print. Of course, this reproduction could not touch upon the experience of the real panorama, but when we rolled out the print on a flat tabletop, we were caught by something we had never been aware of while in the panorama itself: the curvilinear perspective. Inside a panorama, you will hardly notice this optical effect, but it shows itself clearly when you flatten the image: all straight perspective lines (for example roads moving towards the horizon) that seem straight in the cylindrical view of a panorama become curved when you flatten the image. It opened up the Mesdag Panorama in an unexpected way, giving it a slightly psychedelic effect. Yet, it also removed the claustrophobic effect that is as much an essential part of the panorama experience as is the illusion of space. To us, it is exactly this paradoxical combination of immersive spatial illusion and claustrophobia that makes panorama paintings so very different when compared to any other type of painting.



Fig. 1. *Panorama Mesdag*, 1881, Hendrik Willem Mesdag, painting, © Panorama Mesdag The Hague.

Enthused by the reproduction, we decided to try and draw, on a similar small scale, our own curvilinear panoramas of the panoptical spaces we were collecting. Like the Mesdag reproduction, we put these drawings flat on the wall of our studio and combined the images with our portraits of panoptical people. It resulted in a peculiar chemistry between the two pictures, similar in a way to what happens when you see a stereo photo; however, in this case it was not an experience of three-dimensional depth, but one

of a cognitive depth of sorts. The images started relating. They supplied a point of view to each other.



Fig. 2. (n.t.), 2006-2020, Panopticum Berlin, pen and ink drawing, © Panopticum Berlin

Taking this formula as a basic principle, our panopticum started to emerge. Buildings we would typically do in black ink on white paper, portraits with white ink on black paper. We used standard heights, so all drawings could easily be paired into double images. The double images in their turn could be combined with others, to create long-stretched horizontal, panoramic installations, in ever-changing combinations of images, in any type of room. We stored them in a few simple boxes, that we could take with us to wherever we wanted to show the panopticum. Until now, the collection is growing slowly, and we hope to keep expanding it infinitely.

### Seeing All

Meanwhile, we explored the history of the panopticon phenomenon. Soon, we discovered some remarkable facts. For one, that the word “panopticon” originally did not, at all, refer to the shabby type of museum we had in mind, but

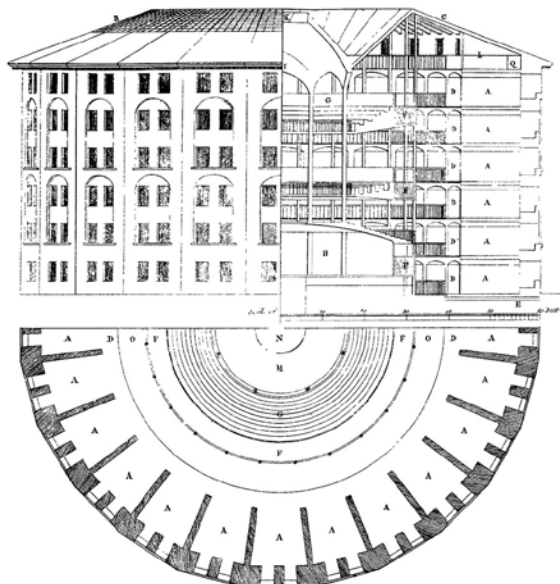


Fig. 3. *Penitentiary Panopticon*, 1791, drawn by Willey Reveley, from the works of Jeremy Bentham vol. IV, 172-3 (1843), Public Domain

to a grim type of prison architecture, invented in the late eighteenth century by British philosopher Jeremy Bentham (1748–1832), who designed a circular, domed building, in which one guard could observe all the inmates from one central watch tower. The prisoners could not see if the guard was actually looking at them, and therefore, Bentham argued, they would internalize the awareness of being observed all the time. This would discipline them into well-behaving people, sticking to the norms of society.

Bentham’s prison became an instant success. Until today, you will find panoptic prisons all over the world. Moreover, its system turned out to be suited for much more than just penitential goals. It developed into a kind of universally applied model for the whole of the organization of western society. Next to prisons, panoptic architecture started to be used for military buildings, schools, hospitals, asylums and all kind of public spaces. Everywhere, buildings emerged—often impressive, ingenious, eerie and yet strangely beautiful—in which people could easily be ordered, observed, categorized, studied and disciplined, all because of an architecture that made them feel that they were being looked upon all the time.

However intuitively and ignorantly our search had started, these buildings appeared to contain exactly the kind of spaces we had started to portray.

It is easy to see that Bentham’s panoptic prison had a striking similarity to the cycloramas that developed in the nineteenth century. Just like the guard in a panoptic prison, visitors in a panorama building can see all around from one central observation point. Not coincidentally, they were invented almost simultaneously: in 1791 Bentham published his book on the panopticon, in 1792, the Irish painter Robert Barker coined the word “panorama” for his circular paintings of Edinburgh, Scotland.



Fig. 4. *The Colosseum*, Regent's park, London (1827-74), taken from “A picturesque guide to the Regent's park”, 1829, Public Domain. The Colosseum was built in 1827 to exhibit Thomas Hornor's “Panoramic view of London”.



It was the age of pompous neo-classicism, an age that seems to have been obsessed with creating stately, mighty displays, building on impressive examples of antique structures like the Pantheon in Rome. Whether for showing off power in a government building (e.g. the Capitol in Washington, begun in 1793) or for didactical reasons in a museum (like the reading room of the British Museum, 1857), whether for the observation of animals in a zoo, the experience of spatial illusions in a panorama, or the control over prisoners in a jail—there appears to have been a universal desire for global control, encyclopedic overviews, and—entertainment.



Fig. 5. (n.t.), 2006-2020, Panopticum Berlin, pen and ink drawing, © Panopticum Berlin

## Bourgeois Culture

Following the French Revolution, a new urban merchant class of nouveau riches had started to rise, that (in the spirit of the Enlightenment) was keen on being well-educated and, at the same time, yearning to be distracted. This climate gave rise to the peculiar combination of art, science and entertainment that is so typical of nineteenth century European culture.

Interestingly, during the nineteenth century, the meaning of the word “panopticon” acquired a new meaning. From its original meaning (a prison), it started to be used to denote



Fig. 6. *A Rake's Progress*. Plate 8 in *The Madhouse*, 1763, William Hogarth, engraving, Public Domain

the exhibition venues which we had in mind when we started our project. This may sound strange, but already from the eighteenth century on, it had been a common practice that paying visitors were able to come and see prisoners in jail or madmen in an asylum. It can be seen, for instance, in the picture from the series “*A Rake's Progress*” (1732-1734) by William Hogarth, where we see rich ladies enjoying the sight of psychiatric patients. The philosopher Arthur Schopenhauer related how, at the age of seventeen, he went to see the galley slaves in Toulon. The step from prison to entertainment was not as big as it might seem. [1]



Fig. 7. (n.t.), 2006-2020, Panopticum Berlin, pen and ink drawing, © Panopticum Berlin

The first exhibition panopticons were wax image cabinets, often with sensational sculptures of famous criminals. These panopticons could be found in the vicinity of the big panorama buildings, as was the case for instance in our hometowns Amsterdam and Berlin. Sometimes they were remnants of world exhibitions, sometimes they would be located at high viewpoints, like the Montjuic in Barcelona or the Eiffel Tower in Paris. Sometimes, they would be part of shabby travelling medicine shows, on display at fair grounds.

## Dreams and Nightmares of a Surveillance Society

Not only do the panopticon and the panorama look very similar, they are also based on a similar principle: both involve a clear distinction between the spectacle and the spectator. In a panorama building, the spectator looked at a 360 degrees illusion, staying outside of it. In a panoptic prison, one guard surveyed a multitude of prisoners who were aware of the guards' gazes, but unable to interact with them.

