

PANORAMA

International Panorama Council Journal, Volume 5
Selected Proceedings from the 30th IPC Conference

2021



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International Panorama Council

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International Panorama Council Journal, Volume 5

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Preface

The International Panorama Council (IPC) is the international organization of specialists committed to supporting the understanding and conservation of existing heritage-era panoramic media from the 19th and early 20th centuries. We promote knowledge and awareness of the panorama phenomenon, including the current state of its development and relevance, and stimulate professional trusteeship and worldwide research and discourse on historic and contemporary production, restoration, financing, exhibition, marketing, and interpretation of panoramas and related media. The International Panorama Council is a non-government and not-for-profit association, subject to Swiss law.

The past year has seen steady and sustainable growth in the breadth and depth of IPC's service to individual and institutional members. The year culminated with the 30th annual IPC conference, hosted by the New Bedford Whaling Museum (NBWM) in New Bedford, Massachusetts, USA. This was our first conference anchored by a moving panorama, and sessions took a variety of approaches to the theme of *Time and Travel*. Panoramas and related media have always facilitated virtual explorations, surrogate travel, and wistful journeys, and Caleb Purrington & Benjamin Russell's *Grand Panorama of a Whaling Voyage 'Round the World* (1848) is a key exemplar. Held in the collection of the NBWM and currently on display at Mystic Seaport Maritime Museum in nearby Mystic, Connecticut, this panorama continues to bring the rarefied seafaring experiences of whalers to broad audiences, much as it did in the time of its production. As a medium, the moving panorama's close association with geographic movement, including whaling routes, alpine ascents, and trips down the Mississippi River, yields inherently time-based experiences. Circular panoramas condense

time and space in other ways, as for example by presenting extended "moments." Both panoramic forms offer virtual "time travel" to other eras and historical viewpoints, and both afford opportunities for finding common ground through shared experiences of uncanny co-presence.

When it became clear that the ongoing global coronavirus pandemic would require us to deliver a virtual conference for a second year in a row, we drew inspiration from the capacity of panoramic media to deliver transporting immersive experiences. We made the most of the opportunities afforded by twenty-first century technology and developed the IPC's most expansive conference program to date, a four-day online program in which 38 presenters from 17 countries distributed across five continents presented in 11 thematically distinct sessions. A small contingent of IPC administrators gathered to administer the event live on site, and the NBWM's collections served as the backdrop for the sessions and the focus of conversation during coffee breaks and social hours. If any organization knows how to make the virtual feel like the actual, it is the IPC!

We are pleased to announce that the 2022 conference will be hosted by the Luxembourg City Museum in Luxembourg, with tentative dates 13–17 September. We are planning an initial day of virtual sessions followed by two days of in-person sessions and an in-person post-conference tour. The conference theme, call for proposals, and further details will be released in Winter 2021/22. We are equally pleased to announce that the 2023 conference will be hosted by the University of Iowa Museum of Natural History in Iowa City, Iowa, USA.

While the annual conference is the IPC's most visible activity, we are busy throughout the year. In 2021, we hosted an ongoing series of international meetings including a summit on panorama conservation focused on the Borodino Panorama in Moscow, Russia, and a monthly meeting on historiography, post-colonial studies, and monumental media. Our annual summer newsletter distills worldwide activity in panorama production, production, conservation, curation, administration, and scholarship, and our website delivers news throughout the year. Members and nonmembers alike are invited to submit news items by emailing the IPC Secretary-General, Thiago Leitão de Souza. We continue to distribute our most recent book publication, *More Than Meets the Eye: The Magic of the Panorama* (2019), edited by IPC member and current Vice President Gabriele Koller and published by Büro Wilhelm Verlag, Amberg, Germany. We continue to streamline IPC operations and steward our resources through ongoing improvements to administrative infrastructure and processes.

The IPC Journal is a particularly robust area of activity and the past year saw the reorganization and expansion of its administrative body, the IPC Journal Committee. Journal founder Seth Thompson continues to serve as the Editor-in-Chief and the roster of Associate Editors has increased from four individuals to eight in order to more sustainably support the editorial process.

To manage the IPC's wide sphere of activity, our organization relies on its office holders, standing committees, and ad hoc committees. The Executive Committee consists of the elected President (currently, Co-Presidents), Vice-President, Treasurer, and Secretary-General. The Executive Board consists of the

members of the Executive Committee plus two elected at-large Members. The Board's activities are in turn supported by the Advisory Board, Conference Planning Committee, Conference Scientific Committee, Technical Committee, Journal Committee, Auditing Committee, Ad Hoc Cultural Routes Program Liaison, and Community Outreach Coordinator. We invite IPC members who would like to become more involved to contact Secretary-General Thiago Leitão de Souza by email.

We could not pursue our complex mission without the collegial, intellectual, and financial support of our members. In particular, we would like thank our current Institutional Members, who make our mission possible:

- Asisi Panorama International GmbH
- Battle of Borodino Museum-Panorama
- Luxembourg City Museum
- Lu Xun Academy of Fine Arts
- Ópusztaszer Panorama Memorial Park
- Panorama 1326 Bursa Conquest Museum
- The University of Iowa Museum of Natural History

With gratitude, and every good wish for all your projects,

Molly Catherine Briggs and Sara Velas
Co-Presidents

2021 International Panorama Council Institutional Members



Asisi Panorama International GmbH

Berlin, Germany

<https://www.asisi-international.com/>



Battle of Borodino Museum-Panorama

Moscow, Russia

<http://1812panorama.ru/>



Luxembourg City Museum

Luxembourg, Luxembourg

<https://citymuseum.lu/>



Lu Xun Academy of Fine Arts

Shenyang, China

<http://www.lumei.edu.cn/>



Ópusztaszer Panorama Memorial Park

Ópusztaszer, Hungary

<https://opusztaszer.hu/>



Panorama 1326 Bursa Conquest Museum

Bursa, Turkey

<https://www.panorama1326.com.tr/>



**The University of Iowa
Museum of Natural History**

Iowa City, Iowa, USA

<https://mnh.uiowa.edu/>

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30th International Panorama Council Conference

Hosted by the New Bedford Whaling Museum, New Bedford, Massachusetts, USA

September 15-18, 2021 via Zoom Meeting



Conference Program

Shown in Greenwich Mean Time (GMT)

DAY 1 WEDNESDAY, SEPTEMBER 15

13:30–14:00 Virtual Check-in

14:00–14:05 IPC Presidents' Welcome
Sara Velas & Molly Briggs

14:05–14:10 IPC Secretary-General's Welcome
Thiago Leitão de Souza

14:10–14:20 New Bedford Whaling Museum Welcome
Naomi Slipp, Douglas and Cynthia Crocker Endowed Chair for the Chief Curator

14:20–15:40 **Session I | Introducing the Moving Panorama**
Moderators: Ruby Carlson & Irina Gribova

Resurrection of *The Grand Panorama of a Whaling Voyage 'Round the World*

D. Jordan Berson, Director of Collections, New Bedford Whaling Museum

Keywords: Grand Panorama of a Whaling Voyage 'Round the World, Caleb Purrington and Benjamin Russell, Conservation, Moving Panorama, Exhibition

The Discovery of Fragments of *Cyclorama Reichardt* in the Collection of the Rijksmuseum

Maud van Suylen, Rijksmuseum, Amsterdam, Netherlands

Keywords: Discovery, Cyclorama, Reichardt, Exhibition

A Man, a Horse-Drawn Wagon, and a Moving Panorama

Peter Morelli, Independent Researcher, Portland, Maine, USA

Keywords: Moving Panorama, Travel Diary, Exhibitor, New England, California

New England's Mill Girls and Exhibitions

Suzanne Wray, Independent Researcher, New York City, New York, USA

Keywords: Mill Girls, New England, Textiles, Moving Panorama

- 15:40–15:50 Coffee Break (10 minutes)
- 15:50–16:50 **Session II | Music, Immersion, and Performance in the Moving Panorama**
Moderators: Sue Truman & Molly Briggs
- Purrington & Russell’s *Grand Panorama of a Whaling Voyage Round the World: An Early Exercise in “Edutainment”*
Michael P. Dyer, Curator of Maritime History, NBWM
 Keywords: Benjamin Russell, Immersion, Performance, New Bedford, Whaling, Edutainment
- A Demonstration of *The Grand Moving Mirror of California*
Artists and Collaborators of the Velaslavasay Panorama, Los Angeles, California, USA
 Keywords: Moving Panorama, Picture Recitation, California, Travel Diary, Travelogue
- Panorama in Performance
West Hyler, Theatrical Writer and Director, Greenville, South Carolina, USA
 Keywords: Moving Panorama, Performance, John Banvard, Georama
- 16:50–17:10 Refreshment Break (20 minutes)
- 17:10–18:30 **Session III | Restoration and Reclamation**
Moderators: Irina Gribova & Ruby Carlson
- The Restoration and Restaging of the Small Panorama *Clear World of the Blissful*
Petra Helm, ARS ARTIS AG, Zürich, Switzerland
Christian Marty, ARS ARTIS AG, Zürich, Switzerland
 Keywords: Elisär von Kupffer, Conservation and Restoration, Reconstruction, Small Panorama, Association ProElisarion
- A Panorama of the Eternal City
Jean-Claude Brunner, Independent Researcher, Vienna, Austria
 Keywords: Italy, Rome, Nineteenth Century, Watercolor Painting, City Landscape
- The Little Panorama that Could: Knight-Ruger’s *The Great Locomotive Chase or Andrews Raid*
Gordon L. Jones, Atlanta History Center, Atlanta, Georgia, USA
 Keywords: Panorama, Civil War, Locomotive, William J. Knight, Albert Ruger
- A Further Panorama by Earle?: A View of Rio, 1823
Robin Skinner, Te Herenga Waka—Victoria University of Wellington, New Zealand
 Keywords: Panorama of Rio de Janeiro, Augustus Earle, Robert Burford, Anthony Murray-Oliver
- 18:30–18:40 Coffee Break (10 minutes)
- 18:40–19:40 Virtual Social Hour
Moderators: Molly Briggs & Sara Velas, IPC Co-Presidents, and Thiago Leitão de Souza, IPC Secretariat

DAY 2 **THURSDAY, SEPTEMBER 16**

13:30–14:00 Virtual Check-in

14:00–15:00 **Session IV | The Panorama Movement in Turkey**
Moderators: Thiago Leitão de Souza & Ruby Carlson

Adıyaman Nemrud Mountain Panorama Museum

Salih Doğan, Adıyaman Nemrud Mountain Panorama Museum, Adıyaman, Turkey

Keywords: Panorama, Nemrut Mountain, Antiochos, Cultural Heritage, Adıyaman, Turkey

Time Stops at the *Panorama 1326 Bursa*

Orhan Mollasalih, Panorama 1326 Bursa Conquest Museum, Bursa, Turkey

Keywords: Panorama, Panorama 1326 Bursa Conquest Museum, Time, Bursa

Depiction of Bursa in Travelers' Accounts and its Reflection on the *Panorama 1326 Bursa* Image

Emek Yilmaz, Panorama 1326 Bursa Conquest Museum, Bursa, Turkey

Keywords: Travelers' Accounts, Bursa, Panorama 1326 Bursa Conquest Museum, Panorama, Media

15:00–15:10 Coffee Break (10 minutes)

15:10–16:10 **Session V | Architectural Perspectives**
Moderators: Blagovesta Momchedjikova & Nicholas Lowe

A Unique Panorama of Nineteenth-Century Istanbul: The Alaca (Colorful) Mosque in Tetovo (Macedonia)

Velika Ivkowska, ICOMOS (International Council on Monuments & Sites) Representing Macedonia

Keywords: Ottoman Panorama, Macedonia, Ottoman Mosque, Ottoman Architecture, Istanbul

Redefining Concepts of Architectural Space Through the Panorama as a Travel Apparatus

Katarina Andjelic, Atelier AG Andjelic, Belgrade, Serbia

Keywords: Architectural Space, Panorama, Travel Apparatus, Spatial Imagination, Spatial Representation.

The Panorama of Rio de Janeiro by Victor Meirelles and Henri Langerock, Part 4: A Game Engine Experience

Thiago Leitão de Souza, Universidade Federal do Rio de Janeiro, Brazil

Keywords: Panorama of Rio de Janeiro, Victor Meirelles, Henri Langerock, Architectural Sketches, 3D Model, 3D Rendering, Game Engines, Virtual Reality, Immersive Experience.

16:10–16:30 Refreshment Break (20 minutes)

16:30–17:30 **Session VI | Mechanisms for Virtual Travel**
Moderators: Nicholas Lowe & Ruby Carlson

Architecture as a Visual Component: Panoramas and Dioramas as Simulation Mechanisms to Experience Travel

Sofia Quiroga Fernandez, Xi'an Jiaotong-Liverpool University (X.J.T.L.U.), Suzhou, Jiangsu, China

Keywords: Panorama, Moving Panorama, Diorama, Travel Experience, Virtual Entertainment, Stage, Propaganda, Universal Exhibition

The Rockland Panoramas: Mounted or Cranked?

Sue Truman, The Crankie Factory, Seattle, Washington, USA

Keywords: Rockland, Maine, Nineteenth Century Panoramas, The Crankie Factory

Virtual and Vicarious: The Best Kind of Travel Your Money Can Buy; or, an Ode to the Panstereorama and the Pansteoramic Park

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

Keywords: Panstereoramas, Panstereoramic Parks, Idealized Travel, Surface/Exterior Knowledge, Financial Challenge

17:30–17:40 Coffee Break (10 minutes)

17:40–18:40 Virtual Social Hour

Moderators: Molly Briggs & Sara Velas, IPC Co-Presidents, and Thiago Leitão de Souza, IPC Secretariat

DAY 3 FRIDAY, SEPTEMBER 17

13:30–14:00 Virtual Check-in & Announcements

14:00–15:00 **Session VII |Situated Perspectives**

Moderators: Gabriele Koller & Gordon Jones

«My Bourbaki Panorama» App: Creating a New Visitor Experience in a Panorama From the Nineteenth Century

**Patrick Deicher, BDO Ltd., Lucerne, Switzerland; Bourbaki Panorama, Lucerne, Switzerland;
Panorama Altötting, Altötting, Germany**

Keywords: Visitor Experience, Cultural Mediation, Offline Tablet App, Schools

The Slav Epic, Mucha's Panoramic Masterpiece

Dominique Hanson, Musée Royale de l'Armée et d'Histoire Militaire (retired), currently based in Berloz, Belgium

Anja Coenen, International Panorama Council, currently based in Berloz, Belgium

Keywords: The Slav Epic, Alphonse Mucha, Art Nouveau, Paris Universal Exhibition 1900

Launching a Contemporary Panoramic Painting About the Passing of Time Titled *Epoch* (2016): The Continued Relevance of the Genre of the Panorama for Contemporary Artists

David Breuer-Weil, Exhibiting Artist, London, UK

Keywords: Time, History, Evolution, Genocide, Future

15:00–15:10 Coffee Break (10 minutes)

15:10–16:30 **Session VIII |Archival Strategies**

Moderators: Gordon Jones & Melissa Wolfe

The Oval: Escape from the Grid

Aurora Tang, The Center for Land Use Interpretation, Culver City, California, USA

Keywords: Los Angeles, Re-Photography, Vernacular Architecture, Residential Architecture, Streetscapes

Scrolling Through Old Pyongyang: Online Archives, Digital Mapping, and Panoramic Views
James Banfill, Institute of Far Eastern Studies at Kyungnam University, Changwon, South Gyeongsang Province, South Korea
Jonathan Banfill, Champlain College, Burlington, Vermont, USA
Christopher McCarthy, Kyoto University, Kyoto, Japan
Keywords: Pyongyang, North Korea, Panorama, Archives, Digital Mapping

Mechanical Theatres of Travel: Scroll Panoramas, Ribbon Maps and Hand Held Media
Nicholas Lowe, The School of The Art Institute of Chicago, Illinois, USA
Keywords: Scroll Panorama, Ribbon Map, Social Media, Performance, Travel

The Union Square Florist Shop: A Case of Spectral Immersion
Sara Velas, Velaslavasay Panorama, Los Angeles, California, USA
Ruby Carlson, Velaslavasay Panorama, Los Angeles, California, USA
Keywords: Hauntology, Window Display, Immersive Art, Floristry, Curatorial Practice, Velaslavasay Panorama

16:30–16:50 Refreshment Break (20 minutes)

16:50–17:50 **Session IX | Painting and Place**
Moderators: Melissa Wolfe & Gabriele Koller

Hockney's Panoramas
Tim Barringer, Yale University, New Haven, Connecticut, USA
Keywords: David Hockney, Painting, Panoramic Western

A Journey Through Time and Space: Jan Styka's *Crucifixion* at Forest Lawn
James Fishburne, Forest Lawn Museum, Los Angeles, California, USA
Keywords: Panorama, Hemicycle, Crucifixion, Gothic, Architecture

Following Battle After Battle: Henry Darger's Panoramic Tale
Leisa Rundquist, University of North Carolina, Asheville, North Carolina, USA
Keywords: Henry Darger, Panorama, Realms of the Unreal, Battles, Horizon

17:50–18:00 **Panorama Updates**
Moderator: Dominique Hanson

Mont des Arts, Brussels
Sabine van der Hoorn, Mont des Arts Festival Representative, Brussels, Belgium

18:00–18:10 Coffee Break (10 minutes)

18:10–19:10 Virtual Social Hour
Moderators: Molly Briggs & Sara Velas, IPC Co-Presidents, and Thiago Leitão de Souza, IPC Secretariat

DAY 4 **SATURDAY, SEPTEMBER 18**

13:30–14:00 Virtual Check-in & Announcements

14:00–15:20 **Session X | Panoramic Meta-Narratives**

Moderators: Thorsten Logge & Sara Velas

Full Circle: World History as Recursive Revolution in North Korean-Built Panoramas

Douglas Gabriel, George Washington University, Washington, D.C., USA

Keywords: North Korea, Mansudae Art Studio, Propaganda, Socialist Realism, Revolution

Stalin Boulevard: Photopanoramic Sightlines Between Colonialism and Socialism

Katie Trumpener, Yale University, New Haven, Connecticut, USA

Keywords: Panoramic Photography, Urban “Renewal,” Colonial Sightlines, Stalinism, Dissident Photography

The Grand Panorama of a Whaling Voyage ‘Round the World in the Anthropocene

Jamie L. Jones, University of Illinois at Urbana-Champaign, USA

Keywords: Grand Panorama of Whaling ‘Round the World, Anthropocene, Climate Change, Time and Temporality, Whaling

Panoramas in Argentina: From Cosmopolitanism to Nationalism (1885-1916)

Paula Bruno Garcén, Universidad de Buenos Aires, Argentina

Keywords: Plevén Panorama, Garibaldi Panorama, Paul Philippoteaux, Giacomo Grosso, Augusto Ferrari

15:20–15:30 Coffee Break (10 minutes)

15:30–16:30 **Session XI | Devices for Accessing the Panoramic Imaginary**

Moderators: Robin Skinner & Thorsten Logge

Introducing Immersive Image Design into the First-Year Experience at University: Using Smartphones to Display 360° Panoramic Drawings

Seth Thompson, American University of Sharjah, UAE

Keywords: 360° Panoramic Drawing, Immersive Image Design, Foundations, Smartphone, Google Cardboard

Panoramic Media at the Antwerp Zoo

Leen Engelen, University of Antwerp, Antwerp, Belgium

Keywords: Panorama, Stereoscopic Diorama, Kaiserpanorama, Zoological Gardens, Restoration

Mapping the World-as-Exhibition: Expressive Typography as an Immersive Medium

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

Natalie F. Smith, University of Illinois at Urbana-Champaign, USA

Keywords: Printed Ephemera, Immersive Media, Expressive Typography, Nineteenth Century, Cartography

16:30–16:40 Closing Remarks

Guy Thewes, IPC Vice President

Thiago Leitão de Souza, IPC Secretary-General

- 16:40–17:00 Refreshment Break (20 minutes)
- 17:00–18:00 IPC General Assembly
- 18:00–19:00 Virtual Social Hour
Moderators: Molly Briggs & Sara Velas, IPC Co-Presidents, and Thiago Leitão de Souza, IPC Secretariat

Opposite page: Detail from the 1848 *Grand Panorama of a Whaling Voyage 'Round the World* by Benjamin Russell and Caleb Purrington. The Grand Panorama is 1,275 ft long - the longest painting in North America and one of America's few surviving moving panoramas. Courtesy of New Bedford Whaling Museum.



New England's Mill Girls and Exhibitions

Suzanne Wray

Independent Researcher

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Abstract

A great deal has been written about New England and its “mill girls,” much of it focused on the intellectual accomplishments of the young women despite their long workdays. The mill girls were the daughters of Yankee farmers who were solicited to work in New England’s textile mills. By the 1850s, the textile industry had expanded rapidly in the United States, with America growing three quarters of the world’s supply of cotton, much of which was shipped to New England to be manufactured into cloth. The factory work gave women an opportunity to earn cash wages, something that was not possible on the farm. They worked long hours tending machinery, were required to live in company-owned boarding houses, and church attendance was mandatory. New England did not approve of entertainments in general, and the theater in particular was frowned upon, so advertisements promised “moral” and “rational” respectable entertainments. There were lending libraries, evening classes, and lectures to attend, but the mill girls also managed to see traveling exhibitions and entertainments, including moving panoramas, dioramas, and magic lantern shows.

Keywords

“Mill girls”, New England, Textiles, Lowell (Massachusetts), Moving Panorama



Fig. 1. Shuttle, bobbins used in textile manufacture. Image, the author.

Introduction

The girls in all manufacturing towns are fine creatures for exhibitions. Their sedentary lives, and their many privations, render anything in the shape of amusement a glory to them, and the satisfaction they receive upon all and every occasion, especially when they are escorted by their beaux, and what pretty girl is without them, renders their company as profitable to the exhibition as it is pleasant to themselves. [1]

These words were written by showman P.T. Barnum some years after he toured New England with Joice Heth, a black slave woman he represented as being George Washington’s nurse, and 161 years of age. The tour had included the manufacturing cities of Lynn, Massachusetts, known for shoes, and Providence, Rhode Island and Lowell, Massachusetts, both known for cotton textiles. [2]

A great deal has been written about New England’s “mill girls,” much of it focused on the intellectual accomplishments of the young women despite their long workdays. The mill owners exploited the publicity value of the mill girls, crediting the workers’ high moral character and intelligence to the superior working conditions that their factories provided. The “Lowell Offering,” a monthly journal, published the writings of the female factory workers. There are reports of girls filling halls to hear evening lectures, but rarely any mention of the young women attending other entertainments. [3] Yet New England, like the rest of the country, was full of traveling showmen eager to find an audience for their “shows.” Newspapers in textile towns advertised concerts, panoramas, dioramas, etc., and the textile workers must have formed a large part of the audience.

The Textile Industry in New England

The textile industry had expanded rapidly in the United States, primarily due to technological advances. Until the invention of the cotton gin by Eli Whitney, seeds had to be removed from the raw cotton by hand. Whitney’s hand-cranked machine separated the seeds from the lint much more quickly, increasing production. Demand for cotton

grew as the technology to spin and weave the fiber developed, and the steamboat developed to transport it. By the 1850s, America grew three quarters of the world's supply of cotton, and most of this was shipped to England or New England to be manufactured into cloth. In the South, more land was devoted to growing cotton, increasing demand for slave labor, and making slavery more profitable.

New England had swift-running rivers with falls or rapids to provide waterpower for manufacturing purposes: water was dammed up before flowing down raceways and flumes to power mill sites—grist mills, sawmills, forges, and others.

The War of 1812 stopped trade with Britain, and cotton mill fever seized America as textile manufacturing became more profitable. Mill buildings were erected near waterpower, often in areas with no previous settlement. Workers were needed, and housing for the workers. In the Blackstone Valley of Rhode Island, smaller mill villages were built, and the “Rhode Island system” hired entire families to work in the mills.

Linen, cotton, and wool had been spun into yarn and woven into fabrics long before the textile mill put some or all of these processes under one roof. Spinning and weaving were done at home, mostly by women, with domestic cloth filling local needs, while finer fabrics continued to be imported from Europe. Water-powered spinning machinery and power looms were developed in England, and the technology was brought to America by recent immigrants, or, in some cases, acquired by industrial espionage.

The Boston Associates, wealthy merchants and businessmen, built a mill in Waltham, Massachusetts that utilized power looms. Their profits, with dividends in the first decade nearly 19 percent a year, encouraged others. The Waltham system, as it came to be known, differed from the Rhode Island system: the mills were larger, with all processes from unpacking raw materials to packing finished cloth under one roof. Early power looms produced limited fabrics: coarse plain shirting and sheeting. But they produced these in a quantity that greatly reduced the cost: fabrics that cost 30 cents a yard in 1816 cost only 13 cents a yard a decade later. The Associates developed and built textile machinery, and their engineers improved the water turbine, which was much more efficient than the huge water wheels that originally powered the mills.

The Boston Associates and Lowell, Massachusetts

The Boston Associates created the city of Lowell in Massachusetts, their showpiece. Quietly buying up land and the existing Pawtucket Canal, they began construction in 1822. The canal had been built in the eighteenth century to allow barges to pass around the falls and rapids, and engineers would transform it into a flume delivering water to several mill sites, while the new Middlesex Canal would provide access to Boston, allowing the delivery of raw

materials and groceries to Lowell, and finished cloth to Boston. The Associates built mills in Manchester, New Hampshire; Chicopee and Taunton, Massachusetts; and York, and Saco, Maine: by 1860 New England made 75 percent of the cloth and 68 percent of the cotton products in America. Not only was the average New England mill about twice as large as those in other areas, it was more productive. [4]

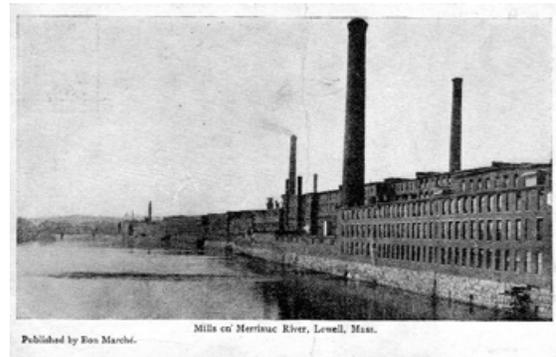


Fig. 2. Lowell mills, early 20th century. Image, the author.

The “Mill Girls”

As at Waltham, the daughters of Yankee farmers were solicited to come work in the Lowell mills. By 1833 nineteen five-story mills were in operation, and the population had grown to 12,000. Five thousand of these worked in the mills, and 3,800 were girls and women. Tens of thousands of young, single women, most between the ages of 15 and 30, left their homes on farms to work in factory towns. They were from large families, averaging more than seven children; often other family members were already working in the mills. The expansion of woolen mills increased the amount of land used to raise sheep, and the factory production of both wool and cotton took away work that had been done by women. It was rarely poverty that drove these young women to the mills; they were generally from neither the very rich nor the very poor farm families. Domestic service and teaching were the two alternatives then open to women; domestic service did not appeal to many, and teaching often paid less than factory work.

Employment in the textile industry gave women the opportunity to earn cash wages, something they did not see on the farm. Some sent money to their families, others saved for a dowry; most seem to have spent their earnings as they chose. Most did not plan to stay in the mills long: their agreement with the corporation required them to stay one year. On the average, women worked for five and a half years. The women were required to live in company-owned boarding houses, where room and board cost about \$5 a month. Bedrooms usually contained three beds, and the girls slept two to a bed. The possessions of the six to eight girls took up most of the space in the rooms, so they

were crowded, not well ventilated, and without privacy. But conditions at home on the farms had probably been similar.

Their work in the mills was repetitive: mill girls tended spinning frames or looms, prepared warps for weaving. They were familiar with spinning and weaving, but here the work was done by machinery. In the early years, the work was relatively undemanding, but improvements in technology and the desire for profits led to “speed ups,” with workers required to work faster and tend more machinery without an increase in pay. The workday on the farm had been a long one, too, but in the factories the work was more repetitive and much more closely regulated.



Fig. 3. “Mill Girls” ca. 1870. *Wikimedia*.

The Publicity Value of the Mill Girls

The mill owners exploited the publicity value of the mill girls, crediting the workers’ high moral character and intelligence to the superior working conditions that their factories provided. The public heard of mills girls filling halls to hear evening lectures, and taking careful notes, and of the “Lowell Offering,” a monthly journal that published the writings of the female factory workers. There were “self improvement circles,” lending libraries, and evening classes in singing, penmanship, drawing, painting, arithmetic, bookkeeping, and music.

Not publicized were the dangers of factory work: there were moving belts, moving parts, and the machinery was so

noisy that workers learned to lip-read or developed a sign language. Many workers developed lung diseases and standing for many hours contributed to health problems; cotton yarn could not be allowed to dry out, so factory windows were nailed shut, even in summer, to maintain the proper humidity. The heat could be suffocating.

Likewise, the less “literary” and “genteel” amusements available to, and attended by, the mill workers, were less publicized. But, as P.T. Barnum had learned from experience, textile workers were profitable audiences for showmen traveling New England.

In the early 1800s, Lowell was a destination for foreign travelers, who were fascinated by the mill girls, and by how much the American factories differed from England’s “dark, Satanic mills.” Lowell and its mill girls also fascinated Americans. Sensational novels featuring mill girls, attempted seductions, and melodramatic plots were popular. *The Mill Girls of Lowell, or, Lights and Shadows of Factory life! With Mysteries of Lowell, Dover, Nashua, and Manchester* was the title of a play presented in 1849 at the National Theatre. The characters include a “man of Intrigue, in search of novelties either in Wine or Women,” and beautiful factory girls. The scenery showed images of Lowell and the Lowell Depot, machinery and operatives in the Middlesex Mills, and a boarding house. [5]



Fig. 4. *Bell Time* by Winslow Homer. Boston Public Library via *Wikimedia*.