While the panoptic prison was a tool to discipline the prisoners into “normal” (socially accepted) behavior, it has been observed that the panorama was a comparable tool: a means to control and exploit the masses in the quickly expanding industrialized cities. Stephan Oettermann, in his monography on the history of the panorama phenomenon, has characterized the panorama as “an apparatus for teaching and glorifying the bourgeois view of the world” as well as reproducing “the real world so skillfully that spectators could believe what they were seeing was genuine.” [2]

German philosopher Walter Benjamin, in his “Arcades Project”, noted that this skillful illusionism involved not only the sweet dreams of the bourgeoisie, but also its nightmares. In all nineteenth century bourgeois culture, there is a sense of escapism, a longing for wide open spaces, alongside a preference for the phantasmagorical. [3] Panorama and panopticon fit perfectly into this pattern. It might explain the paradoxical experience of opening up space and suffocating claustrophobia simultaneously, which, as we observed before, is at the basis of all panorama painting. And remarkably enough, this characteristic seems to have been fully embraced and cultivated. According to Benjamin, a Marxist thinker, this could be explained from the incongruities of bourgeois ideology. It was a suffocating society, not only for the working-class proletariat, but also for women, outcasts and outsiders, who were kept in place by the powers that be. All this was not only affected by the architecture, it was also mirrored in the art of the age.



Fig. 8. (n.t.), 2006-2020, Panopticum Berlin, pen and ink drawing, © Panopticum Berlin

From the start, panoramas and panopticons were part of a society that stressed control and discipline, and was about normalizing people, about objectifying subjects. This systematic “panopticism”, as French philosopher Michel Foucault has called it, grew into one of the pillars of the modern world. [4] Even after the liberation movements of the nineteen sixties and the period of decolonization, it has not faded; rather, it has developed and refined into many new directions. We found, and still find panopticalities wherever we travel in Europe, the United States and beyond. Sometimes they are in a ruined state of repair and deceptively charming, sometimes they are still functioning, at other times they are brand new. We find our subject matter in libraries, coffee houses, shelters for seamen, waiting rooms, wardrobes, on colonial photographs and classroom snapshots. The imagery of Panopticum Berlin comes from everywhere, from all over the world, from present and past.

## Berlin

In creating Panopticum Berlin, we discovered that the “panoptical” images of people we were intuitively drawn to when we started our project, are without exception images of people that are in some way being observed, ordered, categorized, put in a normative hierarchy, made into objects that can be observed, handled, managed, jailed. The awareness of being observed and treated thus, is reflected in the facial expressions and the body language of the people

we portray. Some look scared, some look numb, some keep a poker face. They might be labelled in many ways, but on closer inspection they are just ordinary people. By carefully scanning them with our white ink, maybe we will be able to restore a little bit of their humanity in the eyes of the viewers.



Fig. 9. Visitors to a Panopticum Berlin show, Paris 2014, Panopticum Berlin, Photo by Onno Schilstra

We try to trace the emotions that run through us when we see certain images of people or when we unexpectedly run into panoptical places. Perhaps we experience a similar delight as the nineteenth century panorama audiences did, in the depiction of both the beauty and the phantasmagorical eeriness of the culture that we were raised in. That is why we called our project *Panopticum Berlin*.

Berlin, our second hometown, symbolizes overwhelming cultural achievements when it comes to science, museums, art and literature. At the same time, it has been the epicenter of the blackest episode of humanity. A panoptic city.

*Panopticum Berlin* is our poetic attempt to show the beauty and the darkness of the panoptic, and, for that matter, panoramic culture. We present its buildings and the people who dwell in them as carefully and precisely detailed as we can, wondering what it means to live in a panoptic society. We dream of *Panopticum Berlin* as an all-seeing eye that observes itself. An odd, travelling museum, in which we might learn something about ourselves as human beings.

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Fig. 10. *Panopticum Berlin* installation view, Delft 2015, Photo by Onno Schilstra.

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## Authors' Biographies

Wim Hardeman and Onno Schilstra are a Dutch artist duo, living alternately in Amsterdam and Berlin. They have been developing *Panopticum Berlin* since 2006. Wim has a background in cinema, photography and digital imaging. She invented the technique of tintography, a merger between photography and painting. Onno is a visual artist, writer, and musician. He teaches art philosophy at the Royal Academy of Art, The Hague. Onno's and Wim's work has been shown in galleries, museums and art fairs in Paris, New York, Budapest, Stockholm, Brussels, Amsterdam, and Berlin.



Fig. 11. *Onno Schilstra and Wim Hardeman*, The Hague 2012. Photo by Jos Poeder.

# The End of the End: Panoramic Devices in the Transporting Imperial Fictions of E. Nesbit

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## Abstract

E. Nesbit (British, 1858-1924) is widely recognized as a threshold author whose turn-of-the-twentieth-century fantasy novels influenced such luminaries as C. S. Lewis, Diana Wynne Jones, and J. K. Rowling. Recent scholarship examines the imperial themes and discursive tropes with which Nesbit resolved her plots; less well understood is their registration of the currency of panoramic media for London readers. Much as the British Museum used its vast collections to create transporting environments for visitors, entrepreneurial collectors and showmen devised immersive environments that allowed citizens to sense the empire enfolded within the time and space of the modern city. In order to recover a popular visual and discursive field whose contours have been lost to the sedimentation of successive media discourses, this paper catalogs panoramic references in *The Story of the Amulet* (1906). Third in Nesbit's enduring *Psammead* trilogy, the tale situates a series of transporting experiences of pre-dynastic Egypt, Babylon, pre-Roman Britain, Atlantis, Ancient Egypt, future London, and Tyre within the broader frame of the then-present streets of London. This narrative reveals the terms in which Britain's colonial expansion was valorized for period audiences and theorizes history writing as a form of time travel.

## Keywords

E. Nesbit, Media Studies, Panoramic Attractions, Fantasy Literature, British Empire, London Shows.

## Introduction

Growing up in the American Midwest, I discovered vintage hardcover volumes on my parents' shelves that looked like adult novels but spoke to my interests as a young reader. These included English children's classics by Frances Hodgson Burnett and early volumes in the *Mary Poppins* series by P. L. Travers. Another was E. Nesbit's *Five Children and It*, published in 1902 (figure 1). Thick, cloth bound, filled with closely set type and few pictures, its object qualities conveyed the weight of adult worlds, yet its pages drew me in with language at once confidential, conversational, and urbane. Its setting in the ordinary everyday of turn-of-the-century London reverberated with both similarity to and difference from my 1970s present, and the unfolding of fantastic events amplified that dissonance in a way that left me wanting more.

I was also compelled by John Bellairs's *The House With a Clock in Its Walls*, 1973. Set in 1950s Michigan in an historic mansion with "third-best upstairs front parlors and second-best back bedrooms," Bellairs's young adult tale of gothic horror unfolds against a backdrop of dusty artifacts proffering uncanny virtual glimpses of other places and times. [1] A stained glass window in a back stair occasionally changes its scene, while a round mirror in the front hall coat rack sometimes eschews the viewer's reflection in favor of living scenes of Mayan ruins, recognizable to the ten-year-old protagonist from his Viewmaster slides. [2] His uncle, a parlor magician, hosts evening entertainments that transport visitors from their armchairs beside the crackling fire to a viewing platform on John O'Groats, the northernmost point in Scotland, where a pay telescope affords closeup views of the struggling Spanish Armada, or to a muddy hillside in Belgium overlooking the Battle of Waterloo unfolding below. [3]



Fig. 1. E. Nesbit's *Psammead* trilogy, 1902-1906. Image, the author.

Another genre-bending novelist who captured my attention was Joan Aiken. Spanning science fiction, fantasy, and alternative history, her works traverse narrative terrains variously contiguous with those of Nesbit, Hodgson Burnett, Travers and other favorites by Noel Streatfield, Edgar Eager, Lloyd Alexander, and Philippa Pearce. And with the exception of Bellairs, each of the authors I have mentioned has claimed E. Nesbit as a formative influence, as have such luminaries as George Bernard Shaw, C. S.



Lewis, Diana Wynne Jones, Neil Gaiman, J. K. Rowling, and many others. Nesbit is revered as a seminal author who captured imaginations and catalyzed creative practice for generations that followed.

Recently I wondered if the stories I read as a child sensitized me to the nested virtual worlds of London's popular immersive entertainments, and in particular whether Nesbit's works could be read as iterations of a broader period culture of transporting mediated experience. I returned to her *Psammead* trilogy, beginning with *Five Children and It* (1902) and proceeding through *The Phoenix and the Carpet* (1904) and finally *The Story of the Amulet* (1906), in search of evidence for the affiliation I sensed. In the third book I found not only features of setting and emplotment but also direct evidence for the view that Nesbit's tale is an artifact of the worldview I have described elsewhere as *the panoramic mode*—a mediated way of experiencing the built urban environment as a microcosm that condenses the colonizing world. [4]

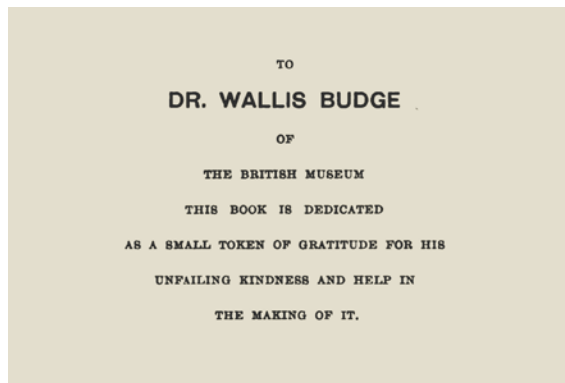


Fig. 2. Dedication. E. Nesbit. *The Story of the Amulet*, 1906. Image, the author.

It is clear not only from the book's dedication (figure 2) but also from plot and character references that the exhibitionary logic of the national museum is a key inspiration for *The Story of the Amulet*. What I will argue presently is that the story is equally informed by the broader experiential logic of popular shows. Such shows included panoramas, dioramas, and other uncanny and transporting exhibitions, all of which synthesized panoramic overview with somatic immersion; examples include Robert Burford's Panorama at Leicester Square, William Bullock's Egyptian Hall in Piccadilly, the Crystal Palace at Sydenham, and other popular venues. This paper identifies panoramic references in Nesbit's chapter-and-plot structure, distills specific references to immersive virtual entertainments, and correlates these findings with data on London's culture of exhibition from the pages of Robert Altick's compendious *The Shows of London* (1978) and Aleck Abraham's 1906 survey of exhibitions mounted at Bullock's Egyptian Hall between 1813 and 1873. I secure

these connections by turning to Nesbit's later nonfiction work *Wings and the Child, or the Building of Magic Cities* (1913) for evidence that the author's own early experiences of immersive media shaped her literary imagination.

## Edith Nesbit

Edith Nesbit, known in her private life by her married name Edith Bland, was born in London in 1858. She was twenty-one years old and seven months pregnant when she married Hubert Bland (British, 1855-1914) in 1880. Followers of the British textile designer and Marxist socialist activist William Morris (1834-1896), Nesbit and Bland and seven like-minded colleagues co-founded the democratic socialist Fabian society, an influential precursor to the British Labour Party. They had two more children in rapid succession, and their brood grew to five as Nesbit adopted first one and then another child born to her husband's mistress. Their unconventional family structure was further shaped by the regular failure of Bland's business interests, as it fell to Nesbit to support the family by publishing articles, stories and novels—the latter primarily for children as this market proved consistently lucrative for her. Nesbit published some 40 books for children, and collaborated on at least as many more. One of her biographers, Julia Briggs, credits Nesbit as “the first modern writer for children,” in that she situated her stories, even those involving fantastic adventures, in the context of the world as it really was, rather than in alternative universes as Lewis Carroll, Kenneth Grahame, and J. M. Barrie did. [5]

The novels comprising the *Psammead* series first appeared as serials in London's monthly *Strand Magazine*. In the first, five siblings discover a curious beast burrowing in a sand quarry near their rented home in the English countryside. This turns out to be an ill-tempered sand fairy who is obliged to grant wishes. Misadventures ensue as one well-intentioned wish after another begets troublesome consequences. In the end they lose the *Psammead*, but adventures resume in the second book as they come into possession of a magic carpet belonging to a Golden Phoenix; empowered, they embark on global travels.

The third book finds the children nonplussed to be living with their Old Nurse in London's Fitzroy Street while their parents are away. Setting off one afternoon through hot, dusty streets toward St. James's Park, they are reunited with the sand fairy when, “by some wonderful chance turn of Robert's” they “came into the little interesting criss-cross streets that held the most interesting shops of all—the shops where live things were sold.” [6] Their forlorn old friend calls out from a cage, and the children rescue him from his prison. He can no longer grant wishes, but on a subsequent outing he points out a magic charm in the window of an antiquarian shop, and so the new plot is born. The charm is one half of an Ancient Egyptian amulet whose power is to

grant the possessor his or her heart's desire, which for the children is the return of their parents; but they soon learn the amulet's other half was crushed to dust long ago. The surviving piece can't grant their greatest wish, but it can transport them to places and times in its own history. Thus the children embark on a time-travel quest to make the amulet, and their family, whole again.

## The London Shows

Richard Altick notes that the discursive field of period exhibitions to which he refers as "the London shows" operated at "the confrontation between amusement and instruction." [7] He notes that "the search for the elusive acceptable balance between instruction and diversion became the recurrent motif (a melancholy one, it might be added) in the history of London exhibitions during the first half of the nineteenth century," averring "as every reader will reflect upon finishing this book, the magic formula is still to seek, over a hundred years later." [8] Nesbit's concerns can be understood as an example of this interplay. Writing at the end of the Victorian era and the apex of British "high empire," a period of rapid global imperial expansion from 1870-1914, Nesbit's melancholy surfaces in her acknowledgement of a social media culture she had known intimately as a child but saw fast retreating into a soon-to-be dusty past.

Mavis Reimer interprets Nesbit's *Psammead* trilogy as an imperialist fable by invoking Fredric Jameson's concept of ideology, "a representational structure which allows the individual subject to or imagine his or her lived relationship to transpersonal realities such as the social structure or the collective logic of History." [9] Based on Louis Althusser's argument that one of the core functions of ideology is to render the obvious invisible, Jameson's concept is appropriately applied to turn-of-the-century narrative fiction; for, as Reimer notes, "one of the most important 'transpersonal' realities for British subjects was empire, which, by the beginning of the twentieth century, included a quarter of the world's area and a third of its people." [10]

It is in the shape of the quest that we find the first intimation of an affiliation with panoramic media. *The Story of the Amulet* walks its protagonists through a series of transporting experiences of pre-dynastic Egypt, Babylon, Atlantis, pre-Roman Britain, Pharoah's Egypt, future London, and Tyre (figure 3). [11] This journey is framed by the then-present streets of London, where each of these spatiotemporal destinations was the subject of intense contemporary interest, not only due to history and legend but also because of the variety of national projects then under way, from colonial expansion to archeological excavation and museum collecting to the democratic socialist endeavors with which Nesbit and her colleagues

were envisioning a utopian British future. Nineteenth-century Londoners could access these places and times by exploring the complex of exhibitions distributed throughout the urban fabric, and Babylon and imperial Rome were widely understood as conceptual models for London and the British Empire. [12] But to what extent should a plot organized around transporting experiences of these destinations be understood as an iteration of the panoramic mode?

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Fig. 3. Table of Contents. E. Nesbit. *The Story of the Amulet*, 1906. Image, the author.