The Workday

“The evening is all our own,” wrote one worker, while another commented, “the time we have is our own...when finished we feel perfectly free, till it is time to commence it again.” [6] But there was not much free time. Workdays were long: in 1845, for example, they ranged from a little over 11 hours a day in the winter to over 13 hours in the summer. Starting times varied with the season to use the maximum natural light, with the mills lit by oil lamps in the evenings.

Bells signaled the start and end of the workday and break times; it was not beneath management to adjust the timing to lengthen the workday, for very few workers owned watches. Work began at 5 in the morning, with brief breaks

for workers to return to their boarding houses for breakfast and dinner. If workers allowed eight hours for sleep, they had no more than an hour or two a day for themselves. [7] Work ended at 7 in the evening, and most entertainments began at 7:30 or 8:00 pm, leaving little time for the workers to eat dinner if they wished to attend. Doors of the company's boarding houses were to be locked at 10 pm. The length of entertainments may have been adjusted to allow for the curfew, or perhaps the company rules were not always stringently enforced.

The cost of entertainments seems to have been adjusted for Lowell, and perhaps other towns with large populations of textile workers. Bayne's *Voyage to Europe* panorama, for example, charged 50 cents admission when exhibited in Boston, but in Lowell, admission was 25 cents. Some shows offered tickets that would admit eight women for \$1, a 50 percent discount. Most panoramas and dioramas charged 25 cents to 50 cents admission for adults, and half that price for children, but in Lowell one showman advertised, "in accordance to what is understood to be the custom in this city, the price of admission will be reduced to 12 ½ cents, without distinction of age." [8]

New England's Attitude Towards Amusements

New England in general did not approve of amusements, and the theater in particular was frowned upon. In 1838, Nathaniel Hawthorne wrote of a village that had decided not to license any public exhibitions: "The scruple is that the factory-girls, having ready money by them, spend it for these nonsenses, quitting their work." [9] When the push for a ten-hour day began, clergymen supported the mill owners in their opposition: "the time that would be saved to the operatives, would be spent in vanity and wickedness—in loafing around town, and cutting up all manner of shames!" [10]

As a result, advertisements often termed entertainments "moral" and "rational" to convince the public of their respectability. The "museum," unlike the theatre, was considered an acceptable venue. Most cities had a "museum" with a collection of natural history specimens, paintings, sculpture, wax-works, and curiosities, and a "lecture room." The Lowell Museum's lecture room seated 1,000. In 1846 the Museum's proprietor advertised in the *Lowell Courier*:

Believing an orderly and well-regulated Museum, in connection with some moral and rational Evening Amusements would be approved and sustained by the intelligent, liberal, and discerning public he pledges himself to spare no pains nor expense to make the Lowell Museum a place of both innocent amusement and instruction, every way acceptable to the people of Lowell and deserving of their patronage and encouragement. [11]

However, more often than lectures, the Lecture Room presented dramas, ranging from Shakespeare to lurid melodramas. When Lowell's Board of Aldermen was presented with a petition for the renewal of the license of the museum, several members protested because of the theatrical performances presented. The same page of the *Lowell Courier* reporting the meeting contained an advertisement for the Museum's "New Plays" and "new and laughable Vaudeville." [12]

In addition to a museum, every city had at least one "hall" that could be rented for lectures or "shows": City Hall, Mechanics Hall, Temperance Hall, Odd Fellows Hall, church halls, and private halls or "rooms." In the mill town of Lawrence, Massachusetts, Pacific Mills even built "an elegant lecture hall" seating 900 for lectures, musical entertainments, panoramas, etc. It was not usual for a company to do this, but the superintendent was John Fallon, an Englishman who knew the dyeing and printing of textiles. He was also the owner of a magic lantern, or Stereopticon, which was exhibited by various showmen throughout the Northeast. [13]

The Diary of Susan Brown

A young woman named Susan Brown spent the first nine months of 1843 in Lowell's Middlesex Mills as a weaver. [14] Born in New Hampshire, a farmer's daughter, she had taught school for a time before going to work in the mills at age 18. Her wages were not sent home to her family: she spent them as she chose.

Susan Brown kept a diary. The entries are very brief, but give a glimpse of how a "mill girl" spent her time outside the mill, and of some of the "amusements" she saw. Unfortunately, she wrote nothing more than the name of these amusements, and left us no record of her reactions.

Shopping was one popular activity: Susan wrote in her diary of her purchases, and the prices paid: she bought a bonnet, a shawl, gaiters, and yard goods for dresses.

Susan attended a different church each Sunday, and briefly noted her feelings about each service. Although the factory management made church attendance mandatory, religion was a very important part of life then, and most of the young women would have attended church weekly.

Susan Brown heard lectures: several of these were Temperance lectures at City Hall, and anti-slavery lectures. In theory, many New Englanders supported the abolition of slavery, although the cotton textile industry was based on a crop grown by slave labor. Susan attended lectures on geology, illustrated by pictures (possibly magic lantern slides) of recently discovered fossils.

The lyceum movement of the 1840s promoted these public lectures as wholesome leisure activities. Lucy Larcom, who went to work in the Lowell mills when she was between 10 and 11 years old, wrote in her autobiography,

Many of the prominent men of the country were in the habit of giving Lyceum lectures, and the Lyceum lecture of that day was a means of education, conveying to the people the results of study and thought through the best minds. At Lowell it was more patronized by the mill-people than any mere entertainment. [15]

Attendance at lectures was encouraged, and overseers sometimes allowed workers to leave early; permission to leave early to attend other amusements might be granted, but pay would be docked. The Lowell Institute in 1845 sold 1200 subscriptions to a lecture series at City Hall for seventy-five cents each; two-thirds of the audience were mill girls. One speaker reported that most of his attentive audience took notes during the lecture. On the other hand, one young woman wrote that, after a long workday, it was all that she could do to stay awake, and that the buzzing in her ears from noise of the looms could make it impossible to hear the speaker. And there were reports of lectures disrupted by young men and women talking, flirting, and engaging in other bad conduct in the gallery.

There were concerts at Mechanics Hall: in April, Susan Brown heard the Hutchinson Singers, and in May a Mr. Russell, a concert singer. A Mr. Sunderland also appeared at Mechanic's Hall, speaking on mesmerism (hypnotism): trances and sleepwalking demonstrations were promised.

She saw the "Reformed Drunkard's Comedy", presented by a troupe of traveling actors who presented temperance dramas throughout New England.

And she saw the *Conflagration of Moscow*, advertised as a "grand panoramic view of the conflagration of Moscow," with ventriloquist Jonathan Harrington of Boston. Inspired by an earlier *Conflagration of Moscow* by Johann Nepomuk Maelzel, this show traveled widely though the United States between 1835 and at least 1868. Rows of mechanical figures marched before a painting of the city of Moscow, to the sound of drums, martial music, and musketry fire. Dioramic effects showed the burning of the city, and buildings with hinged spires or domes toppled into the flames. The conflagration itself reportedly took about 45 minutes and was the conclusion of the entertainment. [16]

The *Conflagration of Moscow* appeared at the Lowell Museum in April and May of 1843, returning in 1849 with Mr. Young, the Wonderful Necromancer. In April, 1853, the diorama was back with Prof. Taylor, the Great Oriental Magician. After traveling to Bangor, Maine, the show returned to Lowell, with Mr. Gallagher as ventriloquist.

The Lowell Museum presented another "Conflagration" and mechanical panorama as a summer amusement in 1847. This was Lewis and Bartholomew's *Battle of Bunker Hill and the Conflagration of Charlestown*. Painted on 5,000 square feet of canvas, the show combined a mechanical panorama with articulated, costumed figures moving in front of painted backdrops, and three moving panoramas. A storm on the Merrimack River was shown with sound effects: lightning, thunder, rain, and howling wind, and a

view of Lowell, "The Manchester of America!" "In which the factories are seen lighted up as at work. At the ringing of the bells the lights are extinguished and the scene closes." The panorama had also been seen in Providence, Rhode Island in 1845, and in Portland, Bangor, Saco and Biddeford, Maine in the late 1840s. [17]

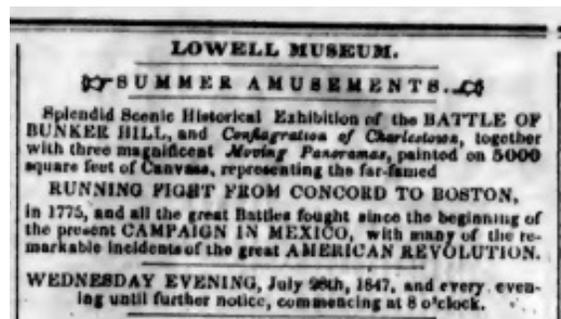


Fig. 5. Battle of Bunker Hill at Lowell Museum, July 1847. *Lowell Daily Courier*.

Lowell's Concert Hall presented the "Great Novelty," a "Moral, Rational, & Interesting Exhibition" of *Huntington's Moving Dioramas and Wonderful Italian Fantoccini* or marionettes. This panoramic and dioramic entertainment, advertisements assured readers, had been exhibited for 15 years in all the principal cities of the United States and Europe.

Other amusements included magic lantern shows: in 1849 a local church showed "Brilliant Dissolving Views, Illustrating Lectures on the Passions, Church History, &c" by Professor Young. The show ended with "a miscellany of humorous subjects, for the innocent amusement of youth." [18] In 1851, "200 Chemical Paintings [...] formerly known as *Whipple's Dissolving Views*" were exhibited at Lowell's City Hall, with a lantern using Drummond Light. Dissolving views, scenery from America and Europe, and comic slides were shown to musical accompaniment. [19]

Another "chemical" entertainment came to Lowell in 1844, when Robert Winter brought his chemical dioramas to Mechanic's Hall. The dioramas, the Destruction of Babylon, Milan Cathedral and Midnight Mass, Church of the Holy Sepulchre, and Belshazaar's Feast were, to quote the advertisement,

exhibited by illumination in the style of the celebrated Daguerre of Paris, and produce the wonderful phenomena of two distinct pictures on the same canvas. Each painting covers a surface of 200 square feet. [20]

Winter's dioramas were double-effect dioramas, based on Daguerre's huge paintings that were illuminated from the front, then from the back, to give different effects, and even the illusion of motion. Winter's exhibition had been a huge success in Cincinnati before moving to New York, Boston, and other cities; it continued to tour throughout the United States and Canada until the early 1870s. [21]

Moving Panoramas

Much as cotton mill mania had gripped New England earlier, “Panoramania” gripped the United States after the success of John Banvard’s famous “three mile” painting. The cotton for his moving panorama was grown “in a Southern clime,” wrote one magazine, and woven into fabric by the Lowell mill girls. [22] Many, many moving panoramas were exhibited in New England.

There were panoramas that allowed viewers to “travel” without leaving home:

- Bayne’s *Gigantic Panorama of a Voyage to Europe* was shown in Boston for 11 months, and viewed by 130,000 people before traveling to Lowell and Salem, Massachusetts, and Portland, Maine.
- Samuel Hudson painted two panoramas that were unrolled in Lowell. His *Great National Painting*, showing scenery along the Ohio and Mississippi rivers, had already been seen in eight large cities. His *Gold Regions Grand Original Panorama of California* was exhibited in 1849, when the discovery of gold had created much interest in that region.
- In March of 1849 Bartholomew’s *Grand Historical Panorama of the City of Edinburgh and its’ environs!* was at Wentworth Hall.
- In 1850, *King’s Panorama of the Holy Land and Ruins of Ancient Cities* was exhibited, showing yet another conflagration: this one of Jerusalem.

Panoramas reported on the events of the day: the search for British polar explorer Sir John Franklin, and the explorations of American Elisha Kent Kane were popular subjects. When a panorama of Kane’s Arctic Expedition was shown, a Lowell newspaper proclaimed “it is a much better painting than the one that was here a few weeks ago.”

- *The Grand Moving Mirror of Slavery*, showing the slave trade and the conditions of Southern slaves, produced for escaped slave Henry “Box” Brown, toured New England in 1850 and 1858.
- Wentworth Hall exhibited *Curtis’s extensive panorama of Mexico and its battles!* It was to be shown 3 times during the day and once in the evening.

Biblical subjects were popular: *Pratt’s Grand Serial Panorama of A Walk in the Garden of Eden with Adam and Eve*, “a rare production of art,” according to the newspaper advertisement, was at Lowell’s Mechanic’s Hall in 1849. Hanington’s *Grand Exhibition of Sacred Dioramas* appeared at Wentworth Hall. The first part of the exhibition showed the six days of creation, and the second the Grand Diorama of the Deluge.

The Pilgrim’s Progress

The *Pilgrim’s Progress*, or *The Splendid Moving Mirror of the Bunyan Tableaux*, differed from many other moving panoramas. It illustrated John Bunyan’s *Pilgrim’s Progress*, a seventeenth century allegory with which most of its viewers would have been familiar; due to the religious revival in the early nineteenth century, the book had appeared in many illustrated editions. Now audiences could see “the story in color” and in motion. [23]

Unlike most other panoramas, the *Pilgrim’s Progress* could claim a connection to “high” art: it was painted by well-known painters Edward May and Joseph Kyle, both members of the National Academy of Design.

The *Pilgrim’s Progress* was a huge success: after opening in New York in November, 1850, it was exhibited to full houses for six months. It moved through Hartford, Providence, and Boston, among other cities. A second version was painted to tour different areas of the country. When the panorama came to Mechanic’s Hall in April, 1859, it had never before been exhibited in Lowell. The *Journal and Courier* printed an article detailing the artists involved, and the designs each had contributed. Robert J. Greenwood, manager and proprietor of the panorama, advertised the painting as “one of the Largest Panoramas in the world,” a “sublime and unique work of art.” Admission was 25 cents for adults, 15 cents for children. Doors would open at 7, and the panorama would move at 7 ½ o’clock precisely.

The initial advertising for the panorama advised that it would be in Lowell for a short season, but its stay was extended. On April 30th, the *Lowell Journal and Courier* printed a letter from several citizens requesting that Mr. Greenwood continue his exhibition for another week, reducing admission to 15 cents. They wrote,

It has been our high privilege to witness your beautiful Bunyan Tableaux of the Pilgrim’s Progress. We do not hesitate to say, that it is by far the finest panorama ever exhibited in our city— It furnished for us an entertainment at once pleasing and instructive.

Mr. Greenwood’s reply was printed below their letter: he agreed, of course, to continue the exhibition, and reduce admission.

It is evident that you see in the Bunyan Tableaux something more than an ordinary exhibition for gain. I must be frank to admit that the grand object I have in exhibiting them, is the profits that may arise therefrom, but I also speak equally true when I say that I do all in my power to turn the exhibition to some little advantage to every christian [sic] who may see it, and to every community that I may visit with it. [24]

Whaling Panoramas

Several panoramas depicted the whaling industry, of vital importance to the economy at the time. Captain E. C. Williams showed his “Panorama of a South Sea Whaling Voyage” with a series of panoramas providing a background for a fully rigged whaleboat.

Benjamin Russell was born in New Bedford, Massachusetts, a center of the whaling industry. After serving as a crewman on a whaling voyage, he and Caleb P. Purrington painted the “Grand Panorama of a Whaling Voyage ‘Round the World,” first shown in 1848.

The Civil War

The Civil War affected the textile industry: as secession by the South began to seem inevitable, mill owners had to guess whether a long or short war would result; any war would cut off their supply of cotton. Most did not stock up on raw cotton: Lowell mills sold their “surplus” cotton for a high price. Many mills shut down, and an estimated 10,000 people were put out of work. The partners in Lewiston, Maine, however, bet on a long war, buying enormous stocks of raw cotton from the record crops of the pre-war years. During the war, they turned out tent fabric, knapsacks, and uniform parts. Woolen mills fared better, often working at full capacity to produce cloth for uniforms.

Moving panoramas continued to travel through the North and the South during the Civil War, many promising audiences views of battles that they had just read about. 1861 brought *Bishop’s Mammoth Exhibition of the War* to Lowell’s Huntington Hall.

The paintings are acknowledged the best ever put on canvas; they are up to and include Fort Donelson [sic]. This last scene is the largest, and cost more than any panoramic scene ever exhibited.

1862 brought a panorama painted by the Pearson brothers, formerly Lowell residents; it had previously been shown in other New England cities. A “correct view” of the engagement between the Monitor and Merrimack ironclads was promised.

By this time, the workforce in New England’s textile mills was changing. As early as 1836, the Lowell mill girls had protested an announced wage reduction with a “turn out”-a strike-and many left their work. The owners did not budge, and the workers returned to their machines. There was agitation for a reduction of hours in the 1840s, with workers petitioning for a 10-hour day: they did not get it. Gradually the Irish, who had dug the canals of Lowell and other cities, began to replace the Yankee women in the mills. After the Civil War, French Canadians from Quebec joined the Irish; other ethnic groups and nationalities followed. [25]

Exhibitions of Surviving Moving Panoramas in New England

Although the mill girls are long gone, many of the red brick mill buildings survive in New England, though few now have anything to do with textiles. In the recent past, two surviving moving panoramas have been exhibited in surviving mill buildings.



Fig. 6. Restored Pilgrim’s Progress panorama. Image: the author.

The *Pilgrim’s Progress*, rediscovered in the Saco, Maine, museum’s storage in 1996, was conserved and restored and a digital copy created. In 2012 the replica was unrolled and “performed” before audiences with musical accompaniment and narrator, and the 800-foot-long panorama was on static exhibition in a former textile mill in Biddeford, Maine. [26]

In New Bedford, Massachusetts, Russell and Purrington’s panorama was restored and a digital replica created. The eight and a half foot tall painting, 1, 275 feet long, was on static display in a former textile mill, while the digitized replica was “unrolled” in the New Bedford Whaling Museum, presented as it would have been seen by a nineteenth century audience. [27]

For me personally, as a “panoramaniac” who had worked in a knitting mill located in an 1850 Manchester, N.H. former cotton mill building, it was wonderful to see these panoramas on display in the type of building that may once have woven the fabric they were painted on.

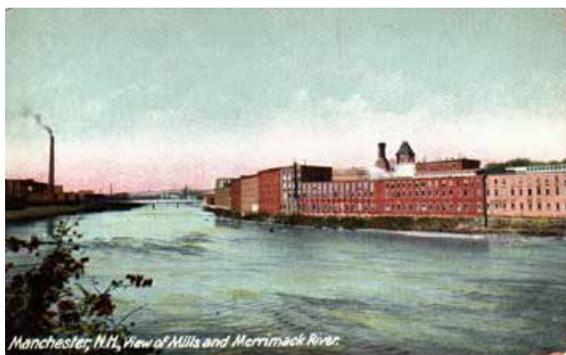


Fig. 7. Manchester, N.H., former Amoskeag Mills. Image: the author.

Notes

1. Reiss, 2001, 95.
2. For the purposes of this paper, the following states are included in “New England”: Connecticut, Maine, Massachusetts, New Hampshire, upstate New York, Rhode Island, and Vermont, and the time period the 1820s to 1862. I use the term “mill girls” as it was used during this period, although “girls” would be considered unacceptable today.
3. Baldwin, 2012, 36-43.
4. Josephson, 1949.
5. Broadside from the National Theatre for Thursday Evening, September 20, 1849, accessed July 18, 2021, <http://libweb.uml.edu/elh/ALL/en08.htm>.
6. Baldwin, 2012, 35, 38.
7. Josephson, 1949, 88-89.
8. *Lowell Daily Courier*, November 17, 1849, fultonhistory.com/Fulton.html
9. Hawthorne, 1900, 198.
10. Baldwin, 2012, 40.
11. *Lowell Daily Courier*, January 10, 1846, fultonhistory.com/Fulton.html
12. *Lowell Daily Courier*, April 18, 1846, fultonhistory.com/Fulton.html
13. Wells, 2011, 3-34.
14. Blewett, ed., 1984.
15. Larcom, 1961, 252.
16. Wray, 2017.
17. Arrington, 1961, 50-58.
18. *Lowell Daily Journal & Courier*, March 1, 1849, fultonhistory.com/Fulton.html
19. *Lowell Daily Journal & Courier*, September 9, 1851, fultonhistory.com/Fulton.html
20. *Lowell Daily Journal & Courier*, August 20, 1844, fultonhistory.com/Fulton.html
21. Wray, Suzanne, “R. Winter’s Unrivaled Exhibition of Chemical Dioramas, Crystalline Views, Chromatropes, &c.: the life of a 19th century showman”, talk at the Coney Island Museum, 2012.
22. *Literary Museum*, 1847, 62.

23. Tom Hardiman, *The Panorama’s Progress: The History of Kyle & Dallas’s Moving Panorama of Pilgrim’s Progress*, Montclair Art Museum. <http://www.montclairartmuseum.org/>
24. *Lowell Journal and Courier*, April 29, 1859. fultonhistory.com/Fulton.html
25. Farrant and Strobel, 2011.
26. Routhier, Avery, and Hardiman, 2015.
27. Dyer et al., 2018.

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Author Biography

Independent researcher Suzanne Wray became interested in the history of the textile industry while working as a sweater designer in the former Amoskeag mill in Manchester, NH, once the largest cotton mill in the world. This led to membership in the Society for Industrial Archeology, then a long and circuitous route led to an interest in 19th century "optical entertainments." Her research on panoramas,

chemical dioramas and other 19th century "exhibitions" has been presented to the International Panorama Council, and the Magical Lantern Society. BFA, Art Institute of Chicago. **Note:** a version of this paper was presented at "Panoramas in Motion: A Public Symposium" in Saco, Maine in 2012. A written version was published in the *Magic Lantern Gazette*, Summer 2018.

Panorama in Performance: *Georama* at St. Louis Rep

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Abstract

In 2016 St. Louis Repertory Theater premiered *Georama*, a new musical based on the life and work of moving-panorama artist John Banvard (American, 1815-1891). The scene shop built an 800-foot long and 6-foot high moving panorama that scrolled continuously throughout the performance for the six-week run, and was later shipped to Winona, Minnesota for the summer season of the Great Lakes Shakespeare Festival. Although the musical was an original piece of theater, it contained some text written by John Banvard as well as musical selections composed specifically to accompany his own performances in the mid-1800s. During one particularly moving sequence, Banvard's own words were spoken to accompanying music originally intended to underscore them, while the recreation of his moving panorama scrolled by behind him.

Moving panoramas were the original moving pictures and were intended to be performative events (rather than museum displays) in which continuous scrolling images joined with dramatic storytelling and original music. As the writer and director of *Georama* I had a front row seat to the powerful audience response created when moving panoramas are combined with musical storytelling. The panorama became a setting for location, as well as a sequential series of images that communicated both action and temporal movement. The magical alchemy between live performance, storytelling, and moving panoramas recreated the Panorama Show as popular entertainment.

This paper will discuss Banvard's life and the creation of his panorama of the Mississippi and the way in which his biography and artistic invention informed the creation and performance of the musical *Georama* in 2016. It will present insights into Banvard's life and work, and into the moving panoramas, that were perceived through the 2016 production of *Georama*.

Keywords

Moving Panorama, Georama, John Banvard, Panorama, PT Barnum, Paul Collins, West Hyler, Matt Schatz

Banvard, Georama, and Theatrical Entrepreneurship

In 2005 I came across an essay in *McSweeney's* by Paul Collins' about John Banvard (American, 1815--1891) and his 3-mile-long moving panorama [1]. I was preparing to begin graduate school at the University of California at San

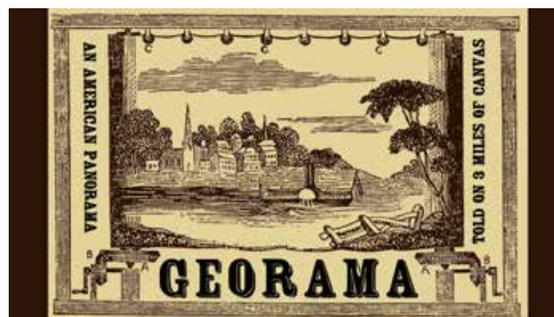


Fig. 1. *Georama* Thumbnail, 2017, Matt Schatz from a sketch by John Banvard in 1848, Digital Media, Credit: Author

Diego when I read the tale of Banvard travelling up and down the Mississippi river. The article resonated with me, and Banvard's story seemed ripe for theatricalization. Along with my writing partners Matt Schatz and Jack Herrick, I began work on the musical which would become *Georama*, a bio-musical of John and Elizabeth Banvard and the medium of moving panorama theater that he invented.

As a director I am drawn to artists who are entrepreneurs, who create their own work from the seed of an idea to a fully realized theatrical presentation. Their art is groundbreaking, their aesthetic is singular, and they tend to invent genres and mediums. They create the scripts and produce the shows, and frequently star in the productions. For example, I directed *Air Play*, where the silent clowns called the Acrobuffos interact with kinetic wind sculptures designed by Daniel Wurtzel. [2] I directed *Piff the Magic Dragon* in Las Vegas, where Piff effortlessly combines comedy, magic, and narrative. [3] I also directed *Cirque Du Soleil's Paramour*, where we combined a strong musical theater narrative with the dance, art, and acrobatics for which Cirque Du Soleil is known. [4] All these visionaries brought forth an idea into reality and took their creative talents from the page, to the rehearsal studio, to the stage. I regard John Banvard as another entrepreneurial artist who transferred his imagination into a groundbreaking production that may resist categorization yet is unquestionably theatrical. His

moving panorama show combined art, motion, technology, drama, and music into a singular event.

In an effort to re-create the experience that John Banvard gave to audience members, my collaborators and I turned his life story into a musical that played out in front of (and in conjunction with) a moving panorama. The audience moved down the river along with the characters while the panorama scrolled through space and time, creating an alchemy of narrative action, geographic movement, and temporal motion. After years of development, *Georama* was produced by the St. Louis Repertory Theater in 2016. We told Banvard's story from the time he got his first job on a steamboat up until the time when his career had run its course and he moved to a small farmhouse with his wife.

Moving Panoramas as Theatrical Experiences

The pre-Civil War era, when Banvard was gathering research and creating early drafts for his panorama through trips up and down the Mississippi, was a time of pioneering innovation. America was expanding its borders to the west and artists desired to expand America's cultural influence on an international scale. Europe was seen as the epicenter of art and entertainment, and America had contributed little



Fig. 2. *Georama Musical*, New York Musical Festival, 2017, Jillian Louis and P.J. Griffith, photo, Credit: Jagged Edge Arts

influential work in music, theater, or visual art. John Banvard sought to challenge that Eurocentrism by demonstrating the grandeur of the American landscape, an ambition similar to that of his contemporaries Whitman, Longfellow, Thoreau and Twain.

The landscape Banvard encountered and documented in his moving panorama was mostly untouched by Western civilization; to the European-Americans who encountered it

in the early 1800s, it seemed both feral and pristine, dangerous and Edenic. Banvard's intent was to capture the natural world of the Mississippi Valley and then bring it to life with a scrolling panorama where he could give viewers the sense that they were they with him on the mighty Mississippi. Whether or not he considered that he was creating a new theatrical medium, his "3-mile-long" moving panorama show presaged the work of influential theater and film artists that followed.

Banvard began work on his moving panorama in 1842 and his moving image may have been inspired by seeing zoetropes (1840s--50s), phenakistoscopes (1832), or magic lantern shows (1830s--40s) but his panorama was arguably the first life-sized moving picture presented to mass audiences (and thus the precursor to cinema). His pairing of moving images along with the narrative of his adventures down the river, spoken to music specifically composed to accompany each scene and story, can most easily be understood by those of us in the 21st century as a blockbuster film. Ironically, it would be the invention of what the world came to know as "moving pictures" (i.e. "movies") that played a significant role in the declining interest in moving panoramas and the fading of Banvard's career.¹

Like those other moving pictures, John Banvard's moving panorama was not a piece to be enjoyed in silence or meditated upon in a museum; rather it was a part of a performance that occurred in time and space with a beginning, middle, and end. Scenes scrolled past while Banvard dramatically narrated his river adventures, including fights with pirates, attacks by wild animals, tempest-tossed shipwrecks upon the storm-swollen river, and beautiful moonlit nights upon the peaceful frontier. It produced an ineffable effect wherein the movement of the painting made viewers feel as though it was not the painting that was moving but rather the water itself, and with it the character on the boat, and perhaps even the audience members themselves.

If born today, Banvard might have been a film director in the vein of Steven Spielberg, capturing Harrison Ford as Indiana Jones galloping on horseback through the desert, the camera speeding along with the protagonist as he rushes toward the Nazi army, story written by Lawrence Kasdan, music scored by John Williams to perfectly accompany the action and take the audience on an emotional and adrenaline-fueled journey. The scene is a perfect combination of story, actor, artistic capturing of beautiful scenery, and music. Those same elements exist in John Banvard's presentation of the moving panorama; a story, a performer, a soundtrack composed specifically to

¹ For historical context see: Altick, Richard D. *The Shows of London*. Cambridge, Mass., Belknap Press, 1978, pp. 204–206.

accompany the action, and a beautiful capturing of the landscape in the form of his scrolling panorama.

To take the metaphor further, now imagine the same sequence from *Indiana Jones* without Harrison Ford or the horse, without the story written by Kasdan, without the Nazi army, and without the music by John Williams. All that remains is the cinematography by Spielberg, the desert cliffside rushing past in the form of moving pictures. It unquestionably has a certain beauty to it, but the action, the drama, the music, and the story are gone; everything that made the scene exciting to experience and the movie popular has been drained away.

When we look at a moving panorama today, we are seeing only the smallest fraction of the event. It is as if we are looking at a wind effects from *Air Play* without the clowns to interact with them, a magic trick without a magician like *Piff* to make it work, or a circus apparatus from a *Cirque Du Soleil* show without the acrobat to give it beauty. All these examples exist; you can see *Cirque's* acrobatic apparatus on display in Montreal, magical tricks displayed at La Maison de la Magie Robert Houdin in Paris, and the balloons used in *Air Play* at any party store. But these are lifeless artifacts of the event, fossils far removed from the excitement they once produced.

The Musical, *Georama*

For the sake of clarity in this essay, whenever I describe the character of John Banvard from the musical *Georama*, I will use the name of "John", and whenever I describe the historical John Banvard of the 1800s, I will use the name "Banvard".