A panorama immerses visitors by placing them at the center of a virtual landscape. Similarly, the British Museum played a central role in framing discourses of empire by virtually situating citizens at the nexus of its cultural and political geography. As art historian Stephanie Moser notes, "new 'life' emerges for objects once they are placed in an exhibitionary setting," wherein "the arrangement of material culture creates a 'mental picture' that functions as an interpretive framework for understanding a particular theme, cultural group, or historical episode." [13] As collecting became more widespread, museums morphed from repositories for study by scientists and other professionals to popular attractions for audiences aspiring to join the upper classes. [14] And while Moser's concern is

with the museum, her argument can usefully be extended to the more commercial context of the London shows. Much as the British Museum used its vast collections to create transporting environments for visitors, entrepreneurial collectors and showmen devised immersive environments that allowed citizens to sense the empire enfolded within the time and space of the modern city. For an example, we need look no further than the popular attractions that registered British period interest in Egypt, piqued both by the region's status as a recent theater of the war with France and as a monumental site of archaeological discovery. These included the 1802 *Aegyptiana* exhibition at the Lyceum; numerous theatrical productions; panoramas at Leicester Square including the *View of Grand Cairo*, Large Circle, 1810, the *View of the Great Temple of Karnak and the Surrounding City of Thebes, from Drawings by Catherwood*, Upper Circle, 1835-1836, and the *View of the City of Cairo and the Surrounding Country*, Large Circle, 1847-1848; and the name of the Egyptian Hall's and the design of its enduring façade (figure 4).

In Chapter 10, Nesbit's narrator makes explicit reference to the range of productions comprising this exhibitionary complex:

there are pleasant things to be done in London without any aid from Amulets or Psammheads. You can, for instance visit the Tower of London, the Houses of Parliament, the National Gallery, the Zoological Gardens, the various Parks, the Museums at South Kensington, Madame Tussaud's Exhibition of Waxworks, or the Botanical Gardens at Kew. [15]

But in order to appreciate *The Story of the Amulet* as a veritable tour guide to the nested imperial worlds of the London shows (albeit in a register that, while obvious to period readers, may have become invisible to readers of our own day), it will help to turn to the opening pages of the final chapter. Nesbit begins by mentioning magical adventures that she lacks the time to narrate; for example the children went “into the golden desert, and there [found] the great Temple of Baalbec,” [16] to the Hippodrome, and “to a magic-lantern show and lecture at the boys' school at Camden Town...about our soldiers in South Africa.” [17] The chapter's action finally begins in earnest when

Nurse...broke into the gloomy music of the autumn rain on the window panes by suggesting a visit to the Egyptian Hall, England's Home of Mystery. Though they had good, but private reasons to know that their own particular personal mystery was of a very different brand, the four all brightened at the idea. All children, as well as a good many grown-ups, love conjuring.

“It's in Piccadilly,” said old Nurse, carefully counting out the proper number of shillings into Cyril's hand, “not so very far down on the left from the Circus. There's big pillars outside, something like Carter's seed place in Holborn, as used to be Day and Martin's blacking when I was a gell. And something like Euston Station, only not so big.”

“Yes, I know,” said everybody.

So they started.

But though they walked along the left-hand side of Piccadilly they saw no pillared building that was at all like Carter's seed warehouse or Euston Station or England's Home of Mystery as they remembered it. [18]



Fig. 4. Cover. Programme: Maskelyne and Cooke—England's Home of Mystery, Egyptian Hall, London, 1887. Image: The London Picture Archive.

As Nesbit's readers would surely have known, the storied Egyptian Hall had been demolished a few months earlier. Writing in *The Antiquarian* in 1906, just days before the first serialized installment of Nesbit's story would appear, historian Aleck Abrahams notes,

with the demolition of the Egyptian Hall, Piccadilly has lost one of its most familiar landmarks and places of interest. Even those who had never entered that peculiar doorway beneath the huge figures of Isis and Osiris had some affection for the old “Home of Mystery,” and its disappearance will be regretted by everyone familiar with its strange exterior. As a place of entertainment its history is only exceeded in length by three coexistent buildings, viz., Drury Lane, Sadler's Wells, and the Pantheon. But not any of these ever had such a remarkable series and variety of attractions, or formed so interesting a link between the showmen of the past and the present-day entertainers. [19]



Scanning Altick's (1978) and Abrahams's (1906) accounts of the Egyptian Hall's programming reveals a litany of panoramas and immersive exhibitions mounted there during the middle fifty years of the nineteenth century:

- 1824 *Modern Mexico*, by William Bullock (founder and proprietor of the Egyptian Hall) [20]
- 1840 *A Moving Diorama of Constantinople, Etc.* With explanatory letter written by Albert Smith and Shirley Brooks [21]
- 1848 *Banvard's Moving Panorama of the Mississippi* [22]
- 1849 *Moving Panoramic Picture of the Nile*. Painted by Henry Warren and Joseph Fahey from drawings made by Joseph Bonomi, July. 800' long with transparencies [23]
- 1849 *Moving Diorama of Constantinople, the Dardanelles, and the Bosphorus*. Painted by Allom from sketches made on the spot [24]
- 1851 *Freemont's Moving Panorama of the Overland Route to Oregon and California* [25]
- 1851 *The Holy Land*, based on sketches by Henry Warren, and Joseph Fahey and painted by Joseph Bonomi [26]
- 1852 *Albert Smith's Ascent of Mount Blanc* [27]
- 1854 *The Grand Moving Diorama of Constantinople*, by J. H. Stoqueler [28]
- 1860 *Hamilton's Grand Moving Diorama of the New Overland Route to India via Paris, Mont Cenis, Brindisi, and the Suez Canal*, by Telbin [29]
- 1866 *Artemus Warde's Entertainment, Among the Mormons, and Other Lectures Delivered in Explanation of a Panorama* [30]
- 1869 *Coupée's French Promenade and Exhibition of the Boulevards and Streets of Paris* [31]
- 1873 *Mr. Alexander Lamb's Royal Diorama of Scotland* [32]

Intent on reaching their destination, the children ask a passer-by for help:

At last they stopped a hurried lady, and asked her the way to Maskelyne and Cooke's.

"I don't know, I'm sure," she said, pushing past them. "I always shop at the Stores." Which just shows, as Jane said, how ignorant grown-up people are.

It was a policeman who at last explained to them that England's Mysteries are now appropriately enough enacted at St George's Hall. [33]

This exchange demonstrates the currency of the London shows in Nesbit's narrative: there is no need to explain the "ignorance" Jane attributes to the hurried lady, because period readers would have shared with the protagonists a deep familiarity with the immersive attractions mounted at the Egyptian Hall and typified by Maskelyne and Cooke's (figure 4). The latter exhibition made its permanent home in the Egyptian Hall from 1874 until 1904, at which point it was forced (presumably by the building's impending

demolition) to relocate to St. George's Hall at Langham Place. [34] The children follow the policeman's directions:

[T]hey tramped to Langham Place, and missed the first two items in the programme. But they were in time for the most wonderful magic appearances and disappearances, which they could hardly believe—even with all their knowledge of a larger magic—was not really magic after all. [35]

## Living Objects

While seated in the audience, the children are startled by the sudden appearance beside them of the Egyptian "priest" Rekh-mara, a fictional character modeled on the historical figure of Rekhmara, an 18<sup>th</sup>-Dynasty Egyptian noble whose tomb was excavated by the Scottish archeologist Alexander Henry Rhind in 1857. In an earlier chapter, Nesbit's Rekh-mara followed the children from Ancient Egypt back through the amulet's magical arch into the present, and has since been at large in London. Possessed of a sharp eye, the magician on stage, whose name is given as "Mr. David Devant," notices Rekh-mara and announces, "Ladies and gentlemen...this is a trick I have never before performed. The empty seat, third from the end, second row, gallery—you will now find occupied by an Ancient Egyptian, warranted genuine." [36]

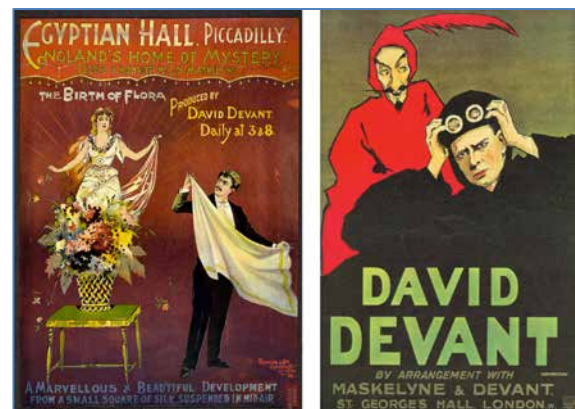


Fig. 5. Left: David Devant at the Egyptian Hall, 1895. Image, the British Library. Right: David Devant at St. George's Hall, n.d. Image, the Bill Douglas Cinema Museum, University of Exeter.

This plot point further evidences the culture of display at venues like the Egyptian Hall and St. George's Hall, where a magician known as David Devant in fact did perform regularly, as period posters attest (figure 5). Moreover, Altick's and Abrahams's inventories show that both venues were active sites in the period practice of exhibiting living people as though they were objects. Nesbit's magician's exhortation to regard Rekh-mara as an "authentic" object of display comports with the manner in which human bodies were reified by the workings of colonization. Scholar of



visual and material culture and literary studies Sophie Thomas distinguishes between the exhibitionary concepts of “person-things,” exemplified by the Elgin Marbles at the British Museum (and equally well-represented by the example of waxworks, to which Nesbit refers), and “thing-persons,” characterized with the example of William Bullock’s six-week display of a living Norwegian Laplander family and their live reindeer at the Egyptian Hall in 1822. [37]

Such exhibitions reveal a British way of seeing the rest of the world and its contents as objects, rather than as agentive subjects. A cursory scan of Abrahams’s 1906 inventory of exhibitions at the Egyptian Hall turns up a host of similar examples of humans displayed as thing-persons (figure X). The inclusion of human beings as artifacts for material display in the same venues where panoramic and immersive media were shown demonstrates the imperial significance of the London shows: this mode of display was a key method for producing a lived experience of the transpersonal reality of empire.

|      |   |
|------|---|
| 1822 | Joannes Holm, a native Norwegian Laplander, with his wife, child, reindeer, etc.  |
| 1824 | An Esquimaux Man and Woman  |
| 1824 | Modern Mexico. In the foreground is an Indian hut, completely furnished and inhabited by the only Mexican-Indian who has visited Europe since the natives sent by Cortes to the King of Spain   |
| 1829 | The Siamese Twins, Age 18   |
| 1830 | Tableaux Vivants, Ancient Pictures Presented by Living Figures  |
| 1831 | A Double Sighted Boy, M’Kean, Aged Eight Years  |
| 1837 | A Living Male Child with Four Hands, Four Arms, Four Legs, Four Feet, and Two Bodies, Born at Stalybridge.  |
| 1844 | German Lilliputians in a Dramatic Pantomime Ballet of Action entitled “Napoleon’s Generosity”   |
| 1845 | The Bushmen Children. A Girl and a Boy 32 and 44 Inches High Respectively   |
| 1846 | Professor Kist’s Poses Plastiques and Tableaux Vivants  |
| 1846 | The Family of Bosjemans   |
| 1847 | Second Family of Bosjemans from South Africa  |
| 1855 | The African Twins, Christina and Milly. “These extraordinary children, only five years old, and whom Nature has linked by an indissoluble band about 16 inches in circumference, having excited the most intense interest, will be on view, etc.” |
| 1865 | Chang, the Chinese Giant, and his Attendant Dwarf, only 3 Feet High   |
| 1867 | Blind Tom, the Musical Prodigy, a Negro Boy Pianist   |

Fig. 6. Exhibitions of human beings at the Egyptian Hall, distilled from Abrahams’s essay in *The Antiquarian*, 1906. Image, the author.

Nesbit’s quest-plot culminates with the merging of two characters, the Egyptian priest Rekh-mara and the “dear learned gentleman” who works for the British Museum and lodges on the top floor of Old Nurse’s home in Fitzroy

Street. This fusion produces a new scholar of Ancient Egypt whose eminence will emerge from his capacity not just to excavate the past, but also to viscerally and personally “remember” it. The two parts of the amulet are similarly reunited, and the children’s hearts’s desires are fulfilled by the consequent return of their parents and baby brother. They turn the precious artifact over to the care of the newly-formed scholar, secure in the knowledge that he will eventually donate it to the British Museum, for this they foresaw on their visit to “future-London.”

## Conclusion

Nesbit’s narrative postulates history writing as a form of time travel, and reveals the terms in which Britain’s colonial expansion was marketed and valorized for period audiences. She was not coding her references; rather, they would have been obvious to readers of her own generation, for whom the cultural context of exhibition was all-pervasive, even if this context has since been obscured by the sedimentation of successive media cultures of cinema, television, internet, and social media. Nesbit’s description of her own formative early experiences at London’s Crystal Palace, set forth in her later nonfiction publication *Wings and the Child*, confirms her stories as artifacts of the visual and discursive culture of mediated global spectacle that emerged in the context of British imperial expansion. She sets a long meditation on the Crystal Palace at the heart of this 1913 work of instruction on early childhood education. The book is illustrated by photographs of dioramas she created with children, followed by instructions on the imaginative use of everyday objects to create magic worlds:

In the Victorian days we sneer at, when our fathers could not see that there was any quarrel between knowledge and beauty, both of whom they loved, they built the Crystal Palace as a Temple vowed to these twin Deities of their worship. Think what the Crystal Palace was then. Think what its authors intended it to be. Think what, for a little time, it was. A place of beauty, a place where beauty and knowledge went hand in hand.

I shall never see the Alhambra now, but it is because of the Spanish Court at the Crystal Palace that there will always be an empty ache in my thought, an ache of the heart, a longing that is not all pain, at its name, a feeling like a beautiful dwarf despair, in that I never shall see that blue and red and golden glory, and the mystery of its strange mis-shapen arches that open to the whole world of dreams. [39]

Nesbit’s exhortation to creative worldmaking mirrors that which she practiced in her own novels, and which entrepreneurs and showmen engaged in their multifarious production of the London shows. But that world was fading, and the British Empire was reaching the limit of its imperialist dream. As we seek to make the worlds of tomorrow, we would do well to reflect on the ongoing

mediated intersections of representation, identity, and built space that we negotiate today.

## Notes

1. Bellairs, 1973, 14.
2. Bellairs, 24-25.
3. Bellairs, 78. The narrator observes, "they watched the whole thing from behind a low wall that looked a great deal like the wall on John O'Groats."
4. Briggs, 2018; Briggs, 2019.
5. Briggs, 1987, xi, xix.
6. Nesbit, 24.
7. Altick, 1978, 4.
8. Altick, 3-4.
9. Reimer, 2006, 40, quoting Jameson, 1980, 30.
10. Reimer, 2006, 40.
11. Knoepfmacher, 1987, 320.
12. Nead, 2005, 3.
13. Moser, 2006, 2.
14. Moser., 32.
15. Nesbit, 1906, 232.
16. This had been the subject of Burford's *Panorama of Baalbek* in 1844; Altick, 1978, 182.
17. Nesbit, 1906, 346. Reimer, 2006, builds context for this brief plot point by noting that Nesbit was arguing for a nationalist perspective on service in the still-active Boer War, 47.
18. Nesbit, 1906, 347.
19. Abrahams, 1906, 61.
20. Abrahams, 140.
21. Abrahams, 142.
22. Abrahams, 226.
23. Altick, 1978, 206; Abrahams, 227.
24. Abrahams, 226.
25. Altick, 461 and Abrahams, 227.
26. Altick, 182.
27. Altick, 473.
28. Abrahams, 227.
29. Abrahams, 228.
30. Abrahams, 228.
31. Abrahams, 229.
32. Abrahams, 229.
33. Nesbit, 1906, 348.
34. Altick, 504.
35. Nesbit, 1906, 347-348.
36. Nesbit, 1906, 349.
37. Thomas, 2016.
38. Abrahams, 1906, 139-229.
39. Nesbit, 1913, 50-51.