The first half of *Georama* chronicles John's rise from an unknown painter to a world-renowned artist. It begins on the docks of St Louis, as John is hired on a showboat to paint scenery for the productions. Although we occasionally took liberties with Banvard's life story, it is true that he began his professional career painting for the theater and was drawn to live entertainment for the rest of his life.

When the showboat steamed downriver toward New Orleans, the 800ft panorama that was created by the staff at St Louis Rep began to scroll. Each movement of the panorama was timed to music and started and stopped at the beginning and ending of each song. As characters sang and music played, the panorama scrolled past behind them, carrying the actors and audience alike through landscapes whose details corresponded to specific sung lyrics in a partnership of story, image, and moving picture.

During stationary "set" scenes, like the scene on the dock where John is hired, the panorama was static and served as a landscape, more like a traditional backdrop. This correlates to Banvard's own panorama, which scrolled "in action" at certain times during Banvard's show while at other times he would rest on a particular painted scene and

describe in detail an adventure that had occurred in that locale. Moving panoramas from the era have been found with notes written on the back of the canvas telling the workers turning the cranks when and where to stop, and it is likely Banvard had similar instructions scribbled on the back of his canvas.



Fig. 3. *Georama Musical*, St Louis Rep, 2016, PJ Griffith, Photo, Credit: St Louis Rep

In the course of *Georama*, John quits the showboat when he dreams up the idea for a 3-mile-long moving panorama and heads back upriver to sketch the entirety of the Mississippi. As he grabs a keelboat and begins moving upstream, the panorama carries the characters--and the audience--along the Mississippi River from New Orleans, Louisiana north to Winona, Minnesota. In Winona, John met the woman who would become his wife, Elizabeth, and convinced her to join his show as a composer adding music to the panorama show. She jumps aboard his skiff and then, in filmic terms, we "crossed the line" by continuing in the *same* direction of movement for the viewer, while *changing* the direction in which the characters are traveling; now heading south from Winona, our panorama scrolled to Louisville, Kentucky, where John presented his first moving panorama show in 1846 and then built his fame to the point where he was invited across the Atlantic Ocean to perform for Queen Victoria.

While in London, the story begins to turn darker as John sees that moving panorama shows have become a fad with several panorama shows advertised all over in London, including some that are clearly imitators of his Mississippi River panorama.[5] Where the first half of *Georama* chronicled John's rise, the second half was all about his fall.



Fig. 4. *Georama Musical*, *St Louis Rep*, 2016, Jillian Louis and PJ Griffith, photo, Credit: St Louis Rep

Inspired by the British Museum, John decides to leave London to travel to Egypt and gather antiquities to create a museum in America devoted to archeological history with a new moving panorama show of the Nile River in permanent residence in a theater space inside the museum. This gave my collaborators and me the ability to present both the Mississippi River and the Nile River on a single scrolling panorama, acknowledging both of Banvard's major works.

On the Nile, John falls in love with antiquities, learns to decipher hieroglyphics and collects Egyptian artifacts. During this sequence, his relationship with his wife, Elizabeth, falls apart as John is unable to recapture the joy he had felt as a young man when boating down the Mississippi.

After his sojourn in Egypt, the panorama scrolls back across the Atlantic to New York, for the finale of *Georama*; Banvard's career-defining battle when he opened his museum in direct competition with Barnum's American museum. During this sequence John loses everything by failing to make a return on his investment in the museum and is forced to sell all that he owns to pay debts and debtors.

Eventually, broke and broken, John leaves New York and journeys far to South Dakota, another frontier uncontaminated by civilization, and finds peace with his wife and an appreciation of untamed nature.

John Banvard vs. PT Barnum

Presenting PT Barnum (American, 1810-1891), another entrepreneur who created performances that resisted classification in medium and genre.



Fig. 5. *Georama Musical*, *New York Musical Festival*, 2017, Randy Blair as PT Barnum, photo, Credit: Jagged Edge Arts

Because Barnum proved to be John's greatest nemesis and antagonist, we had introduced him much earlier in the narrative of *Georama*, his story being the greatest biographical liberty we took. In *Georama*, John meets Phineas Taylor Barnum while working on the showboat and together they realize the commercial potential of a moving panorama show. Barnum wants to create hundreds of the moving panoramas, mass-producing them for profit, whereas John wants to create a singular epic piece of American artistry. This disagreement causes the two men to part ways for several years. They reconnect before John travels to London, as Barnum offers to be a main investor and finance the trip; but Barnum then double-crosses John by producing several other panoramas, even shoddy plagiarisms of John's Mississippi river.

There is some inspiration for these biographical liberties that we took, PT Barnum mentions travelling the Mississippi by riverboat in his autobiography, and he did, in fact, present a moving panorama of the Mississippi River most likely plagiarized from Banvard at his American Museum. [6]

This protagonist/antagonist relationship of Banvard v. Barnum allowed dramatization of the two branching ways in which art and entertainment were both commingling and separating during the 1840s-1870s.



Fig. 6. *Georama Musical*, New York Musical Festival, 2017, Randy Blair and PJ Griffith, photo, Credit: Jagged Edge Arts

Although both men were entrepreneurial artists working within the boundaries of live entertainment, they had widely different goals. John Banvard wanted to be an American artist who was received with the same cultural appreciation as European artists. In *Georama*, we present his definition of art as requiring truth and integrity to be successful amongst a large population, and his definition of artistic endeavors as requiring strength and sacrifice to produce high quality, artistic entertainment. Conversely, PT Barnum believed that successful entertainment relied on mass marketing by using outrageous stories to gain headlines in newspapers across the nation. To Barnum, truth and integrity were meaningless to commercial success and oftentimes lies, propaganda, and fantasy produced more popular entertainment.

A famous story we dramatize involves the “Cardiff Man” skeleton; a petrified giant found in upstate New York. In the 1860’s Banvard bought the original artifact and displayed it in his museum; immediately after PT Barnum had an exact replica produced and advertised it as the real thing—and Barnum’s sold better. Another example is “cool ventilation” an early high-technology version of air-conditioning that Banvard installed in his museum. Barnum installed no such thing but advertised on colorful banners that his museum was “thoroughly ventilated”. Again, Barnum’s ticket sales soared while Banvard’s collapsed.

In *Georama*, we threw an even wider metaphorical net over the two impresarios, linking them both to a genre which today would be called “virtual tourism.” Banvard spent years of his life traveling and meticulously researching the settings and locales on the Mississippi River and the Nile River and then re-creating them in detailed

moving panoramas while narrating his own adventures in both locations. In contrast, PT Barnum manufactured fictional creatures such as mermaids, unicorns, and the “forcibly tattooed man from Tartary,” all of which were marketed as “real” and all of which were fantastical fictions. In other words, Banvard sought to provide audiences with an early form of documentary entertainment, whereas PT Barnum was more interested in presenting lies and fictions.

The Power of Panorama in Performance

It is easy to look at John Banvard’s moving panoramas and see him as a visual artist, but my experience leads me to believe he was a performative artist first and foremost. He was an entertainer as celebrated for his theatrical flair as for his artwork, and a performer who used visual art as a means of enhancing his performance. A moving panorama can be looked upon in silence and stasis and be appreciated as such, in the same way that a Shakespearean play can be read as literature rather than watched in performance but doing so is reductive and antithetical to the creator’s original intent.

It is the moving panorama combined with live performance, the synthesis of performer and audience collectively experiencing an event, that gave the moving panorama show its power. In one telling sequence of *Georama*, Banvard realizes he can combine the mediums of storytelling, music, and visual art within a performance of his moving panorama, and then is told the plural of medium is not “mediums” but “media.” His moving panorama shows were an early form of what we think of today as “Media,” and Banvard was far ahead of his time in discovering the entertainment possibilities therein.

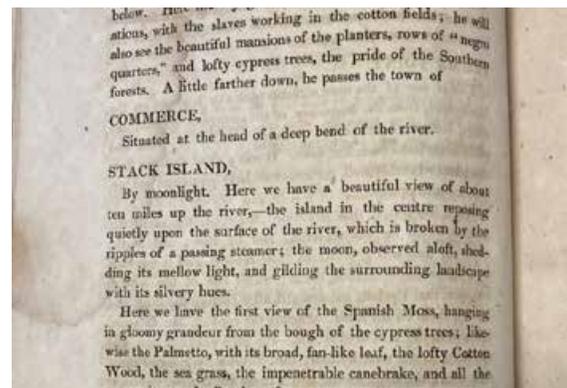


Fig. 7. *Description of Banvard's Panorama of the Mississippi, Missouri, and Ohio Rivers*, 1852, John Banvard, Printed by Reed and Pardon, Paternoster Row, Photo, Credit: Author

My favorite part of *Georama* is a section where the character of John Banvard recites a passage from a

transcription that the actual John Banvard sold at his shows, essentially a summary of his script that audiences could read along with during the performances. The section describes a lake at moonlight. As the character of John Banvard begins to recite the passage from the book, live piano music fills the air with a tune that was composed specifically for John Banvard's show in 1847.

The motion of the scrolling panorama slows to a stop and we “land” on a scene based on Banvard's surviving painting “Journey to the Ohio River.”



Fig. 8. *Journey to the Ohio River*, 18??, John Banvard, Painting, Credit: Charleston Renaissance Gallery

In that moment Banvard's actual words, underscored with the melody composed to accompany those words, are spoken in front of the recreation of his art scrolling past on a moving panorama. I watched every night as the audience sat enthralled in their seats, transformed into an audience from the 1800s as if they had all left space and time and were experiencing the same sense of excitement produced by John Banvard's theatricality.

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Acknowledgments (Optional)

Special thanks to Paul Collins, the writer of "Banvard's Folly", which appeared in the copy of *McSweeney's* I read in 2005. He has been incredibly useful throughout the process and the transcription of Banvard's text, as well as the music composed for Banvard's show and published as the "Mississippi Waltzes" both were introduced to me by Paul Collins. A debt of gratitude to my collaborates Matt Schatz, who co-wrote the book and wrote the music and lyrics to *Georama*, and Jack Herrick, who did the orchestrations and wrote original music and lyrics. I would also like to acknowledge Suzanne Wray, who first introduced me to the IPC, and Sara Velas, Peter and Janet Morelli, and Sue Truman, who came to St Louis to see *Georama*. A special thanks to Molly Briggs who was also there in St Louis and provided valuable feedback on the substance and structure of this essay.

Author Biography

West Hyler was the Story writer and Scene Director for *Cirque Du Soleil Paramour*, Cirque's first Broadway musical. Other Directing work includes *Shrek! The Musical* (National Opera House of Bulgaria), *Get Lit with iLuminate* (Stratosphere Showroom), *Piff the Magic Dragon* (Flamingo Showroom), *Avenue Q* (State Puppet Theater of Bulgaria), *Air Play* (New Victory Theater), *H2O* (59E59), *Georama*, *The Disappearing Man* (St Louis Rep), *Tempest*, *Love's Labours Lost*, *Merry Wives of Windsor* (Notre Dame Shakespeare Festival), *Getting My Act Together...* (York Theater Company), *No Way to Treat a Lady* (The Colony Theater), *Djembe!* (Apollo Theater), *Legendarium*, *Metamorphosis* (Big Apple Circus, Lincoln Center), *Panda!* (Beijing State Theater), and *A Jake and A Tom* (Hollywood International Film Festival, Charleston International Film Festival), amongst others. He was the associate director of the Broadway hits *Jersey Boys*, and *How the Grinch Stole Christmas* and directed Vanessa Carlton into *Beautiful, the Carole King Musical*. He was the Producing Artistic Director of the New York Musical Festival and Co-Artistic Director of Artistic Stamp.

The Restoration and Restaging of the Small Panorama

Clear World of the Blissful

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Abstract

After Elisar von Kupffer's death the circular painting escaped complete destruction only by chance, and only after its substance had suffered greatly. It is thanks to the initiative of the Pro Elisarion Association that the painting cycle could be restored. The core idea of the restoration concept was based on the idea of joining the painting, which consists of 17 individual, unevenly shaped parts, into a circular painting, analogous to the large panoramas of the 19th century. From a conservation point of view, the great advantage of this concept is that the fabric is always sufficiently taut in the event of climatic fluctuations and thus cannot throw waves. In addition, the exhibition situation of 1939 was rudimentarily restored by reconstructing a lost part of the painting, measuring 1.8 m x 2.5 m according to a historical photograph, and by erecting a pavilion under which the visitor could stand in the center of the installation site.

Keywords

Elisar von Kupffer, Conservation and Restoration, Reconstruction, Small Panorama, Association Pro Elisarion, Monte Verità.

Introduction

The small circular painting *Clear World of the Blissful* is the main work of artistic creation by Elisar von Kupffer (1872-1942). Von Kupffer was an Estonian-born aristocrat who worked as a painter, poet, photographer, historian, and playwright (fig.1). [1] Together with his friend and companion, the philosopher and publicist Eduard von Mayer (1873-1960), who also came from the aristocracy, he moved to southern Switzerland in 1915 because of the increasing hostility toward Germans in Italy. [2] After he and his friend founded the Klarist Society in 1911, Elisar von Kupffer called himself only Elisarion from 1912 on. Elisarion's ideology is based on the idea of duality or contrast between the confused world (the world of earthly passions) and the clear world (paradise, or the clear world of the blissful). In 1923 he began work on the monumental painting, which consists of 17 individual panels of varying



Fig. 1. Elisar von Kupffer (around 1929) with his companion Eduard von Meyer (around 1917).

widths and which he completed in several stages by 1929 (fig. 2). The painting depicts an idealized idea of paradise in an androgynous world and shows in 33 scenes a cycle of changing seasons and landscapes with 84 completely unclothed young men, often decorated with flowers, which almost all have the facial features of Elisarion. [3] The cycle was to become the center of a future Klarist temple. A detailed description of the painting's content will be omitted at this point, since this essay is mainly concerned with the art-technological and conservation aspects of the painting. A basic scholarly work on Elisar von Kupffer and on the painting can be found in the biography of Fabio Ricci. [4]



Fig. 2. Two sections of the painting (created between 1923-26).

History of the Painting

In 1926/27 Elisarion had a residence built in Menuisio (Canton Ticino) according to his plans. However, the rooms were not large enough to present the entire cycle; there was a lack of suitable exhibition space. The painting parts therefore had to be hung in separate rooms – sometimes one above the other. A historical photograph from this period shows part of the painting arranged in a semicircle. Lighting was provided by lamps whose shades were covered on half sides with cloths (fig. 3). Only the completion of a twelve-



Fig. 3. Sections of paintings hung on top of each other, fixed to the wall. For better illumination, the lamps were covered on the sides (red frame).

cornered extension in 1939 made it possible to present the entire cycle in a continuous sequence. The construction of this extension was made possible by the support of the Swiss Confederation as well as private donors (fig. 4). The now completed separation of the residence and the exhibition site of the painting cycle “Clear World of the Blissful” increased the idea of a temple house immensely, as the visitor could be led from the world of confusion to the world of the blissful through a small connecting passage. From this point forward, lighting was provided by a glass roof—very much in the tradition of the panorama paintings of the nineteenth century. Photographic evidence shows that the parts of the painting were attached directly to the wall. In the center of the room there was also a colorfully painted



Fig. 4. Sanctuarium Artis Elisarion after 1939. On the left side of the illustration can be recognized the dodecagonal extension of 1939 with the glass skylights. The covered bridge serves as a connection between the old and new building.

pavilion supported by 6 columns, under which the viewer could take a seat. Due to the area darkened by the roof of the pavilion, the painting appeared more colorful and luminous to the visitor (fig. 5).

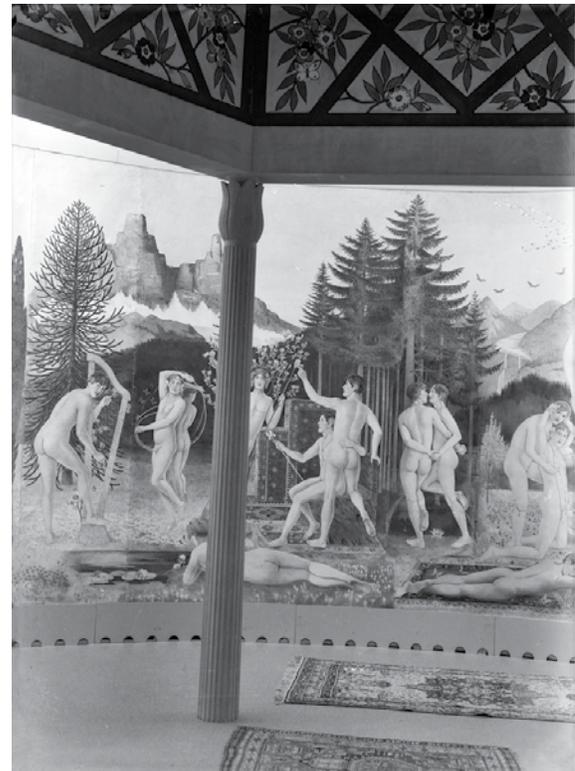


Fig. 5. View from inside the pavilion of a section of the painting. The temple was additionally furnished with wicker chairs in addition to carpets.

Also, in the 1939 annex, the lower edge of the painting is now about 30 cm above the floor. The lower edge cover of the painting with the semicircular black holes at the floor

level could have been vents for the heating system. Since 1939 the villa has been used as the “Sanctuarium Artis Elisarion” and is a residence and temple in one. The outbreak of World War II caused the flow of visitors to the sanctuary to dry up. Although Elisarion’s health was failing, he continued his efforts to spread his religion of Clarism and died in Menusio on October 31, 1942. After Elisarion’s death, his friend Eduard von Meyer arranged and sifted through the joint work and appointed the Canton of Ticino as heir by will—with the condition that the villa be preserved in its entirety. The property was to go to the municipality of Menusio. This could not be prevented even by the long-time housekeeper Rita Fenacci (1906-1973), who had faithfully assisted the two companions since 1923 and enjoyed a lifelong right of residence in the sanctuary until her death in 1973. [5] During this time, the rotunda also suffered damage, especially water damage due from the leaking roof. After her death in 1973, the power of disposal over the building passed to the municipality of Minusio, after the canton had rejected the donation. After years of political back and forth, it was decided to convert the house into a cultural center for the community. In the process, however, all the interior furniture was left behind and destroyed.

Temporary Rescue of the Painting

It was only thanks to the intervention of the well-known art historian and exhibition organizer Harald Szeeman (1933-2005) that the painting cycle was saved from complete destruction. [6] Szeeman made it possible for the entire painting to be subsequently shown in Vienna, Zurich, Munich, and Basel. [7] Prior to the exhibition, Szeeman’s wife, Ingeborg Lüscher (*1936), attempted to carefully repair the considerable destruction of the painting caused by



Fig. 6. View of the wooden pavilion built in 1987. The illustration shows the state after the renovation of 2021.

water in the basement. [8] From 1987 on, the cycle of paintings was presented on Monte Verità in a wooden rectangular exhibition building built especially for the painting (fig. 6). The painting cycle was placed in the center of the main room. In contrast to the historical large-scale panoramas from the nineteenth century, the individual fabric panels were not sewn together and hung from a fastening ring. Rather, the panels were fastened to slightly curved wooden boards with staples and laid next to each other in a circle. However, the transitions were not attached with an exact fit everywhere, and due to irregular and torn-out picture edges, the transitions between the individual picture panels had a visually disturbing effect. The edges of the upper and lower parts of the painting were covered with color-coordinated covers, and the center was masked with a light-colored fabric. Unlike the original building in Menusio, the lighting was not provided by daylight from above, but from below with the help of spotlights (fig. 7).



Fig 7. Interior view of the wooden pavilion. Exhibition situation from 1987 - 2017.

Final Rescue of the Painting

Even at the new location, the condition of the painting deteriorated visibly, and soon it was no longer accessible to the public. As a result, the painting and Elisarion’s ideas disappeared from the public’s consciousness or were forgotten. It was not until the Pro Elisarion Association was founded in 2008 that this changed. The association, whose goal is to preserve the work of Elisar von Kupffer and Eduard von Mayer and make it known to a wider public, has played a decisive role in initiating, among other things, the professional restoration of the painting cycle. [9] To this end, four phases were planned:

- Phase 1. Examination of the painting and concept for the restoration (2014–2015).
- Phase 2. Preparatory work for the restoration of the painting and the building (2017).
- Phase 3. Conservation and restoration of the painting (2019–2021).
- Phase 4. Reconstruction works
Pavilion, entrance, lost painting (2021).

However, before a concept could be developed for the longer-term preservation and a contemporary presentation of the circular painting, which had previously been treated neglectfully an elaborate technological study of the overall condition of the painting and the building had to be carried out. [9] The results of this study are briefly summarized below.

Phase 1: Summary of the Examination Report on the Condition of the Painting

Dimensions

Originally, the cycle of paintings “Clear World of the Blissful” consisted of 17 individual parts, namely 15 picture panels of 14 cm to 3.08 m wide, a painting part in the form of a “door” (154 x 60 cm) as well as a painting of approximately 170 x 290 cm in size, which has been lost since 1973. The latter served as a link between the “beginning” and the “end” of the cycle. Adding the approximate dimensions of the lost painting to the existing circumference of the painting of 26.2 m, the original circumference of the painting is approximately 29.14 m. The height of the painting panels is on average 3.18 m, which gives an area (including the lost painting above the entrance) of about 88.45 m² (fig. 8).

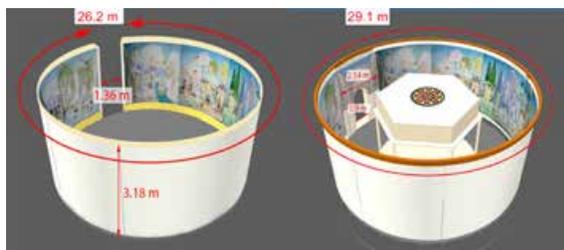


Fig 8. Circumference of the painting and exhibition situation until 2017 (left side). Situation since 2021 (right side).

Support

The individual segments of the painting are not only of different widths but also not uniform in texture. A graphical representation of the fabric widths illustrates this (fig. 9).

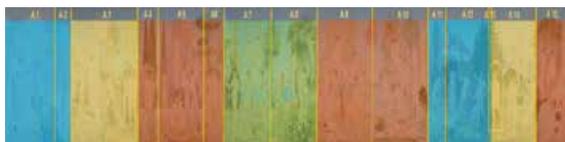


Fig 9. Schematic representation of the different web widths and mesh types.

Four types of fabric could be distinguished, with threads densities varying from 9 x 14 threads per cm² (type A, show in blue) to 19 x 20 threads per cm² (type B, show in red). The presence of different types of weaves can probably be

explained by the fact that the painting was created over a period of several years.

Painting Technique and Painting Layer

Originally, the circular painting was conceived in fresco technique, but since the suitable wall for it was missing, a canvas had to be used for “mobility reasons.” According to Eduard von Mayer—Elisar’s companion—the artist developed a new painting technique, which was closely related to the fresco technique. According to an excerpt from a text by E. v. Meier,

The circular painting of the ‘Clear World’ looks like a fresco. Frescoes, however, were still painted on the fresh lime cast of a wall surface—hence the name ‘al fresco.’ Elisarion, on the other hand, fell in love with the dry chalk canvas, usually used only for underpainting. He could hang them on any auxiliary wall and then, using the white chalk ground as paint, transform them into luminous paintings for the future wall. [11]

This description pretty much fits the painting technique of the painting “Clear World of the Blissful”. On a thin chalk primer, the predominantly light colors are also applied thinly and fluidly, so that the white primer can act as an element of the painting composition.

The surface of the painting has no coating such as varnish. A signature of Elisarion is located in the oldest part of the picture from the year 1923/24 at the very bottom of the edge

A scientific analysis was commissioned to determine the painting ground, the pigments used, and the painting medium.[12] The investigations yielded the following results: The painting ground consists of chalk with a significant amount of gypsum. Caerulean blue for the blue of the sky and the water, as well as yellow ochre and pink varnish in the area of the body parts. The binder used could be an animal glue in the sampled areas. Visual observations, as well as solubility tests elsewhere in the painting layer suggest that it could be a lean tempera painting with portions of oil paint. Some colors, such as green or pink, dissolve with moisture, while other areas, such as the sky or water, are stable to moisture. However, the fact that the painting surface is sensitive to water is also evidenced by the numerous water margins with dissolved and discolored paint. [13]

Condition and Damage

The individual fabric panels and the painting layer were in varying condition. In several places, the fabric was torn or ripped. The reasons for this were certainly poor storage and improper handling of the painting parts. In addition, the painting panels were not always accurately fitted when they were reassembled in 1987, allowing the fabric to be squeezed in different ways, resulting in extensive folding. The painting parts must also have been rolled or folded in

the past, as numerous creases show. The adhesion of the paint layer to the painting support was very weak. In some cases, the paint layer came off even under slight mechanical impact. This resulted in large losses of color (fig.10).

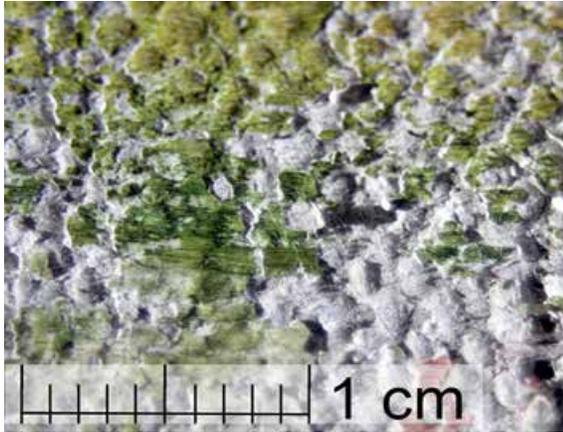


Fig 10. Example of color loss caused by humidity.

Another damage feature proved to be numerous water stains in the painting layer. These were likely caused in part by water penetration the roof of the rotunda (built in 1939.) In addition, the parts of the painting must have been exposed to great moisture at some point, if they were not actually lying in the water. Traces of vandalism were found in several places. Mechanical stress (due to transport, etc.) has caused numerous folds and creases in the painting support. In some cases, the missing areas have been filled extensively with a greasy medium (grease crayon or makeup, etc.)

The color intensity of the painting cycle varies. This is most evident at the transition from sections 10 to 11. Compared to the right side of the painting, the left area appears pale and bleached. However, closer inspection reveals that in these areas the layer of paint has been greatly reduced. As a result, the intensity of the colors has also been lost. The cause of this cannot be determined with absolute certainty, but there are indications that the colors have been reduced by strong friction (during an attempt to clean with erasers?) (fig.11).



Fig 11. Color differences between section 10 to 11.

In summary, from a conservation point of view, it can be said that all fabric parts were in a very poor condition. This is likely due on the one hand to damage to the fabric and the painting layer, and on the other hand to the poor climatic conditions inside the exhibition pavilion. Climatic measurements showed that the values of the external climate were practically identical to the values inside the building. In other words, the thin wooden building envelope offered no relevant protection against climate fluctuations. Since the paint layer is highly hygroscopic and therefore reactive to moisture, there was a risk that it would detach from the primer and flake off—which has already happened in some cases.

Concept

The core idea of the restoration concept was to make it possible for the visitor to experience again, if in a rudimentary form, the spirituality and aura that prevailed in the Menusio Sanctuary after 1939. [14] In addition to the overall restoration of the painting cycle, the concept also included the reconstruction of a lost part of the painting measuring 1.8 x 2.5 m, the reconstruction of the pavilion that was destroyed after 1973, and a small accompanying exhibition on the world of Elisàr von Kupffer's philosophy. [15]

The painting itself, which consisted of 15 individual parts of unequal width and height, was to be assembled into a circular panorama. In contrast to the large panoramas from the nineteenth century, in which the individual painting panels were joined together before painting, in the case of the "Clear World of the Blissful" this had to be done on the already painted surface. For this purpose, the individual painting panels were freely suspended from a circumferential ring (purlin ring) at the upper edge and joined together at the vertical seams. For this reason, it was not practical to restore the painting outside its building. In addition, to allow the painting to be hung with a few as wrinkles as possible, it was also planned to attach precisely defined weights to the lower edge of the painting. A ring mounted on the floor, corresponding to the circumference of the painting, was also to be used to stretch the painting in a circular manner. The great advantage from a conservation point of view was that the fabric parts would always be sufficiently taut in the event of climatic fluctuations and would therefore be able to throw no or only minimal waves. This concept was also successfully applied in the conservation of the large panoramas in Salzburg [16], Lucerne [17], Innsbruck [18], and Atlanta [19].

Phase 2: Preparatory Work and Building Renovation

In order to begin the restoration work, the existing building had first to be renovated. This was essential to ensure the sustainability of the restoration and to meet museum standards. The uninsulated building envelope offered no protection against seasonal fluctuations, and temperatures around freezing were the norm, especially in winter. However, such low temperatures were not advantageous for the sustainable preservation of the painting and the planned conservation work (due to reduced adhesive and drying behavior of consolidation materials, etc.). For this reason, it was necessary to insulate the building envelope in order to create a constant and conservationally compatible interior climate for the painting.

Accordingly, the individual painting panels were protected during the building's renovation phase (2017–19) by removing them from their support panels, suspending them in a newly erected rolling scaffold, and finally covering them with plastic sheeting. The painting remained in the protective tent until the end of the renovation in June 2019 (fig 12).



Fig 12. Protection of the painting sections during the renovation works.

Construction and Mounting of the New Mounting Ring

Following the example of the large panoramas, the “Clear World of the Blissful” was also to be mounted at the upper edge of the picture on a wooden ring. This now has a circumference of 28.7 m and a diameter of 9.1 m. The thickness of the wood is 15 x 10 cm. According to historical research, the circumference of the painting should have been 29.14 m. However, the circumference had to be reduced by about 42 cm for structural reasons. This did not play a big role in the overall effect of the painting's presentation, because the part of the painting above the entrance that was to be reconstructed could be reduced accordingly. It should be noted in passing that the circumference of the painting, as presented by Harald Szeeman from 1984 onwards, was “only” 27.6 meters; that is, the painting was about 1.54 m smaller.