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# Panstereoramas and Parks: A Comparative Study of Amusement

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## Abstract

Panstereoramas, or miniatures, are a convenient way of representing multiple 3D structures in a dispersed manner, such as in a specifically landscaped park. The number of outdoor miniature parks in urban environments is growing; one database reports close to 100, concentrated mostly in Europe (the UK) and North America (the USA). Evidently, visitors enjoy the opportunity to see more structures (often from distant areas) for less money and time at such environments, where miniaturization is the main attraction. Yet miniature parks, like many carefully crafted attractions, embody and perpetuate certain utopian narratives—say, of unity, peace, and understanding—while monitoring leisure. Using examples from several miniature parks, including *Mini Europe* (Brussels, Belgium), *Miniaturk* (Istanbul, Turkey), and *Mini Bulgaria Park* (Veliko Tarnovo, Bulgaria), I reflect on whether miniature parks, despite being a beloved form of “safe,” family-friendly entertainment, function as tools of social control. A comprehensive list of existing miniature parks, based upon my original research and fieldwork, is available upon request.

## Keywords

Panstereoramas, Models, Miniatures, Miniature Parks, Wonder, Amusement, Accuracy, Ideology, Social Control

## Panstereoramas: Perfect or Problematic?

The word “panstereorama” comes from the Greek “pan”=all, “stereos”=solid, and “horama”=view, and it means “a comprehensive solid view,” or simply, a “model” or a “miniature”; [1] I will use these words interchangeably throughout this essay. A panstereorama is a 3D representation of an environment, which aims at accuracy, just like its famous cousin, the 360-degree painted panorama. Unlike it, the panstereorama relies not on perspective but on miniaturization to help create an immersive environment. This difference can be observed in details from a panorama (Fig. 1) and a panstereorama (Fig. 2) of the same event—The Battle of Waterloo of 1815.



Fig. 1. Panorama detail: The Duke of Wellington and his soldiers (top right) sheltering from French cuirassiers. *Panorama of the Battle of Waterloo*, Belgium. Credit: Dennis Jarvis.



Fig. 2. Panstereorama detail: The Duke of Wellington, right arm outstretched, winner of the Battle of Waterloo, *Waterloo Model*, Green Jackets Museum, Winchester, UK. Credit: Dailymail.com.uk.

In his comprehensive study *The Panorama: History of a Mass Medium*, Stephen Oettermann explains this difference and the historical connection between painted panoramas and panstereoramas:



“There is a closer connection between this type of three-dimensional model and the panorama than just the name. Both stem from the same desire to reproduce a particular region as precisely as possible, to create an exact duplicate. The panorama uses perspective to achieve this, the panstereorama uses miniaturization. For the average person whose eye was untrained in art, the three-dimensional form of the relief required less sophistication and abstraction.” [2]

Oettermann posits that it was easier to experience the 3D panstereorama than the 2D painted panorama, because the general visitor could adjust to miniaturization without special practice—something harder to do with perspective. Because of their reliance on accuracy, panstereoramas, unlike painted panoramas, have been used not only as mass entertainment but also as tools for military strategy, in shipbuilding, architecture, and marketing. Model making, reminds us the late Congolese artist Bodys Isek Kingelez, is essential for nationhood—the feeling of pride in one’s nation and national belonging—and by extension, for national independence:

“Without a model, you are nowhere. A nation that can’t make models is a nation that doesn’t understand things, a nation that doesn’t live.” [3]

But models are also linked to our private experience of selfhood. According to Susan Stewart in *On Longing: Narratives of the Miniature, the Gigantic, the Souvenir, the Collection*, miniatures embody “closure, interiority, the domestic, and the overly cultural” [4] as well as “nostalgia” and “private individual history.” [5] They are “uncontaminated” and “perfect.” [6] Yet, their perfect nature comes at a cost: just like any representation, panstereoramas are subject to the hopes and fears of those who create and display them; they are ideological and exploitable. Writes Stewart:

“The miniature, linked to nostalgic versions of childhood and history, presents a diminutive, and thereby manipulatable, version of experience, a version which is domesticated and protected from contamination.” [7]

Panstereoramas (or miniatures) are thus anything but a sweet, naïve, and innocent choice of representing the built environment. They embody our desire to know, to grasp, to hold, to control, to own, to keep, to take away. They occupy a special place in the world of representation, allowing us to tell stories both about that, which is miniaturized, and our relationship (real or imagined) with it.

## The Allure of the Panstereoramic Park

Panstereoramic (or miniature) parks display many miniatures from different environments—cities, countries, continents, the world—within their beautifully and strategically landscaped gardens. Here, visitors can meander around, get close to, and photograph the miniature structures and their intricate details like nowhere else (Fig. 3). They can see more (more structures from distant areas) for less (less money, less time), which makes the miniature park a highly sought-after attraction, year-round.



Fig. 3. Various European landmarks from distant and recent history at *Mini-Europe*, Brussels, Belgium. Buildings: 350, from EU’s member countries; Scale: 1:25 [8]; Park Area: 300,000 sq. ft. (27,870 sq. m.) [9]; Visitors per year: 350,000. [10] Credit: <https://visit.brussels/en/place/Mini-Europe>.

The International Association of Miniature Parks (IAMP)—a trade organization based in Belgium—considers a miniature park “any group of model or miniature buildings in a landscape open to the public,” displaying “scale models of whole towns and cities” or “made-up” structures. [11] Since they often exhibit miniatures that are of historical, architectural, or cultural significance, miniature parks are created, as Zohre Bulut and Hasan Yilmaz claim, for “education, recreation and tourism.” [12]

Furthermore, the tokens of cultural heritage that miniature parks display become more valued once miniaturized. The importance of an existing landmark is confirmed through the miniature representation, and the status of said landmark doubles up: as itself and as its miniature. Thus, miniature parks are significant sites of cultural heritage production, like museums. And just like in museums, each miniature building is represented as “a single object of an exhibition,” as per Esin Osmanoglu, who calls Turkey’s famed *Miniaturk* in Istanbul an “open-air museum.” [13] (Fig. 4) Other miniature parks also call themselves that, proving their conscious decision to be more than just a fun attraction.



Fig. 4. Süleymaniye Mosque at *Miniaturk* in Istanbul, Turkey. Buildings: 135, from Istanbul, Anatolia, and former Ottoman territories; Scale: 1:25; Park Area: 650,000 sq. ft. (60,387 sq. m.) [14]. Credit: <https://www.ceetiz.com/istanbul/golden-horn-and-miniaturk-guided-tour>.

Despite the fact that there are many miniature parks out there, no reliable online site agrees on their exact number: IAMP has 16 miniature parks on its registry [15]; Wikipedia—60 [16], and MiniAmerica—100. [17] None of them includes the following miniature parks that I have personally visited/or written about:

- *Mini Bulgaria Park* in Veliko Tarnovo, Bulgaria, which opened in 2017; [18]
- *Gulliver's Gate* in New York City, USA, which opened in 2017; [19]
- The *Miniland* exhibits at various Legoland parks, the first of which opened in 1999; [20]
- *The Holiday Train Show* at the New York Botanical Garden in the Bronx, New York, an annual seasonal tradition, which started in 1992; [21]
- *The New York-New York Hotel and Casino*, in Las Vegas, Nevada, USA, which opened in 1997; [22]

Evidently, there is no centralized organization and/or online database tracking miniature parks worldwide—a drawback for researchers and enthusiasts alike. A centralized organization could help improve individual miniature park promotion and miniature park cooperation. IAMP lists only its “member” parks on its website, which suggests that the membership fee is beneficial but also exclusive. The variations in miniature park status, funding, relationship to local and national government, and even definition of the term itself (some parks are seasonal, for instance) contribute to the difficulty in creating a centralized database. So, since I found myself wishing for a comprehensive listing of miniature parks worldwide and since I could not locate it anywhere, I prepared it myself. It combines the lists of IAMP, Wikipedia, and MiniAmerica with my own fieldwork and research, and is available upon request.

## Wonder at Miniature Parks

I am always at awe in the presence of miniatures: I stand still, unable to make a movement or sound. This happens when I first catch a glimpse of a miniature, but even more so when I catch a glimpse of a miniature sprawl in a landscaped park... I am wonderstruck. (Fig. 5)



Fig. 5. A child admires the miniature trains going around the buildings constructed from all natural materials at the annual, seasonal *Holiday Train Show* at The New York Botanical Garden in the Bronx, New York, USA. Credit: *The Holiday Train Show*.

In his book *Marvelous Possessions: The Wonder of the New World*, Stephen Greenblatt defines wonder as “the decisive emotional and intellectual experience in the presence of radical difference.” [23] He is referring to the encounter between the European colonizers and the natives of the New World. Discussing the politics of people dominating and representing other people, Greenblatt uses Descartes, who suggests that wonder is “the first of all the passions,” which “has no opposite” and “precedes, even escapes, moral categories”; as well as Spinoza, who characterizes wonder as “a paralysis” [24]. As an “instinctive recognition of difference,” wonder thus accompanies “the discourse of discovery” and Greenblatt delineates it as twofold: a quality put upon an object or a manner of response. Thus, whatever is bestowed the quality of wonder, can be “touched, categorized, inventorized, possessed” [25] and is thus exploitable, like miniatures.

How can Greenblatt’s discussion of wonder from a different context be useful to us with miniature parks?

1. At miniature parks, we engage in travel, on a much smaller scale and with different consequences;
2. At miniature parks, we experience representation through miniaturization, which too encourages possession, though differently;
3. Europe has the most miniature parks—evidence of dominance in this representational practice. “Representational practices,” reminds us Greenblatt, are “ideologically significant” [26];



4. At miniature parks we too deal with the encounter of difference: of structures that are sometimes from places foreign from ours;
5. Representing foreign worlds implies knowing and even controlling them. “Thrilling” yet “potentially dangerous” [27], wonder points directly, warns Greenblatt, to the “assimilation of the other” [28];
6. Representations are “not only products but producers,” [29], insists Greenblatt; they encapsulate but also spread a certain belief system.

Clearly, representations such as miniature parks are significant not only because of how a certain practice and ideology have produced them but also because they themselves produce and perpetuate practices and ideologies.

### Miniature Parks Travelogue

Miniature environments belong to several categories: self-contained (singular, experienced from the periphery, such as a scale model of a city); semi-dispersed (spread out, experienced from the periphery, such as several scale models that you can walk around); and dispersed (spread out, experienced from the inside, such as a miniature park).

#### The Self-Contained Miniature

My first visit to a large miniature environment was in 1998, to the *Panorama of the City of New York*—a gigantic model of the metropolis on permanent display in the Queens Museum, New York. (Fig. 6) Legacy of the 1964-65 New York World’s Fair and Robert Moses, *The Panorama* is a paradoxical exhibit: aerial yet pedestrian, accurate yet ideological, living yet lifeless, and misnamed: it is a panstereorama, not a panorama, experienced from an elevated, peripheral skywalk. The International Panorama Council (IPC) held its 2017 annual conference there. [30]



Fig. 6. *The Panorama of the City of New York*, Queens Museum, New York City, USA. Buildings: 900,000; Scale: 1:1200; Area: 9,335 sq. ft. (867 sq. m.) [31]. Credit: Queens Museum.

#### The Semi-Dispersed Miniature Environment

In 2000, I visited the *New York-New York Hotel and Casino* in Las Vegas, Nevada, USA, where one can take rides and walks among scaled down NYC skyscrapers, the Statue of Liberty and the Brooklyn Bridge. (Fig. 7)



Fig. 7. *The New York-New York Hotel and Casino*, Las Vegas, Nevada, USA. Credit: [https://en.wikipedia.org/wiki/New\\_York-New\\_York\\_Hotel\\_and\\_Casino](https://en.wikipedia.org/wiki/New_York-New_York_Hotel_and_Casino)

Since 2007, I have been paying annual visits to *The Holiday Train Show* in The New York Botanical Garden in New York, USA. With close to 200 past and present New York City and State buildings, constructed with natural materials—branches, leaves, twigs, and cones—and a ½ mile track of miniature trains looping around them—it is Paul Busse’s brainchild and masterpiece of “botanical architecture.” [32] (Fig. 8). In 2019, the exhibit had 2,000 plants, 25 pounds of cedar bark, and 200 boxes of moss. [33]



Fig. 8. Manhattan Skyscrapers cluster at *The Holiday Train Show*, New York Botanical Garden, The Bronx, New York, USA. Credit: <https://www.atlasobscura.com/places/holiday-train-show-at-nyc-botanical-gardens>

In 2017, New York City got its first indoor miniature park, *Gulliver's Gate*—a mecca of miniature worlds filling up several galleries inside a Times Square building. Its 25 model cities from 5 continents are constructed by different architectural companies—typical of dispersed miniature environments—and positioned on elevated platforms, to be viewed from their periphery only—atypical for miniature parks. *Gulliver's Gate* was the highlight of our 2017 IPC post-conference trip.



Fig. 9. New York City at *Gulliver's Gate*, Times Square, New York City, USA. Buildings: 25 model cities; Scale: 1:87; Area: 49,000 sq. ft. (4552 sq. m.) [34]. Credit: *Gulliver's Gate*.

### The Dispersed Miniature Environment

But my first visit to an outdoor miniature park proper was at *Mini-Europe* in Brussels, Belgium (open since 1989), in the summer of 2018, followed by a visit to *Miniaturk* in Istanbul, Turkey (open since 2003), during our IPC conference there in the fall of the same year. In the summer of 2019, I visited the miniature park *Mini Bulgaria Park* (open since 2017) in Veliko Tarnovo, Bulgaria. (Fig. 10)



Fig. 10. The Alexander Nevski Cathedral, Sofia at *Mini Bulgaria Park*, Veliko Tarnovo, Bulgaria. Buildings: 70, from around the country; Scale: 1:25, Area: 139,931 sq. ft. (13,000 sq. m.). [35] Credit: <http://iskamdaletya.com/mini-bulgaria/>

With their beautifully landscaped gardens, accentuated by the masterfully crafted miniatures, outdoor miniature

parks create feelings of openness, freedom, and relaxation. Visitors flock to them alone or with family and friends, despite the weather. They take expensive cameras to the magnificent miniatures and snap pictures, which, with the right angel, may include several landmarks in a single frame! Miniature parks are both amazing and convenient.

### History of Miniature Parks

Miniature parks developed in early 20<sup>th</sup> century Europe, as people began to put model buildings and trains in their “private gardens,” eventually opening them “to the public.” [36] They are thus descendants of pleasure and aristocratic gardens (with their landscape design, arrangement, and meandering walks); urban parks (with their open structure and accessibility); and world’s fairs (with their representation of miniature worlds and environments). Notice, for instance, the meandering ground design of Belgium’s *Mini-Europe* (Fig. 11), in contrast to the perfect symmetry of France’s *Gardens of Versailles*. (Fig. 12) Such flexible design suggests that at the miniature park there is no monitoring of leisure. But is that the case?



Fig. 11. Panoramic view of *Mini-Europe*, Brussels, 2015. Credit: Ruzanna Arutyunyan, 123RF.com.



Fig. 12. Aerial view of the *Gardens of Versailles*. Credit: <https://www.hisour.com/gardens-of-versailles-38423/>.