Securing the Paint Layer

Because the individual pieces of fabric were, from a conservation point of view, in very poor condition, the first step of was to smooth out or at least reduce the countless folds, waves, water stains and warping of the painting's fabrics using a vacuum and special vacuum table. At the same time, the brittle and flaking paint layer was strengthened by applying an organic adhesive. The surfaces were cleaned alternately (fig. 13).



Fig 13. Strengthening of the paint layer and leveling of the fabric with the help of low-pressure tables.

Assembling the Individual Painting Panels Together

One of the most technically difficult tasks was to find a solution for attaching the painting panels, which were irregular in height and width, to the mounting ring in a straight line. For this purpose, they had to be provided horizontally with fabric strips made of plastic fibers at the upper and lower edges and completed to form a rectangle. Flexible, perforated plastic strips were incorporated into

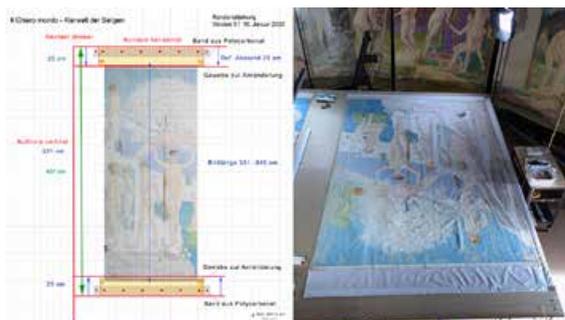


Fig. 14. Each painting panel had to be precisely measured before bordering.

each of these fabric strips for stabilization and fastening to the mounting ring. Within a given web length and according to the interlocking picture motifs, the original painting pads had to be precisely adjusted and each fabric strip had to be positioned exactly so that the representations would fit

together exactly once they were assembled—a complex and time-consuming task (fig. 14).

During the individual processing steps, all the painting panels hung loosely on the existing mounting ring for intermediate storage. The transport and manipulation of the partly very large sections (3 x 3.8 m) often proved difficult and required ingenuity and skill. Once all 15 fabric panels had been precisely and horizontally attached to the mounting ring in the correct sequence, the joining of the vertical edges could be undertaken (fig. 15).



Fig. 15. The painting panels fixed in the correct position (Left side). On the right side the prepared panels for final assembly.

It was decided to bond the individual painting webs with a reversible thermoplastic adhesive. [20] The course and the overlaps with the adjacent painting panel had been precisely measured and marked beforehand.

Tensioning the Painting Panels

In order to give the loosely hanging circular painting the necessary tension, avoid wrinkles, and eliminate distortions, weights were attached to the lower edge of the painting. This was achieved with the help of a circumferential metal



Fig. 16. Detail view of the weights attached to the bottom edge of the painting.

ring fixed just above the floor and weights attached to the lower edge of the painting. In this way, the outward curvature (hyperboloid) of the fabric typical of panoramas was achieved (fig. 16).

Per running meter, the vertical tension weight is now 1.9 kilos or, calculated on the entire circumference, about 50 kilos, which corresponds to 156 weights of 230 grams each. [21] Since the joined painting parts do not form a continuous surface in the area of the entrance, the painting had to be braced in this area. This was also done with the help of weights. For this purpose, metal tubes were provided with deflection hooks on both sides of the entrance and mounted on the floor and on the purlin ring. Wire ropes were then used to deflect the transverse tension generated at the end edges of the circular painting with weights. In order to achieve the required tension of the painting, an average of 21.7 kilos of weights per side were attached over the entire height of 3.18 meters, or in other words 35 weights of 660 grams per side.

In order to hide the mounting ring, the back of the painting with the bordered fabric panels and the tension weights from the visitor, a dark blue curtain was attached to the upper end of the mounting ring.

Phase 3: Restoration

The aim was to visually reduce the countless imperfections (wrinkles, cracks, color losses, etc.) in the original painting layer with the help of retouching so that they would not be the first thing to catch the viewer's eye in a disturbing way. For this reason, the main focus was on retouching the areas in the sky and the depictions to the left and right of the entrance, or at least bringing them into harmony with the surroundings (fig. 17).



Fig. 17. Example of retouching work.

In order to achieve the transparent color application so precisely described by Eduard von Meyer, the retouching and also the reconstruction of the lost painting were carried

out with rubbed pastel pencils. These could be mixed in powder form on the palette and were fixed after application. Watercolor or tempera paints would inevitably have left water stains on the matte color surface.

Phase 4: Reconstruction

Based on the historical illustrations from the sanctuary in Menusio it could be seen that the cycle of paintings must have been attached to the wall of the circular building and thus the entrance to the interior of the circular building also ran through an opening in the wall. The original plan was to create a small passageway for the visitor so that he could physically experience the transition from “the confused world” to “the clear world” as he walked through the connecting passage. For reasons of space, this idea had to be abandoned in favor of the accompanying exhibition.

Therefore, a completely different entrance construction had to be devised for the now self-supporting hanging circular painting. A wooden rod construction was erected as the load-bearing base. It proved useful to integrate the tensioning mechanisms for horizontal tensioning of the



Fig. 18. Entrance construction with horizontal tensioning system

circular painting into this framework at the same time (fig. 18). Subsequently, the inner and outer sides of this construction could be covered with thin plywood panels.

The color design of the vestibule or entrance area was based on a watercolor by Elisàr von Kupffer, which shows the historic vestibule in a dark blue.



Fig. 19. The only existing photograph of the lost painting.

A significant part of the reconstruction work involved the addition of the panel above the entrance. The lost painting (approx. 3.5 m²) was reconstructed based on a black and white photo (fig. 19). It was reconstructed by projecting the historical photo onto the surface to be painted. After the interior drawing could be created in this way, it was possible to reconstruct the rest of the painting freehand with pastel colors. This made it possible for the circular painting to present itself as closed again. For the rest of the design of the entrance area and the covers at the top and bottom of the painting, a simplified and restrained color scheme was chosen for the panels, since no colored models were available for this purpose (fig. 20).



Fig.20. Final state of the reconstructed entrance situation.

In order to make the “Sanctuarium” a historical experience for the visitor, a pavilion consisting of six columns was reconstructed inside the rotunda according to old photographs and watercolors and decorated with flowers. The model of the Ticino decorative painter Silvio Baccaglio (1905-2000), who painted the pavilion on behalf of Elisarion, served as a model. [22] The reconstruction of the pavilion was based on various historical photographs and was made by a carpenter and scenery builder under the direction of the Pro Elisarion Association and then assembled on site (fig. 21 + 22).



Fig.21. View from the entrance towards the pavilion.



Fig.22. View from inside the panorama to the entrance.

The lighting is from above with dimmable 14 LED lamps and a color temperature of 4000 Kelvin. The color temperature is unfortunately kept a bit too warm, but for cost reasons it was not possible to install LED lamps with a spectrum similar to daylight. The installation of skylight windows as they still exist in the Menusio annex had to be abandoned also of cost reasons. Instead of these windows, a ceiling-mounted light ring with LED lighting was designed.

The content of the accompanying exhibition was prepared by a historian in collaboration with the Pro Elisarion Association and the Monte Verità Foundation.

In order to preserve the painting in the long term, a maintenance contract was signed with the Municipality of Menusio. This includes the annual control of the painting

and the monitoring of the climate with the help of a remote control.

Closing Words

Finally, it should be mentioned that Switzerland has gained another small panorama in addition to the “Woche-Panorama” in Thun (1814; 7.5 x 38 m). This brings the total number of panoramas in our small country to five, three of which are large panoramas as the “Bourbaki Panorama” in Lucerne (1881; 10 x 112.5 m), “The Crucifixion of Christ” in Einsiedeln (Copy from 1962, 10 x 100 m) and “The battle of Murten” (In storage; 1894; 10.5 x 97.4 m).

Notes

1. A brief overview of Elisar von Kupffer’s work, and oeuvre can be found at SIKART.ch: <https://www.sikart.ch/kuenstlerInnen.aspx?id=4022888> as well as on the homepage of the Pro Elisarion Association: http://www.elisarion.ch/de/biografien/elisar_von_kupffer.html.
2. Information on Eduard von Meyer can be found at www.elisarion.ch/de/biografien/eduard_von_meyer.html and also in: Gradziano Mandozzi: *Elisarion. Un Sanctuario per il Clarismo*. Comune di Minusio, 1996; S. 27.
3. A detailed description of the content of the 33 pictorial scenes can be found on the homepage of the Pro Elisarion Association: http://www.elisarion.ch/de/das_rundbild/die_33_szenen_und_ihre_bedeutung/szenen/szene_1.html.
4. Fabio Ricci: *Ritter, Tod & Eros. Die Kunst Elisar von Kupffers (1872-1942)*. Köln: Böhlau Verlag, 2007.
5. See note 2: Grazione Mandozzi, S. 43.
6. Information about Harald Szeemann will be found in: https://de.wikipedia.org/wiki/Harald_Szeemann
7. *Elisar von Kupffer (1872-1942)*. Kunsthalle Basel, 1979. [Text:] Ekkehard Hieronimus. Basel, 1979.
8. Claudia Lafranchi Cattaneo und Andreas Schwab: *Dalla visione al chiodo. Dal chiodo alla visione*. Il Fondo Harald Szeemann dell’Archivio Fondazione MonteVerità, Bellinzona 2013; S. 173-220.
9. David Streiff: *Der Verein Pro Elisarion und seine Bemühungen um den Erhalt des Nachlasses von Elisar von Kupffer*, Paper from David Streiff on the virtual opening of the restored pavilion, April 2021, in: http://www.elisarion.ch/de/pro_elisarion/verein.html.
10. Christian Marty und Wolfgang Müller: *Untersuchungsbericht zum Gemälde „Klarwelten der Seligen“ von Elisar von Kupffer*, ARS ARTIS AG, 2015.
11. Eduard von Meyer: *Zur Vertiefung des Sanctuariums Artis Elisarion*, 1948.

12. ARS ARTIS AG: *Fragestellung zum maltechnischen Aufbau des Gemäldes „Klarwelten der Seligen“* von Elisàr von Kupffer, 5. Februar 2015.

13. Andreas Küng: Bericht RAP 895601, *Malgrund-, Pigment- und Bindemittelbestimmungen*, Seite 5 ff; SUPSI 31.03 2015.

14. Petra Helm, Christian Marty und Wolfgang Müller: *Detaillkonzept und Kostenschätzung zur Restaurierung des Gemäldes „Klarwelt der Seligen“ von Elisàr von Kupffer*, ARS ARTIS AG, Februar 2016.

15. Another consideration of this concept was the idea, that that the painting could one day be shown again in its original location in Menusio by detaching it from its mounting ring, rolled up, and rehung it its new location.

16. Restauriergemeinschaft Sattlerpanorama: *Die Konservierung und Restaurierung des Sattlerpanoramas*, 2007; and also:

Stefanie Flinsch: *Zur Restaurierungsgeschichte des Panoramas von Salzburg*, in: *Panorama: Virtualität und Realitäten*, 11. Internationale Panoramakonferenz in Altötting 2003, SPA Stiftung Panorama Altötting 2005; S. 113-114.

17. Christian Marty, *Konservierung und Restaurierung des Rundgemäldes von Eduard Castres (Bourbaki- Panorama) 1996-2003*, in: *Panorama: Virtualität und Realitäten*, 11. Internationale Panoramakonferenz in Altötting 2003, SPA Stiftung Panorama Altötting 2005; S. 102 – 112.

18. Petra Helm, Christian Marty und Wolfgang Müller, *Die Translozierung des Innsbrucker Riesenrundgemäldes*, in: *Das Tirol Panorama, Ein Land – Ansichten und Durchblicke*, Hersg. Michael Huber und Wolfgang Meighörner, Haymon Verlag 2012; S. 170-173.

19. Ulrich Weilhammer: *The Big Move: The Relocation and Reinstallation of the Atlanta Cyclorama*, in: *International Panorama Council Journal*, Volume 3, 2019; S. 10-24.

20. BEVA® 371 Film (thick, 65µm). The product is a reversible thermoplastic adhesive consisting of a resin blend on silicone coated polyester and a silicone coated intermediate sheet.

21. The comparison with the vertically mounted tension weights of this small panorama with those of large panoramas such as Innsbruck or Atlanta, results in a tension weight of 6.6 kilograms per linear meter (converted at an assumed average height of the fabric of 11 meters). For comparison: the panorama of the “Battle of Bergisel”, Innsbruck: 6.4 kg or the panorama of the “Battle of Atlanta”, Atlanta: 5.50 kg tensile weight. In the case of the “Bourbaki Panorama”, Lucerne, on the other hand, only 2.3 kg per linear meter could be applied due to the poor condition of the fabric.

22. See note 2, Mandozzi: S. 43.

Photos

All photos taken by Ars Artis, except figure 1-5 (Fondo fotografico Elisarion of the Municipality Minusio), figure 7 (Amici di Ticino). Figure 8 (Drawing Wolfgang Müller).

Acknowledgments

Special thanks got to our friend and partner Wolfgang Müller, who was a valuable help in planning and carrying out the conservation and restoration work. Without his ideas and critically examined concepts, the realization of this project would not have been possible. Our thanks also go to the Pro Elisarion Association, especially to the President Beat Frischknecht and the board members David Streiff and Lukas Piccolin. Our thanks also go to the Monte Verità team and the architects.

Author Biography

Mag. art. Petra Helm completed her studies in conservation and technology at the University of Fine Arts in Vienna, where she graduated with a Magister Artium in 1980. In 1980, she founded her own studio specializing in the conservation of paintings and paper, where she focused on the conservation of art on paper, especially from the 19th century, classical modernism, and contemporary art. In parallel, she completed a degree in European Ethnology. Professionally, she was involved in the board of the Austrian Restorers Association (ÖRV), among others as vice president and delegate of the parent organization of the European Restorers Associations (E.C.C.O). In 2003 she founded ARS ARTIS AG in Zurich (CH) together with Christian Marty. She gained experience with panoramas at the “Bourbaki Panorama” in Luzern (CH) and during the translocation of the panorama of the “Battle of Bergisel” in Innsbruck (A), where she was responsible for the treatment of the image surface. Together with her partner Christian Marty she publishes on conservation and restoration and gives lectures.

Christian Marty completed his training as a painting and sculpture conservator-restorer in Zurich. Further training took place at various museums and institutes in Switzerland, Austria, and the Netherlands. In 1980 he joined the Swiss Institute of Art Science (SIK/ISEA), where he was appointed Head of the Art Technology Department in 1985. During this time, he was involved in the "Swiss Association for Conservation and Restoration" (SKR/SCR) for 8 years, 6 of them as president. He was also co-founder and member of the presidium of the "European Confederation of Conservators - Restorers' Organization" (E.C.C.O). From 1997 onwards, he led the Institute's major conservation projects, including the conservation and restoration of the “Bourbaki Panorama” in Lucerne (CH). In 2003 he founded

ARS ARTIS AG, together with Petra Helm. He was able to contribute his experience in dealing with large-scale panoramas as a consultant in the restoration of the “Sattler Panorama” in Salzburg (A) and during the translocation of the painting “Battle of Atlanta” in Atlanta (USA). He was the overall project manager for the translocation of the “Battle of Bergisel” in Innsbruck (A). Together with his partner Petra Helm he publishes and lectures on conservation and restoration. He is a Fellow of the International Institute of Conservation (IIC).

A Further Panorama by Earle? A View of Rio de Janeiro, 1823

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Abstract

In 1968 Anthony Murray-Oliver noted that the travelling artist, Augustus Earle, had produced a panorama of Rio de Janeiro. Such a work could have provided the basis for Robert Burford's Panorama of Rio of 1827 and 1828 shown in Leicester Square. Burford's presentation is known through reviews, advertisements and the six-penny guide with its accompanying woodcut. Based upon drawings reputedly made in 1823, Burford's spectacle shows a view from within Guanabara Bay, with various ships dotted about the middle distance including some that supposedly participated in the Brazilian struggle for independence. Scholars have sometimes attributed this view to William John Burchell. Earle resided in Brazil between 1820 and 1824 and communicated with Burford regarding his panorama of Sydney at least as early as 1826. While the evidence supporting Earle's authorship remains circumstantial, this attribution offers an intriguing prospect. It prompts us to consider, if Earle had provided these drawings, why would his contribution have been anonymous, what would it tell us about his experience of South America, and how would it extend our understanding of his and Burford's panoramic works.

Keywords

Panorama of Rio de Janeiro, drawing attribution, panoramas Augustus Earle, Robert Burford, William John Burchell, Anthony Murray-Oliver.

Murray-Oliver's Assertion

In his 1968 study of Augustus Earle in New Zealand, Anthony Murray-Oliver listed Earle's then known panoramas. In addition to the view of the Bay of Islands, New Zealand, he wrote that the artist produced drawings for at least three other panoramas: those of Madras, Mauritius and "apparently another, of Rio de Janeiro." [1] While he gave no reference supporting this statement, Murray-Oliver's assertion provokes the question, if Earle had produced such a work, could this have provided the basis for Robert Burford's London panorama of the Bay of Rio de Janeiro of 1827–1828? This spectacle has most recently been discussed by Thiago Leitão de Souza in his essay in the 2019 publication *More Than Meets the Eye: The Magic of the Panorama*, and by Carla Hermann's publications of 2017 and 2020. [2]

Burford's guide to the panorama is entitled *Description of a View of the City of St. Sebastian and the Bay of Rio Janeiro; Now exhibiting in the Panorama Leicester Square;*

Painted by the proprietor Robert Burford from drawings taken in the year 1823. [3] His commentary describes a thriving community with well-established infrastructure, situated within a dramatic landscape. Pointedly, Burford did not name the original artist of the work. As Murray-Oliver's papers are currently unavailable, we have little understanding of the basis of his assertion.

No scholars researching either Earle or the 1827–1828 panorama of Rio de Janeiro have considered this connection. In his 1955 study of Earle in Brazil, David James did not consider that the artist could have produced a now lost panoramic sketch of Guanabara Bay, let alone link it to Burford's show. [4] Therefore, this paper initially considers what evidence supports the hypothesis that Augustus Earle produced the initial sketches for Burford's view of Rio de Janeiro.

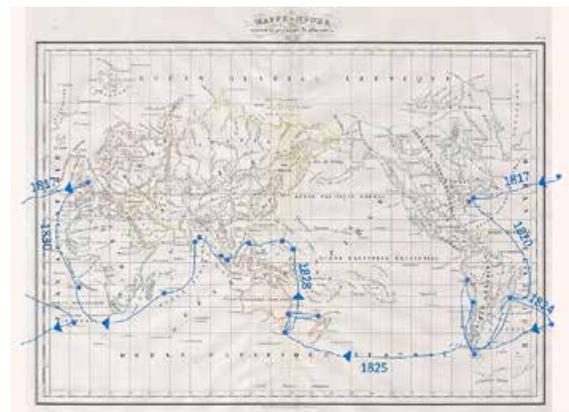


Fig. 1. Earle's Travels 1817–1830. Present author.

The Artist

Augustus Earle (1793–1838) is remembered as a traveling artist who between 1817 and 1830 traversed the Atlantic, Pacific and Indian oceans, drawing and painting as he went. After journeying around the Mediterranean, in 1817 he traveled to New York and Philadelphia. Three years later, on 2 April 1820 he arrived at Rio de Janeiro, before visiting Chile from May to June, and Peru from July to December. [5] Earle then spent three years in Rio de Janeiro between 4 January 1821 and 19 February 1824, before setting out on a seven-year journey that would take him to Tristan da Cunha,

Van Diemen's Land, New South Wales, New Zealand, through the Pacific to South East Asia, and then onto India, Mauritius and Saint Helena (Fig. 1). [6] He later revisited Rio de Janeiro in 1832 while appointed as artist on the first stage of the *Beagle* voyage.

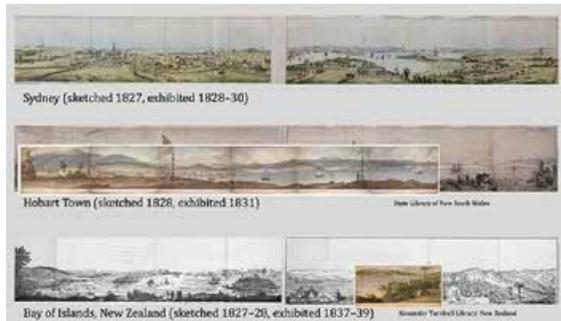


Fig. 2. Earle's panoramas of the Tasman World, with surviving watercolour sketches superimposed. Present author.

A View of Rio

Robert Burford (1791–1861) presented three of Earle's panoramas of the Tasman world in London: Sydney (sketched 1827, exhibited 1828–30), Hobart Town (sketched 1828, exhibited 1831), and the Bay of Islands, New Zealand (sketched 1827–28, exhibited 1837–39) (Fig. 2). [7] Two were shown in the upper drum of the panorama building in Leicester Square with the third, the view of Hobart Town, presented at Burford's site on The Strand (Fig. 3). The Rio de Janeiro panorama was shown in the upper drum from June 1827 to late 1828. [8] As usual, it was accompanied by the six-penny commentary describing the site's development, with a woodblock engraving showing the view's key features (Fig. 4). Forty-nine items were identified including the surrounding topography, islands, distant hills, settlements, notable buildings, infrastructure, larger ships at anchor and smaller vessels. Burford stated:

[The] view taken from the harbor about a mile from the city is the finest and most extensive that can be obtained; From whence its lofty eminence is, crowned with convents, &c. and the beautiful hills in its environs, interspersed with villas, gardens, &c. have a rich and magnificent appearance. [9]

Lord Cochrane, the commander of the Brazilian Naval fleet, was shown heading out in a small boat to his Brazilian Navy flagship, the *Pedro Primeiro*. The former admiral became a mercenary after his controversial dismissal from the British Royal Navy in 1817 following a financial scandal.

First appointed by the Chilean government to command its navy against Spain, Cochrane was then offered command of the Imperial Brazilian Navy. His success at masterminding the Portuguese surrender following the Battle of 4 May helped Brazil achieve independence from Portugal. [10]

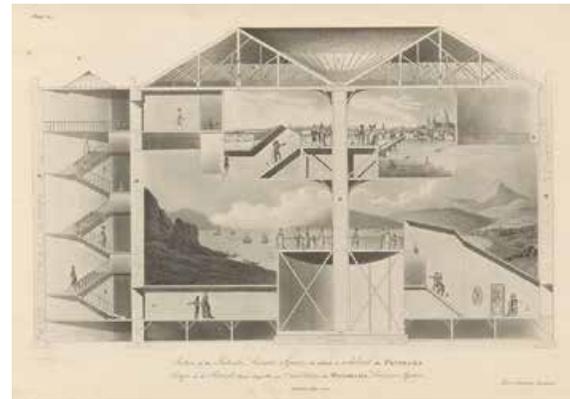


Fig. 3. Drawing of the Panorama Leicester Square, 1801, Robert Mitchell. Metropolitan Museum of Art. 52.519.153.

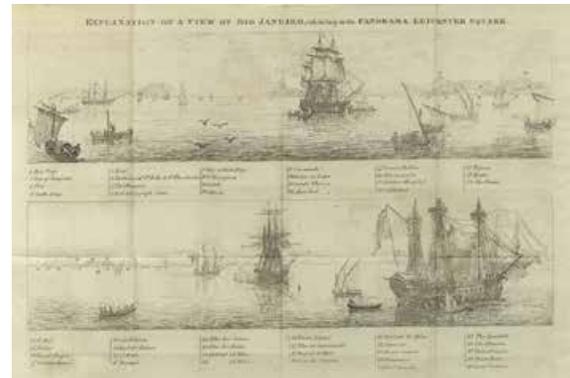


Fig. 4. Burford's Panorama of Rio de Janeiro 1827–1828. Reproduced with permission of the National Library of Portugal.

Burford informed his audience:

Lord Cochrane was invited to take command of the fleet, and for that purpose arrived in the Bay, on the 13th of March, 1823. About that time the present view was taken, his lordship's ship, with several others which composed the Brazilian Navy, being represented in various parts of the Bay." [11]

The panorama shows numerous other sea vessels with four large ships expressly named: the Brazilian flagship, *Pedro Primeiro* with a substantial number of British sailors, and the three British ships, *H.M.S. Doris*, *H.M.S. Spartiate* and *H.M.S. Blanche*. [12] At various times in the 1820s, these three ships were part of the British Royal Navy's South America Station that had been established in 1808. [13] None of the three ships were assigned to the Brazilian Navy or were directly involved with its victory against Portugal, despite Burford's inference in the text quoted above. Rather than focusing upon Brazilian independence, the Royal Navy featured prominently. Carla Hermann has discussed this as an illustration of Britain's "informal imperialism" that extended to Brazil and its naval power. [14] At this time Brazil was Britain's third largest market, and there was substantial investment in gold mining. [15]



Fig. 5. *View of the Bay of Rio de Janeiro, Lord Cochrane's boat & crew*, Augustus Earle. National Library of Australia, Rex Nan Kivell Collection. NK12/94.

Some members of Burford's audience may have known these ships or their crew members. With the approach of Lord Cochrane in his small boat, the Brazilian flagship is shown firing cannons which animates an otherwise largely static scene. Earle's watercolour of Cochrane's small boat with its crew of six survives (Fig. 5). By the time the panorama was shown in London, Cochrane had been recruited by the Greek government in its struggle for independence. [16]

Several smaller boats and canoes were also shown. Using language characteristic of the time, Burford stated:

Most of the boats and canoes which ply about the Bay have a standing awning covered with reeds, and two large triangular sails; they are manned by four, six, or eight negroes, according to their size, whose savage and uncouth countenances, and tattooed and naked limbs, are an extraordinary sight to Europeans; they rise at each stroke of the oar, and throw themselves backward into their seats, and invariably accompany their work with some wild national air, which they vociferate at the utmost pitch of the voice. The man at the helm is generally a mulatto or white. [17]

As one of the forty-nine items annotated on the woodblock in the *Description*, these smaller vessels may appear to be insignificant; however, they accord with the ethnic diversity apparent in Earle's three Tasman panoramas that show Aboriginal people and Māori. In addition to the 'mulatto' mentioned above, Burford's *Description* includes 'gipsies,' 'native Indians' and 'negroes.' [18] The combination of vessels of Europeans and local people is reminiscent of Earle's panorama of Madras that would be staged by William Daniell and E.T. Parris in London in 1830–31. [19]

Several features are visible in the circular view that are positioned 180° apart, diametrically opposite one another (Fig. 6). When plotted on a map, intersecting lines between these distant sites reveal that the viewer's position was in the anchorage area in Guanabara Bay, on the side away from the city where the naval vessels moored (Fig. 7). [20]

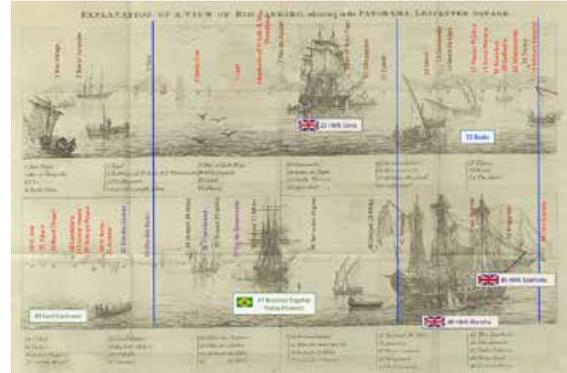


Fig. 6. *Diametrically opposed points on the panorama*. Present author.

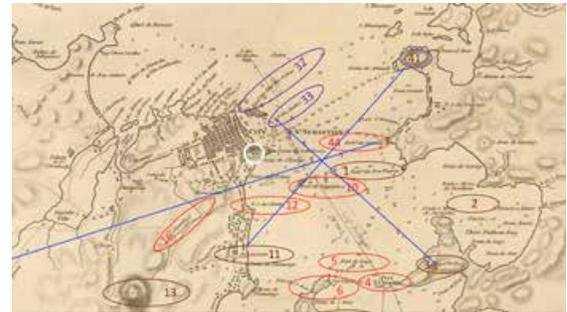


Fig. 7. *Intersecting lines charting the diametrically opposed points identify the artist's position, with a white circle showing Burchell's viewing position*. Present author.

This suggests that the view was painted *in situ* by an artist who was positioned on a ship within the bay. Furthermore, the locations of the British ships suggest that the artist's viewing position may have been within a zone reserved for the South America Station anchorage.

Other Possible Artists

Although the panorama was reviewed in the press, no discussion of the view's source has been found. [21] There were several artists in Brazil in 1823 who could have contributed to the presentation. Jean-Baptiste Debret, Johann Moritz Rugendas and Thomas Ender are possible sources, although it seems likely that Burford would favour a British artist. In 1930 Herbert Andrews suggested that the source of the Burford's view of Rio was the traveler and collector, William Bullock, although he acknowledged that Bullock was not known to have travelled that far south. [22]

William John Burchell (1781–1863) has been credited as the source of Burford's view. Over a period of five or six weeks he produced another panoramic view taken from a position on the Castelo Hill, two kilometres from the viewing position within the harbour (Fig. 7). [23] This work, which is now held at Museum Africa, Johannesburg,

is dissimilar to the Burford view. Gilberto Ferrez stated that of all the nineteenth century panoramas of Rio:

this is not only the most accurate but also the best, due to its perfectly correct perspective and to its faithfully drawn architectural details, which, when carefully studied, reveal a series of valuable information. [24]

Citing a statement in Burchell's entry in the *Dictionary of National Biography*, Ferrez maintained that Burchell had provided the sketches for Burford's view despite his arrival in July 1825, which was two years after the date of the scene. He argued that Burford, "altered the panorama by adding an imaginary scene of the Brazilian Navy commanded by Admiral Cochrane, and dating it 1823..." [25] Margareth da Silva Pereira speculated that Burford's panorama was another view by Burchell, in addition to that now held in Johannesburg. [26] Thiago Leitão de Souza has suggested that Burford may have altered the date to claim authorship over Burchell's work. [27] On the other hand, based upon the time of Burchell's arrival in Brazil, Luciana Martins has queried his authorship. [28] More recently Carla Hermann has expressed doubt regarding Burchell's role based upon the absence of commentary linking him to the Burford view in his own lifetime. [29]

If Burford had access to Burchell's land-based panorama, generating an accurate vista from a hypothetical harbour viewing position, as Ferrez claimed, would have required a detailed map and use of a complicated projection technique. Such complexity suggests that it was more likely that Burford relied on a harbour-centred sketch drawn *in situ* to generate his panorama from within the bay, rather than projecting the features of Burchell's land-based view.

Earle's Images of Rio

Earle's surviving Brazilian images indicate that he immersed himself in the life of the settlement, witnessing royalty, common folk, an expatriate community, indigenous fishing people and slaves. [30] Maria Graham (1785–1842) included six of his images in her 1824 publications on Brazil and Chile, including two views of slave markets (Fig. 8). [31] She would have carried these original views back to England on her return journey in late 1823. They were probably on good terms, with Graham describing Earle as "an ingenious young English artist." [32]

The National Library of Australia holds over twenty works by Earle from Brazil including several views of the area around Rio de Janeiro (Fig. 9). [33] With a three-year residence, it is likely there were once many more.

By Earle's account, during his journey to the Cape of Good Hope in 1824 in Captain Simon Amm's *Duke of Gloucester*, the ship stopped at Tristan da Cunha to load potatoes. Earle went ashore; however, a change in the weather saw the ship depart before he and a companion, Thomas Gooch, had time to re-board, resulting in a stay of eight months. [34]



Fig. 8. *The Slave market at Rio, after Augustus Earle*, illustration to Maria Graham's *Journal of a Voyage to Brazil*, 1824. J.C. Beaglehole Room, Victoria University of Wellington, New Zealand



Fig. 9. *View from the summit of the Cacavada* [i.e. Corcovado] Mountains, near Rio de Janeiro, c. 1822, Augustus Earle. National Library of Australia, Rex Nan Kivell Collection. NK12/93.

Earle kept journals during other legs of his travels, so he probably maintained a similar record in Brazil. One would expect that his paintings and possible journal would have remained on the departing ship. Nevertheless, many Earle images of Brazil exist, which suggests that some of his South American works had already been dispatched to Britain. He did not complain about their loss in his published memoir. [35]

It is plausible that his hypothetical Rio panorama sketches could have been delivered by a traveler such as Maria Graham who departed Rio in October 1823, or by Lady Cochrane, the wife of Lord Cochrane, who left for Britain a few days before Earle departed Brazil. [36] The expatriate community in Rio was relatively small, and Lord Cochrane would have been acquainted with Earle's older half-brother, Commander (later Admiral) William Henry Smyth.

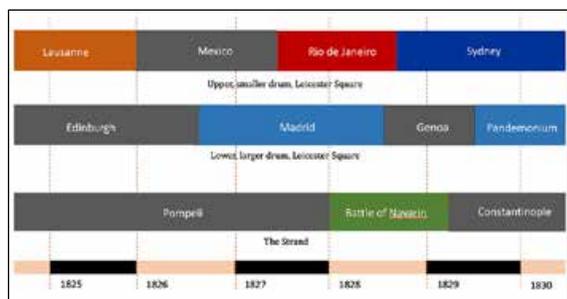


Fig. 10. *The sequence of Burford's panoramas 1825–1830.* Present author.

The Burford Sequence

Examining the succession of Burford panoramas at Leicester Square and The Strand through this period offers further understanding of the circumstances of the Rio presentation (Fig. 10). This was the first spectacle staged by Robert Burford after taking sole charge of the business following the retirement of his father, John Burford, at the end of 1827. [37] It immediately followed the 1826–27 view of Mexico that was based upon drawings made by William Bullock in 1823, which—along with Bullock's 1824 Mexican exhibition at the Egyptian Hall—indicates a continuing focus on the Americas. [38]

The Rio panorama was politically opportune. Britain had recently recognized Brazilian independence, and the new (but short-lived) Prime Minister, Lord Canning, was a notable supporter of its independence and trade with Britain. Rio de Janeiro was presented as a community of some sophistication with comforts of civilization, sited on an outstanding harbour. The controversial issue of slavery, which was officially disapproved of in Britain—and which Earle frequently illustrated—was little discussed in Burford's commentary (Fig. 8). [39] There may have been lobbying for a view of Rio at this time, as there would later be for the view of the Bay of Islands, when colonisation by the New Zealand Company was imminent. [40]

Burford's Rio view was then followed by Earle's panorama of Sydney, which also presented a community enjoying the opportunities of western civilization in a magnificent southern hemisphere harbour setting. By the time Rio opened in Leicester Square, Earle had been in Sydney for a little over two years. In February 1827 *New South Wales* newspapers reported that Burford had contracted Earle for the impressive sum of 100 guineas. [41] Mail times between Britain and the colony took at least four months, so Burford and Earle would have been in communication for some time before 1827, extending through the period when the Rio view was being prepared in London. Possibly prompted by the prospect of Earle's Sydney view in London, *New South Wales* newspaper editors informed their readers of the panorama of Rio de Janeiro, without mentioning the name of the artist. [42]

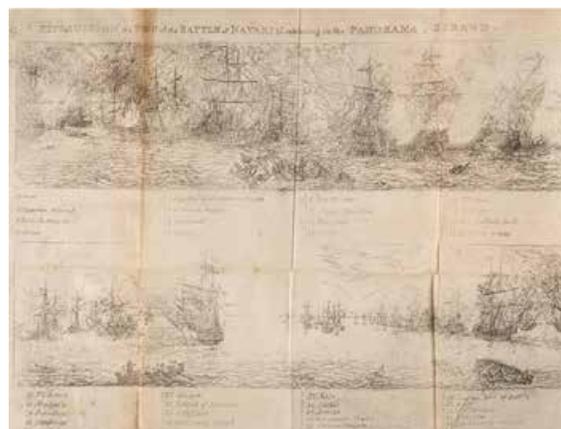


Fig. 11. *View of the Battle of Navarin, Burford's Panorama, 1828.* Reproduced with permission of King's College London, Foyle Special Collections Library.

Burford's Modus Operandi

Six months after the Rio view opened, the naval theme continued with Burford presenting the recent Battle of Navarino off the coast of Greece at his site on The Strand (Fig. 11). [43] He composed the view through a systematic, scholarly process. The position of ships and the manner of attack was taken from official plans, while the view of the town of Navarino and the surrounding country was based upon drawings produced after the battle by Lieutenant Thomas Finmore, with additional “indispensable information” provided by Commander Lord Viscount Ingestre. [44] Andrews suggests that, without permission, Burford may also have used published images of the battle by George Phillip Reinagle, a young unofficial war artist. [45] If this were the case, Burford's explanation of his process may have served to mask this appropriation.

Assembling information from various sources, often with superadded foreground objects, is characteristic of some of Burford's other works including those of the Tasman world. [46] It is plausible that the Rio de Janeiro view was composed from sources which may have been supplied by more than one person. For example, Burford may have amended the shipping from that shown in the initial sketches. An emblem of technological advance, an unnamed “Steam Boat” that appears in the woodblock without commentary, may be such an addition. [47] As with Burford's Battle of Navarino, people who had been in Rio, including those who served at the South America Station, may have advised on the scene.

Burford often acknowledged contributors to his works with artists usually named on the guidebooks' title pages, so his reticence regarding the view of Rio is intriguing. Apart from a footnote referencing Alexander Caldcleugh's 1825 text on South America, if there were other informants, they remain unidentified. This would have been the case with many of Burford's presentations to some degree. It may be

that he communicated with several artists regarding their drawings or that subsequent modifications may have made it difficult to credit only one artist. The images were possibly provided by a third party, or perhaps Burford had not paid for use of the sketches. If this were the case and the images were by Earle, perhaps the project was underway before they started communicating. Currently, we have no way of knowing about this with any certainty, which makes the artist's anonymity perplexing. I have suggested elsewhere that Burford did not acknowledge Earle's input in the Hobart Town panorama of 1831 because the artist was associated with the competing panorama of Madras at that time. [48] If the situation in 1827 was delicate—for whatever reason—discretion could have been required.

Recreating a Shipless Profile

Digitally removing shipping from the view indicates the coastal profile that the original artist supplied to Burford (Fig. 12). While many artists could have drawn such a view, Earle produced similar views in South America and beyond, some of which were annotated as the basis for large panoramas. His 2.2m view of Callao records Cochrane's naval blockade near Lima in December 1820 (Fig. 13). [49] Earle showed ships near San Lorenzo island flying Chilean colours while those in the harbour flew those of Spain. With its numbered annotations, Jocelyn Hackforth-Jones has identified this as a study for a larger panorama (Fig. 14). [50] While in Brazil, Earle also produced a vista of "St. Juan", i.e. Cape Frio (Fig. 15). [51] In New South Wales he produced similar studies, along with views of Sydney Harbour with sailing ships like those in Burford's view.

Earle's Callao and St. Juan views prompt speculation that he may have prepared a panoramic view of Rio de Janeiro. Guanabara Bay has a more dramatic setting than that at Callao. Upon arrival in Rio, Maria Graham described its impact, which may parallel Earle's experience:

Nothing that I have ever seen is comparable in beauty to this bay. Naples, the Firth of Forth, Bombay harbour, and Trincomalee, each of which I thought perfect in their beauty, all must yield to this, which surpasses each in its different way. Lofty mountains, rocks of clustered columns, luxuriant wood, bright flowery islands, green banks, all mixed with white buildings; each little eminence crowned with its church or fort; ships at anchor or in motion; and innumerable boats flitting about in such a delicious climate,—combine to render Rio de Janeiro the most enchanting scene that imagination can conceive. [52]

It seems likely, then, that Earle would have produced panoramic views of Guanabara Bay during his three-year residence. Furthermore, the site had often been described in Britain, which—with its additional British naval presence—would have attracted a larger London audience than a view of Cochrane's 1820 blockade in Peru.



Fig. 12. Upper half of the woodblock of the *Panorama of Rio de Janeiro* looking towards Pão de Açúcar (Sugar Loaf Mountain), with shipping digitally removed. Present author.

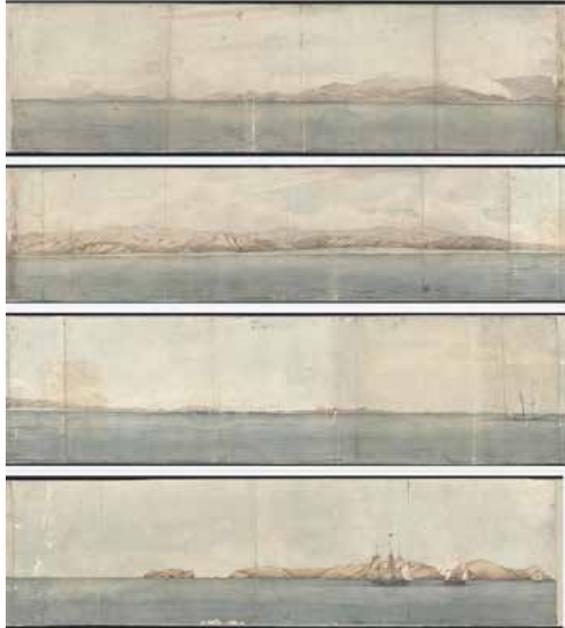


Fig. 13. *Lima, Callao, Island of St. Lorenzo*, 1820, Augustus Earle. National Library of Australia, Rex Nan Kivell Collection. NK12/113.



Fig. 14. *Lima, Callao, Island of St. Lorenzo*, 1820, detail, Augustus Earle. National Library of Australia, Rex Nan Kivell Collection. NK12/113.



Fig. 15. *The river and town of St. Juan*, [Cape Frio], Augustus Earle. National Library of Australia, Rex Nan Kivell Collection. NK12/115.

Few of the original watercolour panels of Burford's panoramas survive. Of the Australasian views, three of the nine Hobart panels, five of the six Bay of Islands panels and all eight of the Sydney panels are now lost (Fig. 2). Carla Hermann has found that eight oil paintings, which were said to be the basis for Burford's Rio panorama, were advertised for sale in London in 1836. [53] Whether these were Burford's source material, or if they were painted after an original set of watercolour sketches is not known. Back in Britain, artists including Earle and Burchell reworked some of their earlier sketches in oils. [54]

Conclusion

Augustus Earle had the means and motivation to provide the preparatory drawings for the panorama of Rio de Janeiro. Earle was in Brazil in 1823 when the original sketches were reported to have been produced. He wrote to Burford regarding the Sydney view at least as early as 1826, and they may have had earlier communication. Returning travelers may have delivered his drawings to London. Earle's other panoramas, including his view of Callao, prompt speculation that he would have been moved to produce a similar long, annotated view of Guanabara Bay.

Site analysis and complexity indicates that the view was almost certainly generated from a shipboard location, rather than being transferred from a land-based view as has sometimes been argued. Therefore, it seems that Murray-Oliver's assertion that Earle was responsible for a Rio panorama is very likely. It is reasonable, then, to list Burford's *View of the City of St. Sebastian, and the Bay of Rio Janeiro* alongside those of Sydney, Hobart Town, Madras and the Bay of Islands as panoramas shown in London that originated with Earle. Although two of these presentations did not bear his name, the first four spectacles gave London audiences the opportunity to see views by Earle through a continuous five-year period from mid-1827 until the latter part of 1832. This is an impressive achievement.

Nevertheless, with no preparatory images from the harbour viewpoint surviving, the argument that Earle produced such drawings remains one that is based upon circumstantial evidence. Until the sketches or the oils advertised for sale in 1836 are located there can be no certainty of authorship. Should these works emerge, then the business of attribution can begin.

Notes

1. Murray-Oliver, *Augustus Earle in New Zealand*, 23–24.
2. Hermann, "Landscape and Power," para 10–19; Leitão, "Un'Opera Brasileira and Quattro Atti"; Hermann, "Robert Burford, Rio de Janeiro, 1827."
3. Burford, *Description of a View of the City of St Sebastian*.
4. James, "Um Pintor Ingles no Brasil," 157.

5. Earle, *Narrative of a Residence*, 50; "Noticias Maritimas," *Gazeta do Rio*, April 5, 1820.
6. "Noticias Maritimas," *Gazeta do Rio*, January 5, 1821; "Noticias Maritimas," *Imperio do Brasil*, February 21, 1824; "Noticias Maritimas," *Semanario Mercantil*, March 4, 1824; Earle, *Narrative of a Residence*, 50–51, 204, 243; Murray-Oliver, "Earle, Augustus."
7. Lum, "'Our Transporting Antipodes';"; Skinner, "'... Dreamt of, Indeed'."
8. "Panorama"; "Sydney Now Open."
9. Burford, *Description of a View of the City of St. Sebastian*, 6.
10. Vale, *Audacious Admiral Cochrane*, 153.
11. Burford, *Description of a View of the City of St. Sebastian*, 6.
12. *H.M.S. Doris* (1808) was a 36-gun fifth-rate frigate. *H.M.S. Spartiate* was originally a French 74-gun ship of the line that was captured in the Battle of the Nile. *H.M.S. Blanche* (1819) was a 46-gun fifth rate.
13. Ship arrivals in Rio were: *H.M.S. Doris* February 1822; *H.M.S. Spartiate* November 1823; *H.M.S. Blanche* August 1824 (after Earle's departure). This suggests that the scene depicted was not 1823, or, if Earle painted it in his final months in Rio, then the ship in the foreground was renamed as the *H.M.S. Blanche* in the 1827 panorama as that ship was then known to be in Brazil. *H.M.S. Blanche* transported Brazilian gold bullion back to Britain in September 1827. *H.M.S. Spartiate* was in Rio harbour when Earle departed Rio in February 1824. "Marine List"; "Imperial Brazilian Mining Association"; "Portsmouth"; Earle, *Narrative of a Residence*, 203. See also, Hermann, "O Rio de Janeiro para Inglês Ver," 56–57.
14. Hermann, "Landscape and Power," para 15–18; Hermann, "Robert Burford, Rio de Janeiro, 1827," 50.
15. "Imperial Brazilian Mining Association"; Fausto, *Concise History of Brazil*, 76; Bethell, *Brazil*, 64.
16. Cochrane returned to England on 26 June 1824, left Brazilian service in April 1826 and arrived in Greece in March 1827. Vale, *Admiral Cochrane*, 166, 172, 176.
17. Burford, *Description of a View of the City of St. Sebastian*, 10.
18. Burford, *Description of a View of the City of St. Sebastian*, 8, 9, 10.
19. Skinner, in prep.
20. Blunt, *American Coast Pilot*, 487.
21. "London Exhibitions"; "Panorama"; "Panorama of Rio Janeiro," *London Morning Post*; "Panorama of Rio Janeiro," *London Weekly Times*; "Rio Janeiro" amongst others.
22. Andrews, "Leicester Square and Strand Panoramas," 75.
23. Letter to William Hooker, July 8, 1826, cited in Martins, *O Rio de Janeiro dos Viajantes*, 119. This letter includes no reference to Burford. Luciana Martins, email to author, December 3, 2021. Burchell was in the vicinity of Rio through April–June 1826 which ties with the timeframe of

the Hooker letter. Smith and Smith, "Itinerary of William John Burchell," 495.

24. Ferrez, *O Mais Belo Panorama*, 4.
25. Ferrez, *O Mais Belo Panorama*, 7. An 1863 obituary informed Burchell's entry in the *Dictionary of National Biography*. "Obituary Notices," xxxv; Chichester, "Burchell, William John," 290.
26. Pereira, "O Olhar Panorâmico," 149n.
27. Leitão, "Un'opera Brasileira and Quattro Atti," 62.
28. Martins, *O Rio de Janeiro dos Viajantes*, 123n.
29. Hermann, "O Rio de Janeiro para Inglês Ver," 60–61.
30. Martins, "A Bay to be Dreamed of."
31. Robert Fitzroy's *Voyage of the Beagle* (1839) also includes images by Earle.
32. Graham, *Journal of a Voyage to Brazil*, 302.
33. James, "Um Pintor Ingles no Brasil," 160–161; Hackforth-Jones, *Augustus Earle*, 59–74.
34. Earle, *Narrative of a Residence*, 205–206.
35. Earle, *Narrative of a Residence*.
36. "Noticias Maritimas," *Imperio do Brasil*, February 19, 1824.
37. Andrews, "Leicester Square and Strand Panoramas," 75.
38. "Mexican Curiosities."
39. He stated that the lower parts of the two or three storeyed houses of the higher classes "are occupied by the slaves, cattle, and for other domestic purposes." Burford, *Description of a View of the City of St. Sebastian*, 7.
40. Skinner, "'... Dreamt of, Indeed'," 391.
41. "We understand that ..."; "Panorama of Sydney."
42. "Panorama of Rio de Janeiro...," *The Australian*; "Panorama of Rio Janeiro," *The Monitor*.
43. "Mr. Burford's Panorama of the Battle of Navarino"; "Sydney—Now Open."
44. Burford, *Description of a View of the Battle of Navarin*, 8. Ingestre advised on the Navarino views by John Theophilus Lee that were engraved by R.W. Smart.
45. Andrews, "Leicester Square and Strand Panoramas," 75.
46. Lum, "'Our Transporting Antipodes'," 131–37; Skinner, "'... Dreamt of, Indeed'," 384, 387–88, 394.
47. Two armed steamships, the *Britannia* and *Hibernia*, were supplied to Brazil in 1826 and were renamed *Correio Brasileiro* and *Correio Imperial*. A Liverpool-built steamship, *Conte de Palmela* ["*Patmella*"], reputedly travelled from Portugal to Brazil in 1820. Vale, "English and Irish Naval Officers," 111n; Kennedy, *History of Steam Navigation*, 34.
48. Skinner, "'... Dreamt of, Indeed'," 386.
49. Hackforth-Jones, *Augustus Earle*, 4, 56; Lum, "'Our Transporting Antipodes'," 126–127.
50. Hackforth-Jones, *Augustus Earle*, 56.
51. Hackforth-Jones, *Augustus Earle*, 71.
52. Graham, *Journal of a Voyage to Brazil*, 159.
53. Hermann, "Robert Burford, Rio de Janeiro, 1827," 50.
54. On Burchell, see Martins and Driver, "'Struggle for Luxuriance'," 70–71.

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Redefining Concepts of Architectural Space through the Panorama as a Travel Apparatus

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Abstract

This paper analyzes the multiple relationships that emerge between travel, the panoramic medium, and concepts of architectural space, within various contexts of spatial imagination. This realm denotes the views of distant spaces and places that are mediated and altered by the panoramic medium itself. With consideration for theories of “media determinism” and visuality, this paper proposes that, through a human-oriented ontology and privileging of the human, the panorama functions as a travel apparatus. As such, the panorama is useful as an interpretative tool for rethinking the production of spatial imaginations, and it provides new approaches to other forms of representation in relation to the “viewing mechanism.” Thus, the panorama is, as a method of negotiating spatial and temporal distances, critical in thinking and representing architecture. This is most evident in how it captures the formations and transformations of architectural space that these views produce. Through critical reading of the history of spatial representation and visuality, the purpose of this paper is to identify how the visions of architectural space redefine their conceptions through panoramic travel apparatuses. Special focus will be put on tracing the genealogy of visual apparatuses that have inspired architectural concepts since modernity.

Keywords

Architectural Space, Panorama, Travel Apparatus, Mobility, Visuality, Spatial Representation.

Introduction

During the eighteenth century, the production of travel discourse began to grow and took on a variety of forms, from literary to visual and spatial configurations. [1] The broadening of visuality was essentially about changing the way desire for traveling was positioned: it effectively “located” desire in space and articulated it as a spatial practice. Speaking of the increased yearning for capturing sites in the form of panoramic views, the historian Alain Corbin (1936-) writes: “The debate continued for some time about the sources of this fabulous broadening of vision ... The Italian *vedute* had learned to take a comprehensive view of their cities, and for ages tourists had rushed to take in the bay of Naples from the terraces overlooking the city ... The ‘prospect view’ offered a pleasure, combined with walking and the ideal city, that gave rise to a new way of seeing.” [2]

Instrumentalizing desire for traveling is nothing new. The concept is repeatedly used to the present day to accompany cutting-edge panorama technology to enable the feeling of immersion in a picture. This basic panorama concept was explored for the first time with Robert Barker’s (1739-1806) patent in the late 18th century (fig.1). [3] Barker’s panorama worked in part by exploiting the tension between the availability of a complete scene and the necessarily incomplete sight available from any one viewing position. [4] In this pictorial tradition, two concepts were essential to create an immersive experience: visuality and mobility. [5] On the one hand, mobility has become a recurring perceptual trope throughout the history of modern visual media. It was used for scanning sites and cityscapes, moving through and with landscapes. On the other hand, to reflect on both micro and macro levels of movement, its definition was continuously reassessed through the different implications of movement: displacement, orientation, representation and conceptualization.

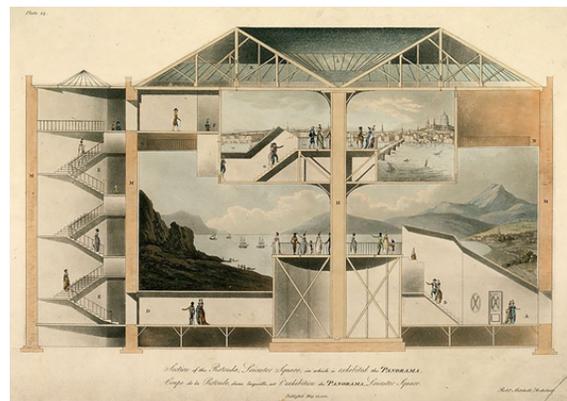


Fig. 1. Cross section of Robert Barker’s two-level panorama rotunda in Leicester Square (1793). British Library, Public domain Mark 1.0

By the late eighteenth century, the picturesque movement established its own sensuous field of action in landscape design and pictorial views. The picturesque model established a “sense” of space, derived from, among other things, the philosophical tradition of John Locke (1632-

1704). [6] At the same time, however, as Barbara Stafford (1941-) claims, another movement sought a more factual approach to spatiality, [7] moving firmly towards the realistic tradition in the nineteenth century. The nineteenth century's mechanized version of the traveling eye affected the ways of seeing and organizing visual memory. It also uncovered the passion for traveling as a new field of observation that connected diverse spatiotemporal configurations and turned them into a new visual memory of perceived travel narratives, historical paintings, history books, and architectural ruins. A branch of architectural scholarship, continuing the investigative line of Walter Benjamin (1892-1940), examines the influence of the 'modern vision' in the conception of the nineteenth-century modern city, focusing on the intersections of modern ideas of travel and pleasure. [8] Among other urban historians, Christine Boyer has studied representations of travel by turning attention to topographic views collected through travel that found their way to stereoscopic, binocular, and panoramic visions of the modern city, combining spectacular with documentary modes of representation. [9] In the words of Christine Boyer, the passion for travel meant "simultaneously perceiving travel narratives, history books, historical painting, and architectural ruins to be modes of vicarious travel through time and space... Traveling, visiting museums, studying maps, gazing upon architecture, and even observing a city's plan were all optical means by which the beholder organized his mind and his visual memory.[10] A comprehensive architectural scholarship within this line of research made it possible to identify an extraordinary archive of places to testify about the history of a city and landscape transformations. The atlas of places they provide takes the role of virtual tourism, education, and entertainment, as an instruction for consuming time and space. [11]

A Liberation of Architecture

With an interest in visibility, modernity and travel, panorama studies have revealed the ways in which the genealogy of visual apparatuses can be observed in relation to architectural concepts, tools and methods. For Étienne-Louis Boullée (1728-1799), Claude-Nicolas Ledoux (1736-1806), Karl Friedrich Schinkel (1781-1841), Philip Johnson (1906-2005) or Le Corbusier (1887-1965) with his concept of the *fenêtre en longueur* (1926), traveling created a new field of observation that privileged and connected diverse spatio-temporal configurations and gave them a new purpose. For example, some of the late 18th and early 19th century architectural conceptions testify to the use of panorama to extend the field of the visible and thus to extend perceptions of time and space. Unlike the rational representation of reality embodied in the pure geometric

form of the late 18th and early 19th century architecture, the interior of Boullée's Cenotaph (*Cénotaphe à Newton*, 1784, figs. 2-4) was seen as a liberation of architecture from anything that is connected to the mechanistic and rational, tending to expressiveness, atmosphere, individualism, and respect of the observer's eye.

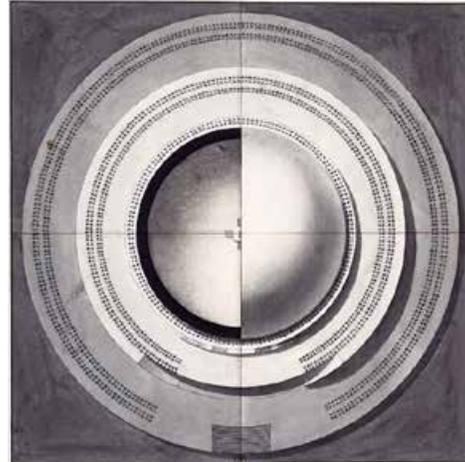


Fig. 2. Étienne-Louis Boullée's rendering of his imaginary cenotaph for Newton, view from above (1784). Gallica.bnf.fr/Bibliothèque nationale de France.

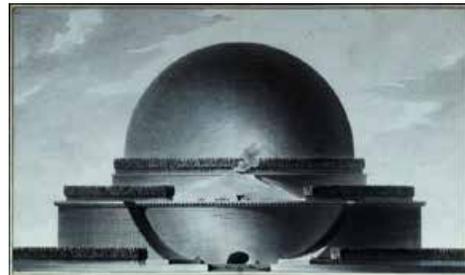


Fig. 3. *Cénotaphe de Newton*, geometric elevation (1784), Étienne-Louis Boullée. Gallica.bnf.fr/Bibliothèque nationale de France.



Fig. 4. *Interior view of Newton's cenotaph* (1784), Étienne-Louis Boullée. Gallica.bnf.fr/Bibliothèque nationale de France.

Using stereometric enclosures, Boullée designed a massive sphere building to immerse spectators in the night sky, with the moon and stars affected by sunlight filtering through apertures punctured in the sphere. Panoramic thinking turned out to be the leading concept when he sets the spectator in the place assigned to him in order to keep him at a distance that favors the illusion. [12] The spectator feels somewhat confused while being fully immersed in the unrolling scene: the space of representation within a real physical space. On the one side, the nature unfolding in front of him appears to be unpredictable, unmanageable, and transient; on the other side, architecture opening up seems rational, civilized, and static. Standing on the platform inside the Cenotaph and simultaneously experiencing the real building and the transformative effect of the represented, our spectator suddenly starts to wonder. He is confused with a relative permanence of the human-made, traditional concerns for rationality, immobile and static space, and yet the immediate experiential plotting of mobility, transformation, and ephemerality of space. With Bergson's claim in mind that "we cannot grasp the unceasing flux of reality with static ready-made concepts," [13] he realizes that *durability* -- in a sense of *eternity* -- is not an absolute concept and asks: "How did our consciousness of time affect the modifying perception of space?" It seems that Boullée's rephrasing of these confrontations can be seen as a preface to a revolutionary questioning of the full opening of architecture towards the epigraph of its *non finito* and Heraclitus' ever-present change being in the essence of the universe. [14]

Panopticon and Modernity

In a dramatic passage in his *The Order of Things*, Michel Foucault (1926-1984) described the epistemological shift from eighteenth-century empiricism to the invention of a transcendental concept of "man" as "the threshold of modernity". [15] A wide variety of optical devices extended the field of the visible and relativized the position of architecture in relation to the observer. For example, operating within modern visibility, Jeremy Bentham's (1748-1832) Panopticon prison from 1791 (fig.5) is seen as an apparatus-- a "machine of the visible," to use Comolli's phrase- which controlled the seer-seen relation. [16] The basic mode of operation was to establish the internalized surveillance system in order to establish permanent transparency of the building while still maintaining its physical boundaries. Foucault described a twelve-sided polygon of the panopticon as an "architectural mechanism," [17] a "pure architectural and optical system" that did not need to use force because the "real subjection is born *mechanically* from a *fictional relation*." [18] The panopticon system relies on the visual register, Foucault

continues, "emphasizing mobility and fluid subjectivity rather than restraint and interpellated reform." [19] The panopticon prison [20] was thought of as a spatial reformatorium that could change and "correct" *subjectivity* by architectural means. [21] Reordering of power, knowledge and the visible [22] (*pouvoir, savoir et voir*), as Foucault claimed, and placing the panoptic model in a pivotal position of this transition, marks the birth of a modern subject. Toying with the viewer's gaze and controlling the physical access, this architectural concept is widely used in other building typology, such as the factory or a hospital, cinema or theatre.