The oldest miniature park, *Bekonskot Model Village & Railway* (Fig. 13), opened in Beaconsfield, England in 1929



and is still operational, having attracted over 15 million visitors over the years. The biggest draw here is the past:

“Stuck in a 1930s time warp, see England how it used to be, & discover a wonderful little world tucked away from the hustle & bustle of everyday life.” [37]



Fig. 13. *Bekonscot Model Village & Railway*, Beaconsfield, England. Since 1929. Current models: Buildings (fictional): 200 in 7 towns; People: 3,000; Animals: 1,000; Vehicles: hundreds; Railroad: a Gouge 1; Scale: 1:12; Area: 1.5 acres. Owner: The Church Army. Donations to charity over the years: 5.5 million pounds. [38] Credit: <https://www.bekonscot.co.uk/gallery/>

The first of its kind, *Bekonscot* provided the inspiration for the second miniature park to open doors in 1952, *Madurodam*, in the Hague, the Netherlands. [39] (Fig. 14)



Fig. 14. *Madurodam* in the Hague, the Netherlands, opened in 1952. Current models: Buildings: 338; Bridges: 27; Cars: 5,000; Tramways: 3; Trees: 5,500; Plants: 55,000; People: 65,000; Scale: 1:25; Total Area: 538195 sq. ft. (50000 sq. m.). Visitors per year: 700,000. Donations to charities for children over the years: 34 million euro (total annual revenue: 600 000-700 000 euro donated). [40] Credit: <https://www.bekonscot.co.uk/historical-links/>

The instigator behind *Madurodam* was Mrs. Boon-van der Starp, who tried to raise money for a tuberculosis sanatorium. The parents of George Maduro, a war hero, gave the initial capital for the project, and that’s how the miniature park got its start and its name. The website introduces *Madurodam* as “a small city full of beautiful miniatures, playful activities and the best attractions,” where one can discover “The Netherlands in one hour,” and see how the country has developed from olden times to the present as “characteristic, free and eccentric.” [41]

What becomes evident in these early miniature parks and subsequent developments is that despite the display variations—single or multiple models of cities, countries, continents—they all offer history and culture packaged as entertainment. As such, they are rightful participants in the development of popular culture, itself focused on “the sell, and purchase, of fun,” [42] as summed up by LeRoy Ashby, in regards to popular culture in the USA.

The marketing language of superlatives on the websites of miniature parks proves that: the parks are painted as “the oldest” (*Bekonscot*), “the most wonderful” (*Mini Bulgaria Park*), “the ideal place” (*Miniaturk*), with “the most beautiful towns” (*Mini-Europe*). Miracles can happen at these parks due to the “captivating” and “enchanted” display (*The Holiday Train Show*), where appreciation unravels over time: “the more you look, the more you see” (*Miniland USA Legoland California*). [43] Of course, each site is also unique: *Miniland New York*, currently under construction, promises that it will “include buildings never before seen at any Legoland park.” [44] (Fig. 15)



Fig. 15. *Miniland New York*, Legoland New York, scheduled to open in 2021. Credit: Facebook.com/LEGOLANDNewYork

## Dispersed Miniature Environments: Features and Problems

To understand the complexity of miniature parks, let's examine some of their most prominent features and advantages: proximity, convenience, education, personalized ownership, design collaboration, and interactivity; as well their respective problems: the weather, out of context, ideology, generalizations, no uniform design, and social control.

**Feature #1: Proximity (I Can Touch This!)** At miniature parks, you can get quite close to some individual structures, almost touch them, take pictures of their details, and view them from all sides. This proximity to the miniatures can spark curiosity to visit the real structures and thus promote travel, tourism, and adventure! **Problem:** Miniatures are subject to inclement weather and careless visitors.

**Feature #2: Convenience/Time and Cost-effectiveness (The More the Merrier!)** At miniature parks, the landmarks are not located according to their proximity to each other outside the park, so you can see lots of landmarks in one place and thus save time, money, and travel hassle. **Problem:** Taken out of their own original context, the structures in the miniature park rely solely on the context created by park.

**Feature #3: Education through Entertainment (We are Giants!)** At miniature parks, you discover a place, a culture, a time-period through entertainment: Next to the miniature, you can feel like a giant, thus inverting the standard relationship between structure and person. As a result, you invert the narrative of experiencing the built environment: at miniature parks you dominate it instead of being dominated by it. **Problem:** The choice (and order) of replicas spins a certain narrative. *Mini-Europe*, some argue, is an overly optimistic belief in the EU...

**Feature #4: Personalized Learning (Owning the Miniatures)** The visitor's physical proximity to the miniatures and the illusion of private discovery due to the meandering walks and landscaping (public yet private!), make it possible for anyone to make any miniature or all of them his/her own! **Problem:** Singling out structures, which represent entire countries and diverse cultures, invites generalizations and misrepresentations (in terms of the representation itself and viewing it).

**Feature #5: Design Collaboration (Teamwork!)** While a single miniature has a single model-maker, the miniature parks employ many model-makers, of various companies, backgrounds, trainings. What matters is collaboration, except for the scale of structures, which is uniform across

each miniature park. **Problem:** No uniformity of design can suggest no uniform vision, and thus no uniform "look."

**Feature #6: Interactivity (Model Worlds Make Model Visitors)** To make the experience more memorable for the visitors, miniature parks create various modes of interaction and participation. **Problem:** These interactions and participation confirm the world of the miniature: it is exemplary and we, its visitors, should be exemplary as well.

Thus miniature parks, though providing a safe, fun space for experiencing history and culture, are what Michel Foucault would call "heterotopias" [45]—sites with their own regulations and sense of time. As such, they have the unique opportunity to stage and maintain narratives of nationhood, unity, and uniformity to an enviable degree. Coupled with the impression of experiencing the park in private through its meandering walks while their open, flat landscaping provides total visibility, miniature parks put on a grand illusion, not unlike that of painted panoramas. At panstereographic parks, therefore, miniaturization and park landscaping help monitor leisure (how visitors behave in public), interactions with otherness (among visitors and with structures), and fun; they are crafty instruments of "social control," [46] sharing that function (or perhaps burden) with urban parks and museums.

## Concluding Remarks

Miniature parks offer history, heritage, and culture at your fingertips. They are important agents of national and cultural identity, and pride. With their carefully landscaped greenery and the skies above, outdoor miniature parks create a feeling of openness, freedom, and relaxation, which you can enjoy in the company of friends and family, or alone. You can snap views of distant famous landmarks, from multiple angles. Indeed, miniature parks offer an experience like no other!

But let's not forget that miniature parks also generalize and perhaps misrepresent, offering heritage more so than history [47] thus controlling social interactions and cultural memory. Utopian dreams of unification are handled with great care unlike our realities of diversity. Ultimately, the narratives about the larger world environments that miniature parks spin are, at worst, ideological and nationalistic; and at best, incomplete. They show us that these representations are more so about the representer and less so about the represented.

*Post Script.* As I was preparing this article for publication, I received two pieces of disheartening news: *Mini-Europe* in Brussels, Belgium, is closing permanently at the end of 2020 due to financial hardship; and *Gulliver's*

*Gate* at Times Square, New York, USA, has filed for bankruptcy and is permanently closed. The financial responsibility of running a miniature park is not something that I examined here but it should be given serious consideration. I would like to remain hopeful about what the future holds for both *Mini-Europe* and *Gulliver's Gate*, as they offer opportunities to escape into a miniature world for respite and fun in order to re-enter the gigantic world outside with a renewed sense of appreciation, if not awe.

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Blagovesta Momchedjikova, PhD, specializes in panstereoramas, memory, and all things urban. She teaches writing, art, and the city at New York University. She is the editor of *Captured by the City: Perspectives in Urban Culture Studies* (2013) and *Streetnotes: Urban Feel* (2010), as well as co-editor of *Sounds of the City* (2020, pre-publication); *From Above: The Practice of Verticality* (2019); *The Panorama Handbook: Thoughts and Visions On and Around the Queens Museum Panorama of the City*



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