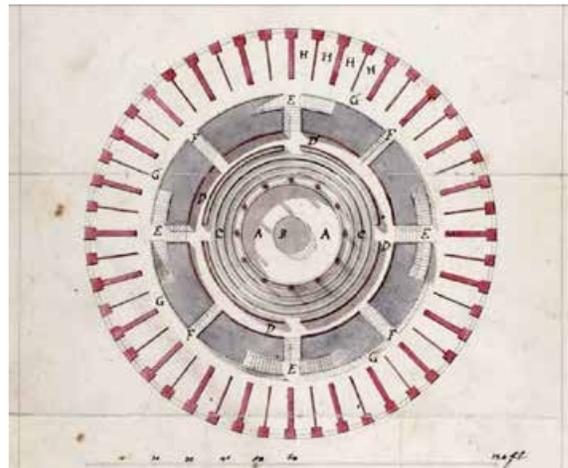


Fig. 5. Jeremy Bentham's Panopticon prison from 1791. A top-down illustration of the panopticon, by architect Willey Reveley (1791).

Modern Architecture: Retracing the Steps of Schinkel's Grand tour

One of the chief modern architects, Le Corbusier, focused his work on tracing the steps of the neoclassical German architect Karl Friedrich Schinkel during his 18th century grand tour of Italian antiquity. He made many drawings of ruined rooms from Hadrian's villa and Pompeii, emphasizing the missing walls or ceilings that allowed nature to define the space normally enclosed by human beings. [23] In his effort to simulate the panoramic all-encompassing view directly from nature in his buildings, Le Corbusier used the trope of the window. The trope has been established early in the renaissance as a trust to the geometrics of vision of the "perspectival window" that decoupled the figure of transparent glass from the metaphor of the window as a "frame of vision." [24] Toying with the integrity of the frame, in terms of vistas, framed views and the iconology of reflections, he cuts the window to condemn to the view of an unending panorama. In other words, Le Corbusier successfully combined the horizontal window

and the panoramic enclosure. The horizontal window diminished the ‘correct’ perception of the depth of the view, and opened the exterior view to the continuum of the landscape.

As the metaphor, window has functioned to situate the artist and the viewer in relation to the flat plane of representation. [25] In other words, if window is for the eyes, then “framing” views is common function of camera, film and architecture. For example, Le Corbusier demonstrates how architecture of his *Beistegui apartment* windows (1929-1931, fig. 6) can be a commentary on the new conditions attained by the panorama, although its basic function is to frame a view. [26] In the rooftop room, the panorama illusion seems to be fully attained as the view is cut between sky and the building and positioned on the horizon line. In Le Corbusier’s own words:

“Forms under light. Inside and out, above and below. When you go inside, you walk, look around as you walk and the forms are unfolded, developed and combined. Outside: you approach, look, take interest, judge, walk and discover. You continue to receive different, successive emotions. Pursued in this way, the composition appears. You walk, retrace your steps, move around, keep on moving, circulating. Take a look at the ways in which a man can feel architecture: he has two eyes that can see only ahead; he can turn his body, or move his body on his legs and turn any way he likes. Hundreds of successive perceptions go to make up his feeling for architecture. His walking, his movement, are the things that count, and it is here that architectonic emotion has its origin. Consequently, the composition has not been established on a fixed central point, an ideal point that can rotated for simultaneous circular vision.” [27]

Following these principles, in his 1926 manifesto *Les 5 points d’une architecture nouvelle*, Le Corbusier eventually set out formal elements of architecture which would redefine the architectural enclosure in terms of permeability and flexible spatial parameters. [28]



Fig. 6. *Charles de Beistegui apartment*, exterior view of the roof garden and the room with periscope, Paris, France, 1929-32, Le Corbusier. Licensed under CC BY 2.0

Contemporary Architecture and Videogames

Contemporary applications of panoramic imaging are not only computer vision, but extend to integrate 3D environment modeling, identification and recognition of robots, human tracking, video representation, and the 3D reconstruction and documentation of architectural buildings. Architects, architectural conservators and restorers use contemporary panoramic media, such as panoramic photography, VR photographs, photogrammetric panorama, digital route panorama, videogame environments, and 360° panoramic movies and screens arranged in a cycloramic 360-degree circle, in both practice and education. One of the most popular alternative models in architectural education- modern video games- is becoming recognized for its experiential, experimental and real-time modes available in first-person. Its educational and practical potential is identified in real-time communication with the players while imbuing them with their own logics, politics and value systems. [29] In Luke Caspar Pearson’s insight, “this method gives the player ever more realistic worlds to experience, yet they typically remain carefully cultivated virtual spaces.” [30] *Videogame Urbanism* research cluster that he instructs with Sandra Youkhana at the UCL Bartlett (fig. 7) investigates urbanism and the future of cities through the use of video game technologies. This panoramic mode of urban investigation offers designers new ways of speculating the city by allowing players to interact and experience their logics through game spaces. However, Caspar Pearson reminds us that these navigable virtual spaces have limited capacities to mimic the natural 360° vision because represented territories in the virtual space are experienced through the defined edges that one cannot transgress. Although operating at full freedom, the effect of “invisible wall” prevents a realistic experience characteristic of panoramic illusion.



Fig. 7. *Greatest Grids*, 2018. Digital screenshot drawing from game. Mingpei Liu, Yingying Zhu, Yu Zhu, Bartlett School of Architecture, UCL. Courtesy of Luke Caspar Pearson and Sandra Youkhana.

Conclusion

Human societies have always tended to produce artefacts intended to stand out visually, to command visual attention, and to extend the field of the visible beyond the horizon of limited human vision. The devices made in the visual culture of panoramas, photography, videogames and movies, were then converted into instrumentalities, automation and reproduction, subordinating our future to the face of irresistible technologies, circulatory speed and image representation. In addition, they seem to promise an expanded field of technological changes which extend our abilities to see, represent, and design spaces. At least this triumphalist modernist narrative of understanding the picture as a viewing mechanism, implies the changing visions, conceptions, and representations of architectural space irrevocably and dramatically.

Notes

- [1] Bruno, *Atlas of Emotion: Journeys in Art, Architecture, and Film*, 171.
- [2] Corbin, *The Lure of the Sea: The Discovery of the Seaside 1750-1840*, 137-138.
- [3] Barker's panorama worked in part by exploiting the tension between the availability of a complete scene and the necessarily incomplete sight available from any one viewing position.
- [4] Uricchio, *Early Popular Visual Culture*, 9:3, 225-238 (2011): 2.
<http://dx.doi.org/10.1080/17460654.2011.601165>
- [5] More precisely, it is referred to the 'mobility of visual experience.' The two concepts, of visuality and mobility, encounter each other for the first time within Grimon Sanson's Cineorama at the Paris Exhibition in 1900. For a more recent elaboration of the intersections between mobility and visuality, read in: Nanna Verhoeff, *Mobile Screens: The Visual Regime of Navigation* (Amsterdam: Amsterdam University Press, 2012).
- [6] Bruno, *Atlas of Emotion*, 173.
- [7] Stafford, *Voyage into Substance: Art, Science, Nature, and the Illustrated Travel Account, 1760-1840*. See also Kenneth Clark, *Landscape into Art* (London: Murray, 1976).
- [8] Traganou, *Travel, Space, Architecture*, 14.
- [9] Boyer, *The City of Collective Memory: Its Historical Imagery and Architectural Entertainments*, 203-291.
- [10] Boyer, *The City of Collective Memory*, 228-230.
- [11] Andjelkovic, "A Diary of Extending Perceptions of Time and Space: From Optical Devices to Moving Images," 2018.
- [12] Boullée wrote of the imagined spectator in: Pérouse de J.M. Montclos, *Étienne-Louis Boullée (1728-1799): Essai sur l'art* (Étienne-Louis Boullée, 1728-1799, An Essay on

the Art of Architecture) (Paris: Arts et métiers graphiques), 137-38.

- [13] Massey, *The origin of Time: Heidegger and Berson*, 2015.
- [14] Graham, Daniel W., "Heraclitus", *The Stanford Encyclopedia of Philosophy* (Summer 2021 Edition), Edward N. Zalta (ed.), URL = <https://plato.stanford.edu/archives/sum2021/entries/heraclitus/>
- [15] Foucault, *The Order of Things: An Archeology of the Human Sciences*, 319. Also see Martin Jay, "In the Empire of the Gaze: Foucault and the Denigration of Vision in 20th Century French Thought," in *Foucault: A Critical Reader*, ed. David Couzens Hoy (London: Basil Blackwell, 1986).
- [16] See Richard D. E. Burton, "The Unseen Seer, or Proteus in the City: Aspects of a Nineteenth Century Parisian Myth," (*French Studies*, 42, no. 1, [January 1988]: 50-68; Comolli cited in: Friedberg, *Window Shopping: Cinema and the Postmodern*, 1994, 17.
- [17] Foucault, *Discipline and Punish*, 1978, 204.
- [18] *Ibid*, 205.
- [19] *Ibid*, 16.
- [20] Jeremy Bentham's panoptic device (1791) provided the model for Foucault's characterization of panoptic power and the "disciplines" of imagined scrutiny. The panopticon was an apparatus- a "machine of the visible," to use Comolli's phrase- which controlled the seer-seen relation. In the panopticon, an unseen seer surveys a confined and controlled subject. The panopticon produces a subjective effect: the seer with the sense of omnipotent voyeurism and the seen with the sense of disciplined surveillance.
- [21] Foucault, *Discipline and Punish*, 1978, 201-207.
- [22] Foucault, *The Order of Things: An Archaeology of the Human Sciences*, translated from *Les Mots et Les Choses*, 1970, 319.
- [23] Luescher, *Travel, Space, Architecture*, 2009, 59.
- [24] Friedberg, "Introduction: The Virtual Window," *The Virtual Window: from Alberti to Microsoft*, 1-24.
- [25] Friedberg, "The Window: Lens I: Descartes's Window," *The Virtual Window: from Alberti to Microsoft*, 2009, 28-30.
- [26] Andjelkovic, *Art Style | Art & Culture International Magazine*, September 2019, 104.
- [27] Le Corbusier, *Domus*, 1936, 7.
- [28] *Ibid*, 58.
- [29] Pearson and Youkhana, "Videogame Urbanism: MArch Urban Design RC12," *Alephograph*
- [30] Pearson, *Drawing: Research, Theory, Practice*, 2017, 23.

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The Panorama of Rio de Janeiro by Victor Meirelles and Henri Langerock: Part 4 – a Game Engine Experience

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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 19th and 20th centuries”, developed at Programa de Pós-Graduação em Urbanismo, Faculdade Arquitetura e Urbanismo, Universidade Federal do Rio de Janeiro, Brazil. The present work is a continuous investigation of the essays presented in 27th, 28th and 29th International Panorama Council Conferences, in 2018, 2019 and 2020. By examining Meirelles and Langerock’s Panorama using practical and theoretical investigations, a new 360° experience will be developed considering Game Engines methods. In order to achieve this goal, digital and analogic 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

The *Panorama da Baía e da Cidade do Rio de Janeiro* was painted by Victor Meirelles de Lima (1832–1903) and Henri Charles Langerock (1830–1915). It represents Rio de Janeiro in the end of the 19th century in a beautiful dusk of April. This Panorama, like other two predecessors, represents the city’s central area, the old capital of the country with the nature in great splendor. From its analysis, it is possible to identify significant changes in Rio de Janeiro’s history: its unique landscape, architecture, urban transformations, and different symbolism of political and administrative power.

Victor Meirelles was the most important Brazilian painter in the late 19th century, and Henri Charles Langerock a Belgian photo-painter, met for the first time during a Belgian’s exhibition in Rio. After this successful presentation, 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.

After a thorough analysis of the Rio de Janeiro city central area, both painters decided to take the Panorama from *Morro de Santo Antônio*. They started the primary studies in 1885, traveled to Ostend, in Belgium, in 1886, to finalize the whole 360° canvas in March 1888.

The first exhibition of the Panorama was in Brussels, on April 4, in the *Grand Panorama National de Belgique*, in Brussels. The *Panorama da Baía e da Cidade do Rio de Janeiro* was 115 meters in length x 14.50 meters in height. It was presented from April 5 to October 16, in 1888, with a great number of 50,000 visitors.

The second presentation was in Paris, on March 14, 1889, in *Avenue Suffren*, as one of Universal Exhibition’s Panoramas. The exhibition was successful, but after the Universal Exhibition’s official opening, the average daily attendance decreased to 50–60 people daily.

The third exhibition was in Rio de Janeiro and opened on January 3, in 1891. The presentation was a huge success establishing an unprecedented mark in art exhibitions in Brazil (figure 1). It is possible to state that the Panorama reached out in the first year the number of 87,500 visitors. It remained in exhibition for about five years. After this time, the Panorama was demolished.

In 1902, Victor Meirelles donated his panoramas to *Museu Nacional da Quinta da Boa Vista*. They were stored inadequately, and after a few years became lost. No more information was found after 1910. This paper continues a series of investigations of this Panorama and interprets its immersive experience. [1]

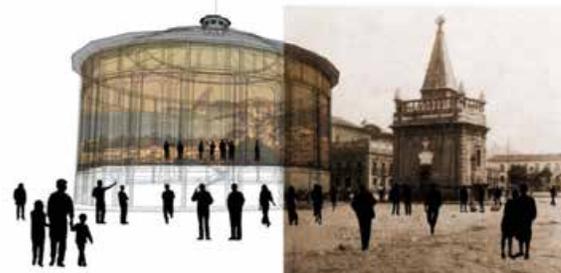


Fig. 1. *The Panorama of Rio de Janeiro* at Praça XV de Novembro in Rio de Janeiro near to Master Valentim’s fountain: 3D model x Photography based on newspaper reports, 2018, Private Collection.

Objective

As part of an ongoing research project, the purpose of this essay complements the papers presented at 27th, 28th, and 29th in International Panorama Council Conferences in 2018, 2019 and 2020. In order to follow this aim, we assume that the main objective for this opportunity is:

- To recreate a 360° immersive experience by a Game Engine Experience 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, 3 and 4. 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).

Similarly, the works discovered during this ongoing research by Teresinha Sueli Franz, *Victor Meirelles: Biografia e legado artístico* (2014); Erkki Huhtamo, *Illusions in motion: media archaeology of the moving panorama and related spectacles* (2013); and Evan Rawn, *Unreal Visualizations: 3 Pros and 3 Cons of Rendering with a Video Game Engine* (2015) are also applied.

For this opportunity, two other important investigations are analyzed and considered, one as a theoretical reference, and another with a practical approach: Linda Groat and David Wang, for their understanding of historical research; and Harrison Ferrone, in how to use the *Unity* Game Engine for Game Experiences.

The main theoretical reference is Linda Groat and David Wang's *Architectural Research Methods* (2013). Both authors are professors, Groat at Michigan University, and Wang at Washington State University. They present and discuss the most frequently used methodological strategies in Architecture and Urbanism research, where historical-interpretive research methods in particular are applied. Groat and Wang highlight the potential of imagination and interpretation in historical research: imagination as a way to understand object patterns and interpretation as a way to relate and concatenate these patterns. The researcher's main task is to organize this framework scientifically, in such a way as to investigate, collect, select, schematize, and finally, propose a

historical-interpretative reading. This is the direction the present work will follow.

The practical approach applied is developed by Harrison Ferrone with *Learning C# by Developing Games with Unity 2020: An enjoyable and intuitive approach to getting started with C# programming and Unity* (2020). Ferrone is an instructional author and a Game-Designer. His work is constantly updated since the first publication of his book in 2013, he has continued to update his work with new releases and updates of *Unity* Game Engine.

The investigation can be understood as a guide, or even a how-to-do-process, to create 2D or 3D games, using *Unity* Game Engine. His book is written for those who don't have any familiarity in programming, specially the language C#. [2] Ferrone presents the fundamentals of programming, control methods, collisions, movements, cameras, characters behaviors, and many other important aspects to develop a video game, in the *Unity* drag-and-drop interface associated with C# scripts. In the end, some of his video tutorial channels present and discuss the worldwide community of *Unity Asset Store*, a place to find free and paid solutions for *Unity* Game Engine: 2Ds, 3Ds, Images, Textures & Materials, Templates, Animations, and Audio, to be used and applied in any project. This online catalog, presented by Harrison Ferrone, became an important research source for analysis, exploration and development of this essay.

A 'New' Beginning: Why Game Engines Are More Used in Architecture and Urbanism

Game Engine is a kind of software specifically designed for the development of video games. [3] The term Game Engine arose in the mid-1990s and became very popular from the early first-person shooters' 3D video games. [4] Some of its main characteristics still remain today: the real time renderer for graphics and the reuse of the same engine to produce different games or to aid in porting games to another / multiple platforms.

As quoted above, Game Engines are not new. However, it is possible to affirm that in the last ten years they have emerged as a new set of tools that are able to offer greater results with real-time rendering and interactive experiences for the video game industry. Before, it was necessary to have a great computer and programming knowledge to create high verisimilitude images, but today, it is possible to achieve quite satisfactory results easily. The images generated by computers became more credible, with a great power of "suggestion", with a faster and easier rendering through working directly in computer's video board. This feature opened new possibilities for video games and other computer graphics experiences.

The turning point for Architecture and Urbanism was the use of real-time rendering and interactive experiences that Game Engines can provide in a personal computer. The possibility of this new kind of *visualization* brought new discussions in Architecture and Urbanism. Usually, without this resource, students, professors, architects and urban planners, would spend several minutes, in some specific cases, hours, to generate one 3D image or a 3D animation. It is important to highlight that it is not a question about time, but about what can be explored in quality and diversity in interactive experiences such as design, simulations, movements, interchangeability of different perspectives and aerial perspective effects.

The video game and Architecture Visualization industries 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 too distant from video games' representations. [5]

Basically, Game Engines offer Architecture and Urbanism two important features today: visualization and interactive experience that closely relates to 360° digital panoramas. The first is related to the presentation of the 3D model itself, either through a pre-established scene or a sequence of internal or external spaces, with colors, textures, shadows, among others. The second is how the user can relate to this visualization, with objects arranged in the scene or space, establishing levels of interactivity, walking movements, lowering, rising, rotating, jumps, collisions, among others. The association of these two Game Engines' main characteristics, if well-conceived and ordered, can generate a greater and successful experience than can be achieved through traditional architectural drawings with plans, longitudinal and cross sections and facades.

It is possible to affirm that the central idea of experience isn't so distant with visualization and interactivity to 360° digital panoramas. They are also frequently applied for Virtual, Augmented and Mixed Realities in Architecture and Urbanism professional works and university researches.

In this way, a Virtual Reality experience of Victor Meirelles and Henri Charles Langerock's Panorama of Rio de Janeiro will be developed with the Game Engine application in this essay.

A Base for Discussion: From *Lumion* to *Unity* Game Engine

The fourth experiment of this ongoing research project was developed in *Lumion* software. It is important to

highlight that *Lumion* is not a Game Engine. But it has some similarity based in real-time rendering, on graphic manipulation of pre-defined objects, and the offer of several presets available to be applied in any project. It is frequently used in Architecture and Urbanism, providing great compatibility with other 3D modeling software and an easy editing of the atmospheric perspective. *Lumion* was considered the perfect choice for visualization at that moment: it could easily apply the circular image of the Panorama of Rio de Janeiro by Meirelles and Langerock redesigned in the third experience; it could create and assemble the 3D viewing platform, 3D faux terrain, and divide the Panorama in five pictorial and concentric rings as a unique Virtual Reality experience developed in the fourth experiment.

However, *Lumion* also presents two important limitations: its interactivity and another technical feature. The software doesn't provide an experience with six degrees of freedom, forward/back, up/down, left/right, yaw, pitch and roll. Besides this, the software doesn't provide an executable file format, which means the experience developed only can load inside the software. For Virtual Reality experiences, these are very important boundaries that must be overcome.

A new solution should be evaluated to generate an experience with higher verisimilitude. 'Real' Game Engines must be now examined, where these limitations, interactivity and technical issue would not happen.

The two most well-known Game Engines were selected and analyzed with the previous experiments: *Unreal* Game Engine (Epic Games Company) and *Unity* Game Engine (Unity Technologies Company).

In one hand, *Unreal* Game Engine becomes more interesting in the beginning with a pleasant, intuitive and customizable interface. It is based on a visual environment with *blueprints*, [6] where it is possible to create games without programming knowledge. However, even with a very simple project, the final files become large and a higher computer set up is not necessary, although it needs some programming knowledge to develop scripts. On the other hand, *Unity* Game Engine is more popular where most browser games are developed. It allows exporting games to many platforms such as cell phones. The final files don't become large and a higher computer set up is not necessary, although it needs some programming knowledge to develop scripts.

These two key points brought a decision: good connection for Virtual Reality experiences, and the large and varied Asset Store, where game-designers change experiences. The chosen Game Engine was *Unity*.

The Fifth Experiment: A Unity Game Engine for the Panorama of Rio de Janeiro

The fifth experiment brings together all material researched and realized in the four previous experiments. [7] This essay applies the circular image of the Panorama of Rio de Janeiro, already redesigned and assembled, to recreate a new virtual 360° immersive experience with Unity Game Engine.

Once the Unity Game Engine was chosen, the next step was to explore this new platform. Several tutorial videos provided information on achieving initial compression about the interface, main tools and how the interactivity works with 3D objects. After this initial comprehension, it was possible to import the 3D model created in Lumion in the fourth experience.

In a quite satisfactorily way, the model was imported correctly. The Unity Game Engine respected the five rings, of a cylindrical projection in 180° x 360° format, according to the pictorial planes of the Panorama: foreground with vegetation; intermediate planes of vegetation with the city; final planes of the bay and the relief in the background. Thereby, a good part of the fourth experience could be maintained: the atmospheric perspective optical effect by Meirelles and Langerock's Panorama of Rio de Janeiro was maintained and improved.

It should be noted that this proved to be an important characteristic of Unity Game Engine: the interchangeability between different 3D modeling programs. The 'geometry' of the 3D model could be easily understood and no problem was found.

However, the same situation didn't happen for colors, textures, lights, shadows, and vegetation for the 3D faux-terrain used in Lumion. In this regard, Unity demanded that these elements were realized in the Engine itself. All elements should be developed in Unity. This became a great challenge, because it was necessary to learn how to create, configure and adjust all these elements in the Game Engine (figure 2).



Fig. 2. 3D model imported into Unity Game Engine: aerial view of the 3D model geometry was read correctly, but lights, shadows, colors, textures, vegetation needed to be done again, 2021, Private Collection.

Again, tutorial videos provided information on solving these problems. Each element needed a specific answer. For light, it was necessary to define light parameters, whether natural or artificial, direction, position in the model, brightness, color, intensity, and luminance. For shadow, it was not just the absence of light, but it related to which objects should have shadows, whether the shadow color would look different on different surfaces. For colors, chromatic palette adjustments were required. For the vegetation in the foreground and the Panorama "rings" the lights and shadows were also required. For textures, there needed to be some redesign and resizing. In particular this related to materials applied like wooden deck for the floors and stairs, iron for the handrail and railing, translucent fabric for the canopy, which were all adjusted according bump map, [8] colors and light's reflection. Finally, for the 3D faux-terrain vegetation, new objects were created and incorporated, such as grasses, bushes, small, medium and tall trees, considering all tropical species (figure 3).



Fig. 3. 3D model imported and corrected Unity Game Engine: aerial view with lights, shadows, colors, textures, vegetation adjusted to Panorama of Rio de Janeiro Game Engine Experience, 2021, Private Collection.

The investigation of all these elements settings was very important for the Unity Game Engine experience. Immediately, it was possible to see the variety of possibilities to configure any element in Unity is one of its main challenges. There are so many specific toolbars and detailed configuration options that it became necessary to choose only a few to analyze. While Lumion essentially works with pre-defined sets with already configured objects, Unity requires that these sets, which are ideally conceived for visualizing Architecture's internal and external spaces, should be configured in its own engine.

In addition to comprehend how to edit all these parameters, and the adaptation to the 360° immersive virtual experience of the Rio de Janeiro Panorama, it was considered necessary to examine some examples of games made in Unity to investigate how these parameters were realized and presented. An extensive investigation was carried out at the Unity Asset Store.

When installing *Unity*, the Game Engine recommends visiting *Unity Asset Store* periodically to find out if some elaborated solutions might aid in your project's realization, new or in progress. However, this became even more evident when Harrison Ferrone emphasized its importance in his book and in the C# language video tutorial channels. In addition to teaching the programming language fundamentals, the game-designer indicates that many scripts are already done and it is not necessary to rewrite them from scratch, they can be combined. It is necessary to understand what the code means and if it is in accordance with the project's objectives. Ferrone highlights the importance of the community of *Unity* users in exchanging knowledge and experiences.

The *Unity Asset Store* is a free and paid solution on online catalog developed by the worldwide *Unity* community. It is possible to find 2D images, 3D objects, textures, materials, animations, scripts, characters, music, audio, and scenarios with specific settings, all ready to be downloaded. It is important to mention the *Unity Asset Store* has become a valuable research source, but it has been restricted only to free models. All materials, textures, effects, scripts used in the experience were developed by the research team or free download.

Once this initial learning process of configuring and applying all these parameters was completed, finally, the *Unity* Game Engine could be developed and enjoyed. The observer-gamer can explore the Rio Panorama's platform in all directions: walk to the right, left, forward, backward, rotate, walking to the faux-terrain, stop at a certain perspective, climbing or descending the helical staircase, among other possibilities. However, it no longer operates like a pre-established video or animation, but rather it now has the freedom of a character within a video game.

The *Unity* Game Engine experience presented more verisimilitude than in the *Lumion* experience: Panorama, rings, faux-terrain in 3D, color palette, atmospheric perspective's effects, were better emphasized by the freedom of movement and the new adjustments achieved (figures 4 and 5).

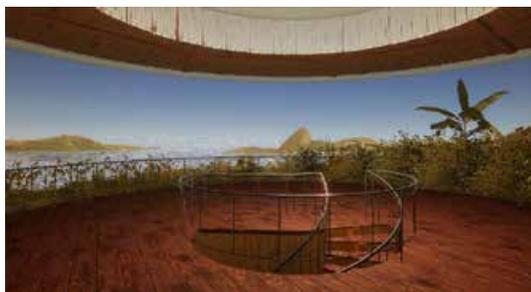


Fig. 4. The Panorama of Rio de Janeiro in Unity Game Engine: observer-gamer in the center of platform viewing the Pão de Açúcar's Hill, 2021, Private Collection.



Fig. 5. The Panorama of Rio de Janeiro in Unity Game Engine: observer-gamer in the center of platform viewing the Corcovado's Hill, 2021, Private Collection.

The Fifth Experiment Continues: How about a *Unity* Game Engine for the Panorama's Context?

It is possible to affirm that Panorama do Rio de Janeiro experience in the *Unity* Game Engine was quite satisfactory. The experience proved to have more verisimilitude and immersive. However, the full potential of *Unity* Game Engine seemed superficial to use just to provide a free movement by the Panorama platform.

A new set of questions emerged: what if the *Unity* Game Engine was also used to present the Panorama story? Where was the Panorama located in the old city of Rio de Janeiro in 1885? And how it would be located today? What could the observer-gamer learn and how could interact with this game beyond the Panorama platform? How could this experience could be idealized and presented in a video game?

It is important to remember, briefly, the context of how the Panorama of Rio de Janeiro was realized: Meirelles and Langerock elaborated six initial studies, from six different points of view, representing the city of Rio de Janeiro from the *Morro de Santo Antônio* in 1885. The juxtaposition of these studies, in the correct order, partially, alludes the 360° image of the city. At the time of the studies, the *Morro de Santo Antônio* was not occupied; there was only the Monastery, with the same name, the *Observatório da Escola Politécnica* opened in 1881 and a few houses. The biggest part of the hill was made up by open areas and vegetation. For the Panorama, the painters traced a route through the hill to draw their initial studies.

In order to present, at least part of the History and context of how the Panorama of Rio de Janeiro was painted, it was decided to develop a 3D model of the *Morro de Santo Antônio* and the *Observatório da Escola Politécnica*, both in 1885, and incorporate them in the *Unity* Game Engine experience. This would be an unimaginable challenge in previous experiments. This possibility would allow enriching the 360° immersive

experience beyond the viewing platform, and thereby, the observer-gamer would start to interact with new information content related to Panorama.

This instant was consolidated as another key moment in this investigation: these two new models, considering their dimensions and unique information, needed specific actions in the research development.

The *Morro de Santo Antônio* 3D model in 1885 had already been made before, however, it was necessary to redraw its contour lines more precisely. For this, an old Rio de Janeiro's City Hall project of 1916 was consulted. The proposal was to demolish part of hill, draw new blocks and open new streets. In this project, the *Morro de Santo Antônio's* contour lines were drawn. Although the project dates back to 1916, the hill didn't have major changes in these 30 years (1885–1915), unlike *Morro do Castelo*. Therefore, it would be possible to consider the contour curves presented in this project (figure 6).



Fig. 6. The Panorama of Rio de Janeiro in *Unity* Game Engine: platform's view of the *Morro de Santo Antônio* 3D in 1885 incorporated into the observer-gamer experience, 2021, Private Collection.

The *Observatório da Escola Politécnica* 3D model was undertaken as a specific piece of research. There is no iconography of the Observatory in 1885 and it was moved to another hill in 1920. But in a fortuitous way, there are some drawings and photographs from the same period of the old project of Rio de Janeiro's City Hall, where the Observatory appears in full operation. Again, it is not the 1885 Observatory, where Meirelles and Langerock crossed when they painted the Panorama's initial six studies, but the main buildings, equatorial telescope, cardinal points towers, research houses and instruments, which already existed there as described in some 1881 documents that were produced when the Observatory opened. Thereby, it is possible to suppose that Meirelles and Langerock saw the initial Observatory's buildings in 1885 when they realized the Panorama of Rio de Janeiro from their position in the *Morro de Santo Antônio* (figure 7).

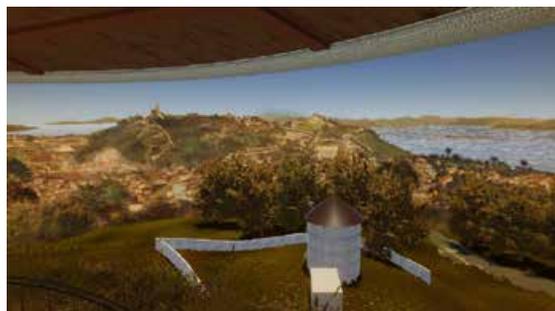


Fig. 7. The Panorama of Rio de Janeiro in *Unity* Game Engine: platform's view of the *Observatório da Escola Politécnica* 3D model incorporated into the observer-gamer experience, 2021, Private Collection.

When gathering all the documentation found, it was possible to adjust the hill's contour levels and model the Observatory main buildings, and finally, combine and incorporate them into the *Unity* Game Engine. The 360° immersive experience became richer, as in addition to viewing the hill and the Observatory, the gamer-observer was also able to walk through the hill and see the buildings at the observer's scale and imagine the possible route that Meirelles and Langerock did when they prepared the six studies of the Panorama of Rio de Janeiro (figure 8).



Fig. 8. The Panorama of Rio de Janeiro in *Unity* Game Engine: aerial view of the *Morro de Santo Antônio* 3D model and *Observatório da Escola Politécnica* 3D model, both in 1885, incorporated into the observer-gamer experience, 2021, Private Collection.

And finally, another 3D model was also incorporated into the experience: an urban model of Rio de Janeiro's central city area in 2020 placed exactly in the former area of *Morro de Santo Antônio*, as if it still exists. It is important to mention this hill began to be demolished in the 1920s; the works were partially interrupted, and were returned in 1950s. The hill no longer exists today with only the Monastery remaining. A set of modern buildings was built on the site, constituting as an important power symbol in Rio de Janeiro's city center (figure 9).



Fig. 9. The Panorama of Rio de Janeiro in *Unity* Game Engine: Urban Rio de Janeiro's central city area 3D model in 2020 incorporated into the observer-gamer experience, 2021, Private Collection.

This was the only model used that was not developed in the research: it was selected on the CADMAPPER.com, a website with a worldwide map files database for any design program. Once incorporated into the *Unity* Game Engine, the experience could finally be enjoyed: it was possible to visualize the central area of Rio de Janeiro's city in 2020, with *Morro de Santo Antônio*, from the perspective of Panorama by Meirelles and Langerock. And similarly to *Observatório da Escola Politécnica* 3D model, the observer-gamer can walk through freely around the hill and see the set of buildings that were built there, at this moment, in a volumetric view (figure 10).



Fig. 10. The Panorama of Rio de Janeiro in *Unity* Game Engine: aerial view of the urban Rio de Janeiro's central city area 3D model in 2020 incorporated into the observer-gamer experience, 2021, Private Collection.

This experience proportioned some new possibilities including establishing an alternative history for the City of Rio de Janeiro. The observer-gamer could interact with the current city, with the historical city, the overlap and, or the intersection between the two cities in different years, and, all of this with freedom, information and fun, because it is a video game (figure 11). New researches will be developed to explore this direction related with the Panorama of Rio de Janeiro.



Fig. 11. The Panorama of Rio de Janeiro in *Unity* Game Engine: aerial view of the urban Rio de Janeiro's central city area 3D model in 2020 with *Observatório da Escola Politécnica* 3D model incorporated into the observer-gamer experience, 2021, Private Collection.

Concluding Remarks and Perspectives

It is possible to state that the greatest learning from this essay was its elaboration process. The *Unity* Game Engine brought a new methodology to be explored and developed in the following years for this ongoing research project. The fourth previous experiments in *Lumion* were great but presented some limitations. The *Unity* Game Engine opened a real possibility to explore a walking-through and an immersive 360° experience. The Game Engine experience of Meirelles and Langerock's Panorama of Rio de Janeiro was very successful and achieved an outcome that was not expected.

In the light of the work realized, some perspectives have been presented for further investigations: continue to develop the *Unity* Game Engine experience with more kinesthetic and spatial involvements, more characterization for movements and virtual environment; ludic and affective involvements, the emotional and the sensible capacities for the observer-gamer, a possibility to interact with characters; narrative involvement, develop histories or alternative histories to relate the Panorama History with Rio de Janeiro's History; shared involvement, a prototype to see how the experience would flow with more than one observer-user simultaneously; create the *Unity* Game Engine experience in Virtual Reality Glasses; hold an exhibition for Panorama of Rio de Janeiro, by printing it in large format and 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 Rio de Janeiro's history and mainly, foster discussions between students, professors, researchers and professionals about 360° immersive experiences and how Game Engines can be developed and applied in Architecture and Urbanism.

Notes

1. For more information about the History of the Panorama of Rio de Janeiro see: Leitão, Thiago. "The Panorama of Rio de Janeiro by Victor Meirelles and Henri Langerock: Part 1 – A City Memory's Representation or a City Invention?". *International Panorama Council Journal*, Vol. 2. (2019): 14–23.
2. C# ("see sharp") is a computer programming language. It was developed by Microsoft in 2001. The most recent version is C# 8.0, which was released in September 2019. It is frequently used for many digital platforms.
3. Valencia-Garcia, Rafael; et al. (2016). Technologies and Innovation: Second International Conference, CITI 2016, Guayaquil, Ecuador, November 23-25, 2016, Proceedings.
4. Fiadotau, Mikhail. "Dezaemon, RPG Maker, NScripter: Exploring and classifying game 'produsage' in 1990s Japan". *Journal of Gaming & Virtual Worlds*, Vol. 11, no. 3 (2019): 215–230.
5. As the designer and architectural professional Evan Rawn, one of the ArchDaily portal editors, stated when discussing the use of Game Engine for Architecture and Urban Planning Visualizations.
6. Blueprint or visual scripting, is a programming language. Visual scripting is coding via a drag-and-drop method, connecting graphics rather than writing texts.
7. For more detailed information about the previous experiences see: Leitão, Thiago. "The Panorama of Rio de Janeiro by Victor Meirelles and Henri Langerock: Part 1 – A City Memory's Representation or a City Invention?". *International Panorama Council Journal*, Vol. 2. (2019): 14–23; Leitão, Thiago. "The Panorama of Rio de Janeiro by Victor Meirelles and Henri Langerock: Part 2 – Render or not to render? Maybe we need to surrender!". *International Panorama Council Journal*, Vol. 3. (2020): 92–101. Leitão, Thiago. "The Panorama of Rio de Janeiro by Victor Meirelles and Henri Langerock: Part 3 – 360° Virtual Layers of Atmospheric Perspective". *International Panorama Council Journal*, Vol. 4. (2021): 33–42.
8. Bump map is a texture mapping technique for simulating bumps and wrinkles on the surface of an object. It is used in 3D models to reduce the number of faces in the final 3D model file.

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Architecture as a Visual Medium: Panoramas and Dioramas as Simulation Mechanisms to Experience Travel

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Abstract

Panoramas and dioramas became popular visual entertainments in the nineteenth century as optical-mechanical playhouses that created illusions on a stage. Their special architecture and representations recreated virtual travel experiences in enclosed rooms. The viewer was seemingly immersed in places previously experienced only by pioneers, travelers, aeronauts, or sailors. The unique characteristics of panoramas and dioramas enabled them to be used as propaganda tools in World Exhibitions.

The panorama represents one of the first attempts to construct a virtual space. Its architecture was a fundamental tool in creating an ephemeral optical environment that depended on spatial relationships between representation, space, and spectator. The spatial layout changed the perspective of the viewer, requiring a tour to complete the perception. The panorama system evolved toward the moving panorama and contributed directly to the diorama's invention. The diorama meant a change in the observer's position in a pre-designed performance, incorporating a motionless viewer in a mechanical device subject to a temporary display of the visual experience. It stripped the viewers' autonomy by placing them on a rotating mobile platform, allowing different views and changing optical effects to produce a virtual experience.

This paper examines the significance of these immersive spaces in changing the traditional relationship between viewer and space in the nineteenth century.

Keywords

Panorama, Moving Panorama, Diorama, Travel Experience, Virtual Entertainment, Stage, Propaganda, World Exhibition

Introduction

Technological innovations in daguerreotypes, cameras, microscopes, telescopes, and electric light demanded a sensitivity that required a new way of seeing. Their virtual effects required the accommodation of the arts to the new visual devices and the architecture that would house them. The panorama, the first attempt to create virtual reality, made a social and cultural impact, providing simulated versions of experiences previously reserved to soldiers, aeronauts, or travelers to exotic countries. The panorama and diorama went beyond the representational and toward the production of a total visual experience; their architecture was a fundamental medium to accomplish their narrative nature. They represented a rearrangement of social

entertainment spaces, questioning their format and inviting reflection on new modes of exhibition and perception. Panoramas and dioramas were the first proto-immersive technologies that would need new spatial typologies for their proper visualization, leading to the configuration of the first 360-degree visual spaces.

Panorama

On June 19, 1787, a patent was granted to Robert Barker describing a new artifact or apparatus, "La Nature à Coup d'Oeil," which evoked a realistic three-dimensional virtual space that stretched in a complete circle around the viewer. The elements described in the patent include a cylindrical painting, a circular building or architectural construction as a support for the exhibition of the painting, and a central platform for observation that would establish distance between the viewer and the illusory representation. The central platform was designed without visual interruptions and ensured a proper viewing distance.

The architectural settings were arranged to control the visualization. The point of view facilitated the visual framing of the painting, with its support from the top of the structure hidden by a fabric umbrella-shaped canopy positioned between the canvas and the viewing platform. This acted as a vellum that blurred the boundaries between the real space and the representation in order to immerse the spectator in the simulated reality created by distance, space, and images. This vellum also hid the upper and lower margins of the painting as well as the building's upper windows; therefore, spectators could not see the image frames, supports or the lighting source. The windows also allowed natural overhead illumination. The light reflected from the canvas was perceived as coming directly from the painting, increasing the immersive visual experience.

The panorama as an ephemeral optical experience depends on the spatial relationships among representation, space, and spectator. The architecture in which the panorama is presented becomes an essential factor for its visualization; the circular image requires a circular structure that allows a 360-degree vision. The design is organized to frame the big pictures in an unconventional manner, deprived of any spatial reference and perfectly filling the

observer's field of vision. It generates a complete visual experience that involves the viewer and increases the building's dynamism. The display of the canvases and vellum, together with the space arrangement, especially the central platform for the panorama's visualization, aims to produce the impression of being transported to the space represented. The panoramas prepared the spectators of the nineteenth century for the reception of large-scale images (fig. 1).

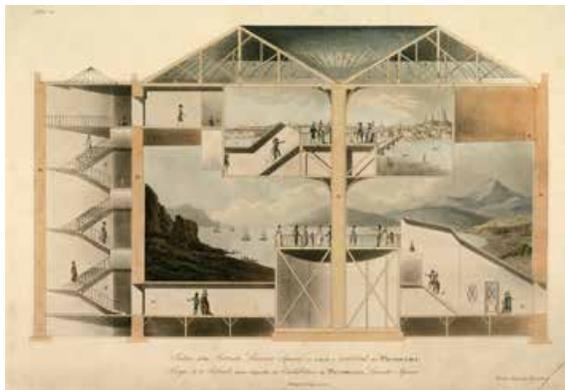


Fig. 1. Robert Mitchell. *Section of the Rotunda, Leicester Square, in which is exhibited the panorama.* 1801. Image: British Library, public domain 56.i.12. (Plate 14).

The newspapers of the time recorded the “singularly striking” effect produced by the panorama and its uncanny ability to create the sense that the viewer was standing in the place defined. For instance, in 1791 *The Times* mentioned the spatial arrangement as well as the idea of simulation: “This artist brings the wished-for scene before them, one entire uninterrupted circle, placing them in the centre, where they can see the same as those who travel.” [1] The architectural layout allowed the viewer to contemplate the panoramic city or place. The panorama can be understood as a designed mechanism discovering and interpreting the place represented from a different and unusual perspective. As Oetterman notes, panoramic paintings became a pattern for organizing the visual experience. [2]

The capacity to simulate the real was motivated by great popular interest in observational and perceptual phenomena, with particular attention to image making and spacial representation. This led to the pictorial creation of hyper-realistic virtual realities, evoking reality as a constitutive element of the panoramic experience. The panoramic representation of places and events offered a unique experience, an immersive representation of actual historical places and events, painted so as to emphasize credibility. This ability to emphasize the realism of the representation transported the spectator to the represented place or event.

The panorama as a visual entertainment form produced a second-order reality. The spectator felt involved in the narrative, a part of the story, contemplating unusual views

from monuments or building tops and observing natural landscapes or action scenes such as battles or other significant events. The landscape panoramas were based on the panoramic vision, while the ones representing actions were based on the composition of multiple perspectives, narration, and details. The panorama was considered the quintessential form of mass media verisimilitude at the end of the eighteenth century.

The panorama was also a propaganda medium, playing an ideological role. Panoramas were often installed in the commercial and political centers of cities and colonies to illustrate military and colonial victories. The warlike was transformed into a visual spectacle with the potential to intentionally manipulate viewers' emotions, making them more susceptible to acceptance of new ideas and propaganda. Consequently, panorama was widely used to strengthen the public's opinion of the government. [3] This represents the beginning of content creation and consumption of images used as propaganda tools.

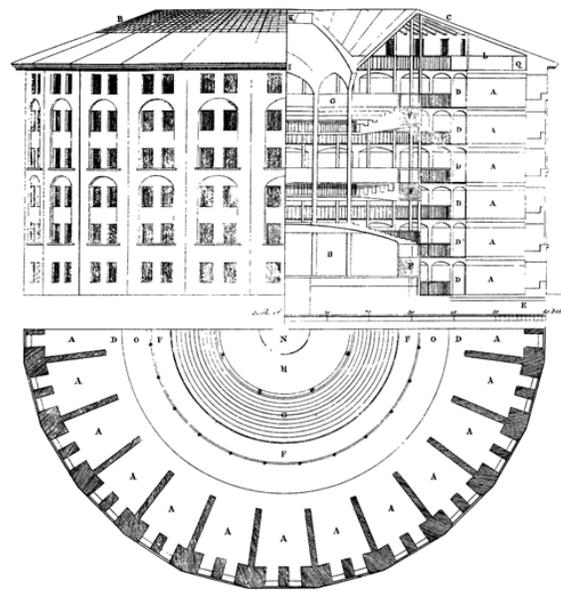


Fig. 2. *Panopticon Prison Plan*, 1791, Jeremy Bentham, Samuel Bentham and Willey Reveley, Plate II in ‘Postscript–Part II’ Works of Jeremy Bentham. Open-source.

Visitors to panoramas were disconnected from outside references by the design of the building. The perceptual model and the success of the visual experience were directly linked to the building's design; the layout invited observers to walk around, analyzing and discovering the whole painting from a darkened central platform that favored a polyptych vision (fig. 2) in which observers controlled from their positions the entire photorealistic painted representation. The success of the virtual experience was related to design strategies such as the position of the

platform for visualization keeping a proper distance between representation and viewer, the skylights on the top of the building lighting the paintings, or the lack of any other openings, which allowed the spectator to be isolated from outside, facilitating the immersive virtual experience. The audience had the illusion of being immersed in the place represented.

Bertha L. Heilbron highlighted in 1936 the idea of “travel films” to refer to the panoramas of the nineteenth century. [4] The circularity of the building, the presentation of the photorealistic paintings, and the design of the platform invited observers to move around, looking for the complete picture in front of them. Viewers were free to move around to discover the complete representation by themselves. However, the views were organized as a succession of events presented in a predetermined order, codifying the supposed autonomy of the audience. This constituted a temporal-spatial organization in which the platform allowed viewers a panoptic vision; they could discover the painting by looking in any direction since the representation was displayed circularly around them. The circularity of the painting determined the building morphology, the exhibition space, the conditions for the panorama’s perception, and the creation of fiction.

Moving Panorama

Circular panoramas inspired the moving panoramas; however, their form and cultural identity were different. In the panorama, the spectator was surrounded by a circular painting and was free to move around the central platform to discover the painting. In the moving panorama, the spectators’ experience was predesigned. Their movements were limited or even disappeared completely when they were seated in the auditorium or space where they would enjoy the simulated trip. The painting was moved by mechanical systems, limiting the audience’s view to a frame or window. Similar to the cinema, the moving panorama immobilized the spectators, emphasizing virtual movement on the screen instead. It represented a challenge in the representation of depths to create the right atmosphere and perspective to achieve the immersive experience. The presentation was usually accompanied by music, a lecture, or sound and light effects, providing a multisensory experience.

Circular panoramas emphasized immersion in a place or event, while moving panoramas relied more on the narrative and combination of different means of expression. The moving panorama was primarily a storytelling medium and secondarily an illusory and immersive experience. [5] While the circular panorama was located in specific buildings built for exhibition purposes in cities, the moving panorama was created as an itinerant medium, visiting different cities, countrysides, and small communities. It was

usually exhibited in community halls, local opera houses, theaters, and churches.

The capabilities of circular and moving panoramas and their possibilities as mass media, together with techniques from the stage, led to new technological innovations related to photography and the creation of illusions. The panorama system evolved to the moving panorama and then to the diorama.

Diorama

The diorama was invented by the French painters Charles-Marie Bouton and Louis-Jacques-Mandé Daguerre. It was presented in Paris in 1822. Like Barker’s panorama, it was at once a building-vision and machine. As a visual experience, the diorama consisted of the overlap of painted glass panes individually illuminated, creating dynamic images with the variation of the light entrance. The transparencies, together with the light changes, created the natural illusion of three-dimensional space. This enabled an impressive power to create and control the visible and produce illusions. It also commanded visual attention through the disjunction between the illuminated imagery and the darkened space where the audience was located. [6]

The diorama determined a change in the audience’s position and the movement linked to the experience. Observers lost their autonomy; they were immobilized and placed in a mechanical rotating amphitheater device that guided them through the experience, allowing different views and changing the visual effects according to the performance. The diorama represented a temporary and thoughtful designed display of the visual experience.

As with panoramas, the diorama required a space with specific characteristics. The building morphology was designed with a central core in which to place the mechanical element for visualizing; the mobile roundabout that allowed the platform with the audience to spin to each arm (fig. 3) could have anticipated modalities of mobile spectatorship. [7]

Kimberly Mair, in the article “Transitory Formations and the Education of the Senses: The Intersensorial Architectures,” highlights that while dioramas do not share the panorama’s circularity, both forms are often understood as paintings that require a particular architectural layout for their exhibition, due to their characteristic of light and curvature. However, she proposes that panoramas and dioramas should be treated not as paintings but as intersensory architectures that can be understood as architectural and artistic devices that produce new spaces and experiences designed to reorder the audience’s sensibilities. [8] Therefore, architecture as a generator of perceptions could provide a space for experimentation and technology, in which tectonics and art will be superimposed in front of the viewer.

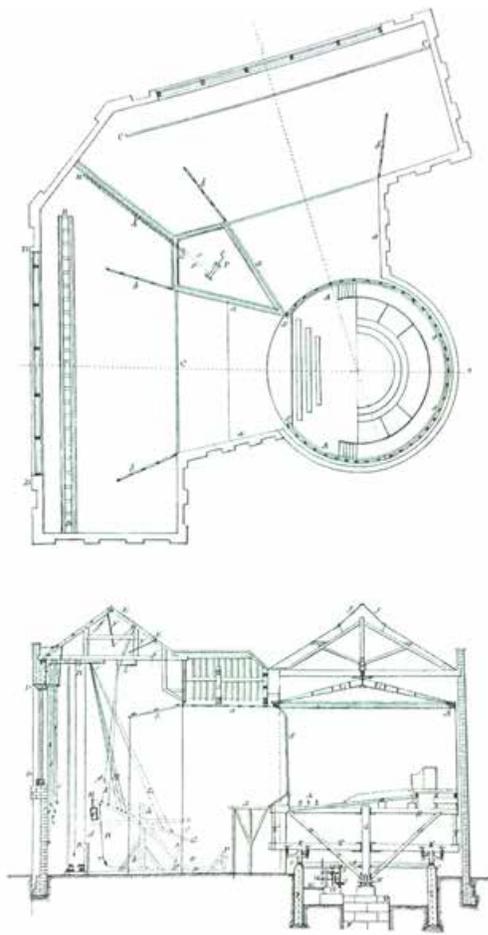


Fig. 3. *Floor Plan of the Diorama in Regent's Park, London.* Designed by A. C. Pugin and built by J. Morgan, 1923. Open-source.

Experimental Spaces in World Exhibitions

Panoramas and dioramas became popular visual entertainments, considered optical-mechanical playhouses capable of creating spatial illusions that brought science to the stage. [9] Consequently, they were widely used as propaganda tools in world exhibitions. The new optical systems associated with new visualization spaces, such as panoramas or dioramas, placed observers in an environment of images that sought to transport them to another reality. These systems found in world exhibitions an environment that provided an opportunity to experiment in terms of space and technology because of their ephemeral nature. Nations could take advantage of such systems to show their economic, cultural, and technological power. [10] The world exhibitions also became new phenomena of mass culture that played a vital role in the emergence of entertainment culture. The general objective in the pavilions was to immerse the audience in a specific environment,

reducing their sense of external reality so as to achieve the best reception of political, artistic, or commercial messages. The modification of the spatial parameters transformed the space into a communication element through visual means, including projections, colored lights, sounds, and other stimuli. The Exposition Universelle in Paris, displayed in 1900, concentrated many attractions based on panorama technology that would revolutionize the tradition of the panorama. The immersive spaces included the visual, conceptual ideas of the moving panorama, combining visual, sound, and scenic effects using the most highly technological advances. The exhibition pioneered the development of innovative and immersive themed educational experiences.

Early examples of the use of simulation mechanisms associated with the image were presented at the Exposition Universelle in Paris. Virtual trips were shown in the usual modes of transport, providing the ephemeral and blurred perception captured by a viewer in movement. Colonial dioramas, the cinerama, the mareorama and the simulation of the Trans-Siberian train trip were included in the exhibition. The exhibition also presented the transition from drawing to panoramic photography, expanding the spatiotemporal reconstruction of historical events and virtual trips.

Mareorama

Created by Hugo d'Alési, a painter of advertising posters, in 1900 for the Paris World Exhibition, the mareorama project had a budget of 1,250 million francs and covered 2,212.5 square meters. The mareorama consisted of moving panoramic paintings and a large platform equipped with mechanical devices that allowed movement. It was located in one of the buildings on the Champs de Mars. The interior hosted a 70-meter replica of a steamboat and two panoramas, port and starboard, placed on large rollers driven by hydraulic motors that unrolled the panoramas as a curtain in front of the viewer. The paintings generated continuous images of the sea and the coast, representing the recreation of a journey that d'Alési made. It started in Marseille and passed through Algiers, Naples, Istanbul, the Suez Canal, Sri Lanka, and Singapore, ending in Yokohama. The images were painted by a team of decorative painters who transferred Hugo d'Alési's sketches to a 750-meter by 13-meter canvas. An area of approximately 20,000 square meters was painted. The platform for the audience was located over a 5-meter-high metal structure equipped with hydraulic motors, chains, and electric engines that allowed small movements that simulated navigation. To increase the illusion of a sea voyage, the painters recreated the sea breeze and the effects of day and night through lighting, completing the effect by adding an olfactory stimulus through the inclusion of sea

algae and tar. The intention was to create a multisensory experience recreating a steamboat trip. [11] Sonorous, olfactory, and haptic stimuli produced by the mareorama enhanced the illusion. It set the mareorama apart from the merely visual tradition of the panorama. Additionally, the audience was more active than in classic panoramas, becoming part of the theatrical scenography. [12]

Trans-Siberian Railway

Another diorama displayed at the 1900 World Exhibition in Paris was the Trans-Siberian Railway, shown in the Siberian section of the Russian pavilion. Built by the international Wagons-Lits (sleeping car) company, it consisted of a wagon with mobile capacity in which the landscape of the Trans-Siberian train route could be contemplated through the windows. In the same way, the Mareorama recreated the journey from Marseille to Yokohama, showing the most exciting stages of the journey, the Trans-Siberian line from Moscow to Beijing, including the cities of Omsk and Irkutsk and the Great Wall of China. The moving panorama system was built under the direction of the architect Chédanne and was painted by Marcel Jambon and A. Bailly, [13] who made numerous sketches and watercolor drawings based on travels along the Siberia railway route. The audience sat in luxury carriages made for the occasion and enjoyed the view through the windows. Different paintings and objects were arranged in different planes with different speeds to create an illusion of travel that was close to natural perception. The foreground, at the fastest speed, contained objects such as rocks and sand attached to a belt moving at a speed of 5 meters per second. A screen with a representation of shrubs occupied the next plane and moved at a speed of 2 meters per second. The following one represented landscapes, moving at 0.65 meters per second. The most distant screen showed a scenic background of mountains, forests, and cities; its dimensions were 7.60 meters high and almost 107 meters long, and it moved at 0.08 meters per second. The screens were moving in only one direction, and due to the inaccurate speeds of the tapes, the “ride” was never precisely repeated, providing a different experience every forty-five minutes. The result was a perspective of great depth created through the movement of the landscape.

Later, in 1904, a similar medium was developed that replaced panoramic paintings in motion with film technology; this was in the Hale’s Tours. Invented by George C. Hale, it was featured at the St. Louis Exposition in 1904. Hales Tours allowed the viewer to take imagined trips for ten cents. The place where the projection was carried out simulated a train car where up to seventy passengers could watch films shot by cinematographic cameras placed on a moving train. [14] The projection was accompanied by special effects, movements in the room similar to the rattle of a train sound typical of the means of

locomotion, or air entering through the train windows generated by fans located outside the wagon. [15]

Cinerama

The proposal of this attraction was the contemplation of the landscape from a bird’s-eye view as if traveling in a balloon. It combined the previous technology of panoramic paintings and the main technological novelty of the moment, the cinema. It was devised by Raoul Grimoin-Sanson, who experimented from 1895 with film cameras and projectors. (fig. 4)

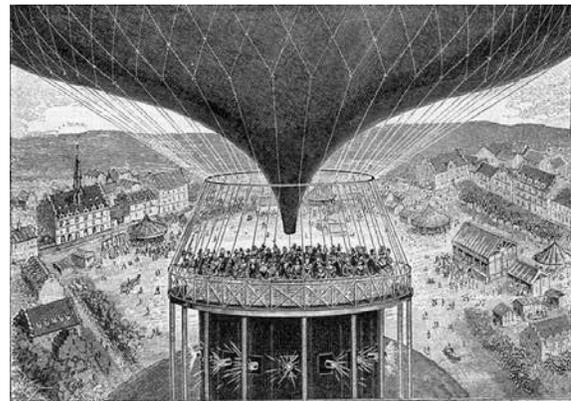


Fig. 4. *Cinerama*, 1900 Paris Exposition. Raoul Grimoin-Sanson. Open source.

The experience was recreated in a polygonal room 30 meters in diameter. The cinerama consisted of ten synchronized 70-millimeter projectors; each projector covered 36 degrees. The images were projected on 10-meter screens arranged in a circle covering 360 degrees around the observation platform, which simulated a hot-air balloon basket with a capacity for two hundred people. The projection system was located on a concrete structure that housed the projectors. The film shown corresponded to a balloon flight filming, in which ten fixed cameras were placed around a central unit to film the ascension of the balloon over the Tuileries. The experience placed the spectators into the position of the aeronauts, showing their view. It aimed to synthesize moving images and panoramas to recreate a flying balloon experience.

Concluding Remarks

The painted panorama existed as a prominent popular entertainment form until it was replaced by the new technologies of photography and cinema. The cinema brought the novelty of recorded movement, offering an intimate visual experience and a more appealing version of travel replacement. The panorama’s architecture as an extension of itself, together with the visual representation, was a powerful fundamental tool to convincingly create the

experience of virtually being in other worlds. The audience, placed in the center of the stage by interacting with a virtual recreated narrative world, obtained the sense of being part of it. By representing exotic and remote territories and events, the panorama allowed the general public to experience spatiotemporal reconstruction of historical events and virtual trips.

The panorama and diorama were specific instruments in reorganizing sensory and visual disciplines that highlighted the relationship between culture, technology, and space, to create multisensory experiences and knowledge production. Spatial layout, architecture, technology, representation techniques, and audience were the key points in creating exhibition spaces that attempted to recreate sensory travel experiences. Novel technologies such as those used in cinema were used to enhance the illusion of immersion, recreating places and travel experiences for the audience.

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Author Biography

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Virtual and Vicarious: The Best Kind of Travel Your Money Can Buy or an Ode to the Panstereorama and the Panstereoramic Park

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Abstract

Urban panstereoramic parks provide visitors with the opportunity to see miniature replicas of many different sites gathered in one place, during a single visit, for a small fee. This idealized form of travel across distances, time zones, languages, and international borders, without the hassle of travel arrangements and documents, saves visitors money and time. In addition, it also provides them with a much-needed safe, outdoor, educational, and fun experience during the Covid-19 pandemic. Thus the convenience that miniature parks offer in general, but also during these challenging times, is unparalleled. And yet, news of the financial challenges that panstereoramic parks face resurfaced over the past year and a half. Here, I explore these challenges while arguing that the panstereoramic park is the perfect pandemic attraction and propose a new way of theorizing it.

Keywords

Panstereoramic Parks, Miniatures, Idealized Travel, Financial Challenge, Pandemic Attraction, Heterotopia, Hybrid Place, Predictability.

Funding the Fantasy

When news came that *Mini-Europe*—a panstereoramic park in Brussels, Belgium (Fig. 1)—was closing doors for good on December 31st, 2020, I was disheartened. [1] With 350 miniatures from 90 European cities spanning 300,000 sq. feet, *Mini-Europe* had been in existence since 1989. [2] Over the years, the park had become a favorite pastime for locals and foreigners alike, regularly advertised at airports, in magazines, and on city billboards; in fact, it had become a symbol of unified Europe. What would it mean to lose such a symbol? Is there time to visit the park one last time before it closes down? I fantasized about visiting *Mini-Europe* despite pandemic lockdowns because I felt a

personal connection to the place: though I had visited it physically just once, I had presented and published on it multiple times, noting parallels with other parks such as *Miniaturk* in Istanbul, Turkey, and *Mini Bulgaria Park* in Veliko Turnovo, Bulgaria. [3]



Fig. 1. Photo collage with famous buildings, *Mini-Europe*, Brussels, Belgium. Credit: *Mini-Europe*.

Though *Mini-Europe* had reopened in May of 2020 (Fig. 2), as Brussels was easing up its pandemic measures, by September of 2020 it had become clear that the pandemic had “spared no one,” as the park’s owner and director, Theirry Meeus pointed out. He had failed to reach an agreement with the park’s landlord, Brussels Expo, despite promises of a “major investment.” [4] COVID-19 had put its stamp on *Mini-Europe*: attendance to the attraction had

dropped drastically: from 400,000 in 2019 to 64,000 in 2020. [5]



Fig. 2. *Mini-Europe's* owner and director Thierry Meeus, wearing a protective mask against COVID-19, talks to children by Brussels' Grand Palace exhibit on May 18, 2020, as Belgium eased up on its lockdown measures. Credit: Francois Lenoir, Reuters.

Pansterioramic parks, like all cultural institutions, are vulnerable to financial challenges. In order to continue to function, they rely on generating funding, through public campaigns, local and/or national government investments, private donations, and attendance. Museums in the United States, for instance, as non-profits, do not rely on federal funding; instead they need to “stitch together sustainable revenue streams from a range of sources” just like for-profit organizations do, all the while being “at the whim of the marketplace,” explains former American Alliance of Museums (AAM) president Ford W. Bell. The Great Recession of 2008, he notes, forced museums to be super creative in finding new and improved ways of generating funding in order to survive. In the informational brochure “How Are Museums Supported Financially in the US,” Bell describes four funding categories (Fig. 3) and the percentage each contributes to museum support: government grants, 24.4%; private donations, 36.5%; earned revenue, 27.6%; and investment income, 11.5%. For US Museums, the largest support comes from private donations. [6]



Fig. 3. Average Mix of Funding Sources for US Museums (2009). Source: American Alliance of Museums.

But why should the funding of cultural institutions, such as museums, theaters, and pansterioramic parks, matter, to the regular visitor? Because cultural institutions suffer from financial instability when budgets are slashed, public and private initiatives get depleted, and visitors drastically decrease. Such has been the case during the COVID-19 pandemic, spanning almost two years thus far—2020 and 2021—and while we have already seen the effects on economies worldwide, we are yet to see the effects on cultural institutions. To know how to help cultural institutions persevere, sustain themselves, and grow in the face of large-scale financial crisis, we need to learn what fuels them, and to what extent. The four categories outlined by Bell can be useful when trying to understand why pansterioramic parks, which refer to themselves proudly as “open-air museums” (i.e., *Mini-Europe* and *Miniaturk*), may go bankrupt. How can we tell if a pansterioramic park is doing well financially, in the US, Europe, or elsewhere? Can we rely on the numbers of its visitors for the answer? Not quite, Bell reveals, as the least amount of support is generated through visitors’ attendance, only 5%. [7] Therefore, other means of support are crucial to explore.

One popular pansterioramic park, *Gulliver's Gate* (Fig. 4), had already closed down, in the year prior to the pandemic. An indoor attraction of close to 1000 miniatures from over 25 cities from 5 continents, *Gulliver's Gate* sat right on Times Square in New York City, USA. [8] It had been in operation for less than 3 years, from early 2017 until late 2019, when it filed for bankruptcy. Stretching over 50,000 sq. feet, *Gulliver's Gate* cost 40 million USD (some of it gathered through a Kickstarter campaign launched in 2014) to create. [9] It took 16 months to put together. [10] Yet despite this big private investment, *Gulliver's Gate* failed to meet its 5.7 million USD yearly rent. [11]



Fig. 4. Thanksgiving Day Parade, New York City. *Gulliver's Gate*. Credit: Molly Flores, NYC The Official Guide.

This begs the question: why are pansterioramic parks so difficult to sustain? As a unique form of cultural treasure and heritage, shouldn't local, regional, and national governments be readily providing funding for them as they

promote cultural tourism, education, fun, and, in the times of crisis, a safe form of entertainment? The answer is simple: panstereoramic parks are costly.

The Cost of a Single Panstereorama

A single panstereorama, such as *The Panorama of the City of New York* (Fig. 5)—a miniature metropolis with 900,000 structures, spanning 9,335 sq. feet in the Queens Museum in New York—cost 672,662.69 USD, back in 1964, when it was commissioned for the New York World’s Fair of 1964/65 by the infamous Robert Moses, as a way to showcase the city that he helped interconnect. The Queens Museum’s estimate considers this amount to be the “equivalent of approximately \$5 million today.” [12]



Fig. 5. *The Panorama of the City of New York*, Queens Museum, New York City, USA. Credit: Queens Museum.

The Original Panstereoramic Park

If a single, though gigantic, panstereorama costs 5 million USD, what about panstereoramic parks, which include large landscaped areas and multiple custom-made miniature structures? Little is known about the amount of the initial funding for the original miniature park, *Bekonscot Model Village & Railway* (Fig. 6), in Beaconsfield, the UK, in operation since 1929. It started as a private garden attraction when Roland Callingham opened his doors to the curiosities displayed on his property. Run by the Roland Callingham Foundation, nowadays the park functions as a charity. This implies that the site is financially self-sufficient and is able to generate enough funds to sustain itself and still donate its yearly surplus to charities. To date, the park has donated 5.5 million British pounds (7.2 million USD) in total. [13]

The amount of the initial funding for the second panstereoramic park in the world, *Madurodam* (Fig. 7), is also unknown. Modeled after *Bekonskot*, it opened in 1952 in The Hague, the Netherlands, as both a theme park and a war memorial in memory of George Maduro, a young man

who lost his life in the war. The Maduro family was responsible for the initial investment. *Madurodam* also functions as a charity to this day, donating its proceeds—600,000-700,000 Euros yearly—to charities. More than 36 million Euros (41 million USD) have been donated through



Fig. 6. *Bekonscot Model Village & Railway*. Beaconsfield, UK. Since 1929. Credit: *Bekonscot Model Village & Railway*.



Fig. 7. *Madurodam*. The Hague, Netherlands. Credit: *Madurodam*.

the *Madurodam* Children’s Fund thus far. [14]

Both *Bekonscot Model Village & Railway* and *Madurodam* then, started as private attractions, with private investments, and continue to function as charities, which suggests that both of them are financially self-sufficient.

Subsequent Panstereoramic Parks

Subsequent panstereoramic parks, by contrast, were created as public tourist attractions, often with the patronage of city municipalities. Such was the case with *Mini-Europe* (Fig. 8), which, built in 1989, received the initial investment of 10 million Euros (12 million USD then, or 24 million USD dollars today [15]), as revealed on inauguration day by then-Prince Philip of Belgium. From its inception, the attraction has been advertised as a symbol of the European Union (EU) and Brussels—its proud capital. It should come as no

surprise that *Mini-Europe's* yearly turnover is 4 million Euros (4.5 million US dollars). [16] By comparison, *Miniaturk* (Fig. 8), a popular attraction in Istanbul, which opened in 2003, cost 10 million USD to build. [17] The area comprises 134 models over 60,000 sq. meters (650,000 sq. feet), and is supposed to evoke pride in Turkey's heritage: "a small model of a big country." [18] These two examples suggest that panstereoramic parks, which start off as public tourist attractions with government investments, put forth a message supporting and summoning national identity and pride. As a result, local and national governments have a vested interest in keeping these parks alive and well.



Fig. 8. Gallata Tower. *Miniaturk*, Istanbul, Turkey. Credit: *Miniaturk*.

The Panstereoramic Park: The Perfect Pandemic Attraction

Luckily, on the last day of 2020, *Mini-Europe* obtained the funding to remain open by striking "a long-term agreement" with the City of Brussels. [19] Perhaps the investors realized that the miniature park is not only a gigantic image booster for the EU and Belgium but also the perfect pandemic attraction: outdoors, spread out, educational, and fun. Or as an article for Reuters enthusiastically proclaimed: "Visitors were back at the Eiffel Tower in Paris, London's Houses of Parliament and the Grand Place in Brussels on Monday, not flouting lockdowns but at the reopened Mini-Europe miniature theme park." [20] This statement confirms that miniature parks are above and beyond borders, distances, and travel logistics; their convenience during pandemic times should be embraced and promoted. (Similarly, *Miniaturk* is on the list of "5 ways to enjoy Istanbul outside." [21])

But *Mini-Europe* re-opened with two significant exhibit updates, which reflect the changed European landscape: the effects of the COVID-19 pandemic are visible on some exhibits, which demonstrate social distancing and masking (Fig. 9); and BREXIT is accounted for in a separation

yellow dotted line and a Custom sign between the British Houses of Parliament and the EU countries (Fig. 10).



Fig. 9. Model figures on a tandem bike, masked and socially distanced. *Mini-Europe*, Brussels, Belgium. Credit: Reuters.



Fig. 10. Brexit made visible at *Mini-Europe*, Brussels, Belgium. Credit: Reuters.

To become the perfect pandemic attraction though, panstereoramic parks have paid a price: compromised immersion and spontaneity: signs reminding visitors of social distancing, sanitizing (Fig. 11), and masking (Fig. 12) throughout the premises (i.e., *Madurodam*) do not allow visitors to escape the reality of the city and fully immerse themselves in the fantasy world of the park. In addition, the advanced online timed ticketing does not allow for spontaneous, unplanned visits to the park and the interactions these may bring about. How do the compromised immersion and spontaneity at panstereoramic parks affect our experiences there?



Fig. 11. Covid-19 preventive measures at *Madurodam*, The Hague, The Netherlands. Credit: *Madurodam*.

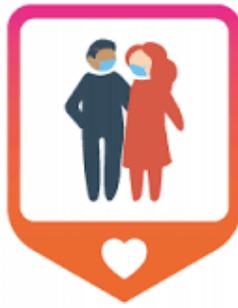


Fig. 12. Covid-19 preventive measures at *Madurodam*, The Hague, The Netherlands. Credit: *Madurodam*.

The Panstereoramic Park: A New Kind of Place?

What kind of a place is the panstereoramic park? Constructed? Imaginary? Ideal? Michel Foucault could have called it, rightfully so, a “heterotopia”: a place that, like museums and libraries, is out of place and out of time, meaning, it is insular and timeless. The panstereoramic park occupies a specially designated area, usually in the city outskirts, and the rules and regulations that one follows there while experiencing it seem to put a pause in the clock. Foucault suggests that at heterotopic places real sites are “simultaneously represented, contested, and inverted,” which we can extend and modify to the panstereoramic park, where real buildings are represented but also decontextualized and miniaturized. [22]

Michel de Certeau, though, would have distinguished between the park as a space and a place by claiming that place has a fixed geographical location while space does not. Since for him “to walk” means to “lack a place,” and further, that the walk activates the physical place into an experienced space: “space is a practiced place,” the park comes into space as a result of the visitors’ practices of walking through the area. [23] [24]

But could the panstereoramic park also be understood as a “non-place”? Marc Auge may agree to that. The panstereoramic park, itself product of supermodernity, is detached from historical and cultural context, and though it promotes a homogenous EU identity, it answers Auge’s definition of non-place: “If a place can be defined as relational, historical and concerned with identity, then a space which cannot be defined as relational, or historical, or concerned with identity will be a non-place.” [25]

Perhaps then the panstereoramic park is simply a “hybrid place,” as understood by Andrew Blum: a place “best characterized by the presence of other places” [26], where the “local” and the “remote” exist simultaneously. [27] Though Blum is referring to how technological advancements help merge the remote with the local—i.e.,

we virtually visit multiple distant places from the comfort of our home, through our iPhone—the elimination of geographical distances and miniaturization at the panstereoramic park do merge “here” and “there” masterfully and unapologetically. One need only think of the site of a real, Belgium crow perched on the grass next to the model of the British Houses of Parliament at *Mini-Europe* (Fig. 13), to understand how local and distant overlap at the panstereoramic park, producing a hybridity of places and experiences.



Fig. 13. A crow by the model of the British Houses of Parliament at *Mini-Europe*. May 18, 2020. Credit: Reuters.

But we cannot forget the poetics of the “dream” space that Gaston Bachelard indulges in, which is the space of associations, imaginings, and daydreaming prompted by physical locations (the house, the corner, the miniature). He insists that “Miniature is one of the refuges of greatness,” [28] implying that miniatures, which are the product of dreaming, encourage dreaming. By that logic, the panstereoramic park is the perfect dream space, which is both the product and producer of dreaming.

These different definitions of place and space overlap at the panstereoramic park, making the park a multi-layered phenomenon. Moreover, a new layer towards understanding the panstereoramic park as a result of the pandemic times should be added: predictability. The panstereoramic park has now become a highly predictable place: visits and experiences there are pre-planned. Spontaneity and immersion, once expected, even encouraged, are now to be avoided, as they signal danger and non-compliance with pandemic restrictions. Will predictability become a defining factor in understanding the panstereoramic park?

Concluding Remarks

Though costly to maintain and grow, the panstereoramic park is the perfect pandemic attraction: it allows for an outdoor experience where one can safely distance from others, learn about different places, and have fun. The new safety regulations at various panstereoramic parks though

suggest that immersion (in terms of fully embracing the fantasy world of the park) and spontaneity (in terms of visiting and experiencing the park) are compromised or temporarily suspended. As a result, we need to consider predictability as a major factor in defining the panstereoramic park: pre-planning and structuring one's visit to, movement through, and behavior at these miniature parks cannot be ignored. Yet it raises at least one question, the answer to which may reveal itself with the passage of time: How are immersion and spontaneity important in experiencing panstereoramic parks and why?

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Epoch and The Coviad: Two Contemporary Panoramas

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Abstract

Is the genre of the panorama still relevant to contemporary painters and graphic artists? It is easy to accept that contemporary photographic or cinematic panoramas attract current artists but painting or drawing in this genre may be seen as a thing of the past--or is it? As a painter, sculptor, and draftsman, I demonstrate how I have been inspired to make two highly ambitious panoramas, one a vast painting, the other a pencil and gold leaf drawing some 35 metres long, the latter inspired by the Bayeux Tapestry and of identical surface area and currently on virtual exhibition in a UK museum. The panoramic format can allow contemporary painters to express profound thoughts about time, philosophy, memory, personal challenges, experiences, survival, and cultural change. In the past, large panoramas tended to deal with historical moments, battles, or realistic scenes of places, but new artists can use the format to express a broader range of subjects, for example, the new panorama *The Coviad* that tells of the experiences of the pandemic during the last year, 2020-2021.

Keywords

Epoch, Coviad, Panorama, Mesdag, Museum, Painting, Drawing, Picasso, Gauguin.

Encountering *Panorama Mesdag*

It started with a chance encounter in March 2016. Every year Maastricht hosts The European Fine Art Fair (TEFAF). [1] I normally visit the fair as it shows an exceptional cross section of art from every period of history, from ancient Egypt, Greece, Rome, medieval times, the Renaissance, the eighteenth and nineteenth centuries and Impressionist, modern, and contemporary art. I am one of those artists who like to dig deep into the past as well as projecting into the future. I normally go for a walk in the beautiful medieval part of Maastricht when I am staying there, dodging students on bikes and crowds leaving bars in an inebriated state. But this walk was different, because I stumbled upon a modern circular structure at the centre of a square that dates to Roman times. I walked inside and there was a recreation of the *Panorama Mesdag* [2], advertising to all visitors of TEFAF the wonder of 19th century panoramic art. Some may have seen Mesdag's small oils of boats and coasts but had never had the chance to travel to the Hague to see this painted view of the coastal town of Scheveningen, one of the best loved panoramic paintings to survive from the

19th century, and an unexpected inspiration to a contemporary artist.

Almost immediately upon entering this space and slowly turning my head to see the panorama, an idea struck me: I wanted to make a contemporary panorama. But why?

In my paintings and sculptures, I had been exploring specific themes: the passing of time, the passing of generations, our attitudes to personal and collective history. [3] In general, I made images on single panels, canvases, or sculptures of a certain size. But it occurred to me that the genre of panorama might be remarkably relevant as a way of expressing longer periods, unfolding narratives, progressive thoughts, and not just events or spaces, as in many 19th century panoramas. In other words, I wanted to extend the genre to include philosophy and thought. Although it is of course much more demanding to bring off a panorama than a painting on a single canvas, it seemed to me a fantastic challenge for a contemporary artist. Furthermore, my aim was to express something very relevant to now but using the age-old medium of paint on canvas. The assumption that the contemporary panorama needs to be photographic or cinematic, whilst of course perfectly valid, seemed to me to tell only part of its relevance to current practitioners.

Creating *Epoch* - a contemporary Panoramic painting

My first act was to paste together many small sheets of paper so that I had a very long strip that I could carry around with me as a kind of elongated sketchbook. I carried this with me for many weeks, sketching ideas for the panorama in sequence in pencil and in miniature. I started the studies for what would become one of my most ambitious works to date: *Epoch*.

What was the idea behind *Epoch*?

The TEFAF art fair is attractive because it covers all artistic periods right back to the dawn of civilization. In 1985, as an art student at Central Saint Martin's School of Art I used to visit the British Museum several times a week. I was studying under Shelley Fausset (1920-1994), one of Henry Moore's (1898-1986) sculptural assistants. [4] Fausset gave me a piece of Hornton stone, one of

Moore's favourite mediums, and encouraged me to carve it. I never did because I saw it as a talisman handed down from one artist to another. Like Moore himself, Fausset exuded a strong feeling for the length of art. In the current art world, it is easy to get caught up in new fashions, movements and the commercial aspects of a world often driven nowadays by money or politics. [5] But the story is much longer. At the British Museum, simply by walking from one room to another, you could see that one empire or system of thought soon replaced the other, but art continues; it is eternal language. I like to think of art history itself as one endless panorama.

In the British Museum there are what might be considered early examples of panoramic art for example the Elgin Marbles [6], the Siege of Lachish (700BC-692BC) [7], and the Neo-Assyrian Lion Hunt Wall Relief of Ashurbanipal (645BC-635BC) [8]. All these legendary antiquities reveal a narrative over a lengthy, continuous surface. Through these frequent visits, these works became deeply imbedded in my visual imagination and I refer to them knowingly or unknowingly in various works, including *Epoch*. But having come across the *Panorama Mesdag* in its circular format, I was given a visual punch. And my idea? To create a panorama that was all about the passage of time. I called it *Epoch* because it was to be a tragi-comic image of history, starting with the moment when life evolved from the primordial swamp. This first image of a lake or swamp that was the incubator of life was, in part, suggested to me during a trip to Los Angeles. The La Brea Tar Pits, so close to the LA County Museum of Art, suggested a start point, and I did several small paintings inspired by this prehistoric site where many bones of prehistoric animals and one prehistoric human have been found. [9] However, images of lakes also had a deeply personal meaning, as will be seen below.

The idea of *Epoch* was to create a panorama recording the epoch since the beginning of life on earth and ending with mankind taking off for other planets. Perhaps it is just one chapter in a larger story? In common with much contemporary art, this is at one time a deadly serious idea but also tinged with irony and humour as well. Because there is a certain absurdity at work here, a painting of a vast period can obviously only be symbolic and extremely partial. But I have always felt that there is something potentially moving about mixing the serious with the comic, something essentially Shakespearian. [10]

After drawing the study (Fig. 1), I ordered several 10 metre rolls of canvas. The *Epoch* panorama was to be composed in sections, each measuring 1.9 m x 3 m. In the end, there were twenty of these inter-related canvases; the overall size of *Epoch* is 3.8 m x 30 m, two panels high and ten panels long.

I had planned out the whole composition on paper after weeks of carrying the strip with me wherever I went and as ideas spilled into the concept of *Epoch*. I was so taken with the panoramic concept that I went ahead and started this massive work without any idea where or when it would be seen.



Fig 1. Study for *Epoch*, David Breuer-Weil, pencil on paper. Copyright: David Breuer-Weil (author), 2021.

Whilst I was embarking on this secret project, I was simultaneously exhibiting monumental sculptures in very prominent public places, and in planning and making them, I was very aware of their placement and end use. My eighteen-foot-tall sculpture *Brothers* was installed at Marble Arch, *Alien* in Grosvenor Gardens, and *Emergence* in Hanover Square in the heart of London. [11] *Emergence* (Fig 2) was a condensed version of *Epoch* in some ways; it is an evolutionary image, showing mankind born from the earth. But *Epoch* would remain hidden until now, as it is not easy to display epic panoramic paintings these days, largely due to an absence of available spaces, the cost of rental, and museums that still tend to favour digital, object or light-based large-scale installations over painted installations. But that does not mean they are not being made, and a search should be made for other contemporary examples that may have been undiscovered (<https://youtu.be/Zd0t2QgfEuA>).

Epoch was a continuous panorama of mankind moving through its crucial stages. Or rather what I imagined to be its crucial stages in a personal, poetic way, partly inspired by T. S. Eliot's (1888-1965) *The Wasteland* (1922) and *Four Quartets* (1943): it is an image of a great passage of time, but it is also quintessentially modern in that, like Eliot's *The Wasteland* and *Four Quartets*, it is filled with vignettes and potent details, particularly many from my own life and family history. [12] For example, my paternal grandfather, Ernst Breuer-Weil (1902-1978), is portrayed playing the piano, a scene I often witnessed as a child, and discussions of all his relatives who had died in the

Holocaust were also frequent. He escaped to London after the Anschluss in 1938.



Fig 2. *Emergence*, 2012, David Breuer-Weil, bronze sculpture in four parts. Copyright: David Breuer-Weil (author), 2021.

My mother's father, Kai Didereksen (died 1944), was murdered by the Nazis by the lake of Holte, near Copenhagen, in 1944. Images of lakes and water in my art are often infused by a sense of loss as a result; he was killed by one of the most beautiful lakes in Denmark, and that element is clear in *Epoch* as well, a sense that natural scenes somehow absorb human experiences and traumas.

In *Epoch*, I try to recreate the psychological storms such subjects evoked in the mind of a person growing up in the shadow of genocide and there are details such as thousands of people deported from a city to a small building where they all disappear (Panel 8 of *Epoch*). Here there are other literary influences as well. When I was in my early twenties, I met Primo Levi (1919-1987), a survivor and one of the greatest writers on the Holocaust. [13] In *Epoch* there are images of people stripped of all possessions and left as vulnerable human presences, a leitmotif from Levi's *If This is a Man*, a book that I heard him talk about in person just before he died. Panel nine has an image of a huge mountain of clothing, suitcases, and belongings that dwarf people nearby. I am often stuck by the thought that I was born only 20 years after the liberation of Auschwitz, but in my mind, it is ancient history because we are tempted to push horrors as far away as possible. The panoramic format however demonstrates in a very eloquent way that all events are connected and joined by time. But mixed in with these thoughts are also beautiful memories like the building of sandcastles on a beach, something that I take as emblematic of childhood, creativity, and hope. But I also make dramatic aesthetic use of the classical elements that appear in many variant ancient cultures: water, air, fire, earth. But towards the end

of the panorama, modern science debunks this idea and embraces the atomic theory. [14]

Although there are powerful themes at play here, there is also a purely aesthetic and artistic element: using this vast flowing canvas to play with a great variety of intense colors, forms, and tones. It is quite literally a broad canvas to let loose.

The idea of creating a large-scale painting that is a symbolic statement about life and destiny is not new, nor are paintings that commemorate historical moments in a veiled symbolic manner. In my twenties, I was very struck by Roman paintings in Pompeii, particularly at the Villa of Mysteries. Medieval and Renaissance art is, of course, exceptionally rich in interconnecting cycles of paintings, often of biblical, classical, or military subjects. There seems to be something eternal about the human need to make wall-sized paintings, perhaps a legacy that goes back as far as the Lascaux Cave paintings and runs right until the Mexican Muralists and beyond. Two of the greatest Post-Impressionist and Modern artists achieved haunting and magnificent visions in large scale mural sized paintings, Paul Gauguin (1848-1903) in his *Where Do We Come From? What Are We? Where Are We Going?* (1897-1998) [15] and Pablo Picasso (1881-1973) in *Guernica* (1937). [16] Whilst these are painted along a strong horizontal axis, they are not panoramas but do represent events unfolding in sequence. It can be argued that Claude Monet's (1840-1926) *Waterlilies* (1914-1926) at the Musée de l'Orangerie in Paris is a panoramic installation, but without narrative, more of an immersive contemplation of nature. [17] This way of working on large scaled horizontal canvases that are linked in some manner had some influence on American Abstract Expressionist painting as well. In the 19th and 20th centuries, the panorama was more of an illusionistic spectacle, and developed into a distinctive panoramic genre, different from earlier fresco cycles but still with connections to these historical precedents. Such dramatic and all-encompassing examples as *The Raclawice Panorama* (1893-1894), Franz Roubaud's (1856-1928) *Siege of Sevastopol* (1905) and *Battle of Borodino* (1911) as well as Pyotr Tarasovich Maltsev's (1907-1993) *The Battle of Stalingrad* (1981) are memorable examples of the genre. These works were highlighted by Ralph Hyde (1939-2015) in the exhibition *Panoromania!* (1988) he curated at the Barbican in London. [18] Although strictly speaking it is these works that are what we understand to be "panoramas," the idea of an elongated sequential painting that uses symbol rather than spectacle can have wide ranging influence on current artists and be more of a mainstream part of artistic practice.

Epoch completed

The ten connected panels (each consisting of two 1.9 m x 3 m canvases, one above the other) of *Epoch* are as follows (these are the brief notes that I made about them whilst I was at work):

One: *Swamp*. This is the primordial swamp showing different life forms evolving. Mankind is only one of other possible forms of life that never evolved further. I am inventing strange life forms that never made it. Experimenting with different figures that I may also create as sculptures. (Fig 3)

Two: *Fire*. The discovery of fire as a key moment in human achievement and one that is ambiguous because both destructive and creative. I am thinking of J. M. W. Turner's (1775-1851) painting of fire as I work on this. How do you paint light like this? (Fig 4)

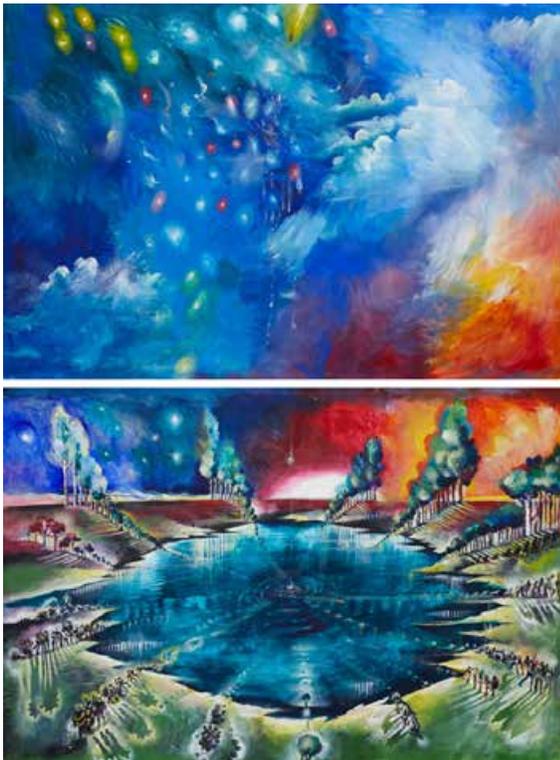


Fig 3. *Epoch*, Section One: *Swamp*, 2016, David Breuer-Weil, acrylic on canvas. Copyright: David Breuer-Weil (author), 2021.

Three: *Height*. Seeking transcendence in the form of faith and beliefs. This is also the element of air. Ladders represent aspiration for me, the instinct that we must pursue something higher, the idea that there must be more to life than survival or material success. At its best art is about the seeking of transcendence.

Four: *The Pit*. The constant threat of death and the reality of mortality is represented by the element of earth. As a sculptor, digging the earth for clay and plaster is particularly vital. There is the Biblical idea that the first man, Adam, was made of earth, born of clay. The species is remarkably resilient and continues its march through time and space.

Five: *Ant hills*. Human beings are compared to ants, building ant hills and cities as soon as the hunter gatherer stays still and embraces agricultural life. The discovery of writing and record keeping seems to come hand in hand with the creation of cities.

Six: *The Great Wave*. The supremacy of nature over human wishes and ambitions. A seismic destruction like the Flood. Water as an element, both essential and destructive. I am thinking of Hokusai's (1760-1849) famous image of a wave. Its great height gives a point of compositional focus to *Epoch*. I think about Japanese and Chinese art. I also look at some scroll paintings, these are early panoramas often of great beauty and often hidden.



Fig 4. *Epoch*, Section Two: *Fire*, 2016, David Breuer-Weil, acrylic on canvas. Copyright: David Breuer-Weil (author), 2021.

Seven: *The Shore*. The instinct to create and build cannot be destroyed even by overwhelming force. Sandcastles on the beach built by survivors evolve into great cities.

Eight: *Civilization*. What we regard as civilization is relatively new in historical terms as a proportion of the time that there has been life on earth. Great cities, painting, music, cinema, communication, architectural and scientific progress do not prevent genocide and self-destruction. In this panel are references to my grandfather, a refugee from Nazi Vienna and a pianist: he plays his piano having fled to England whilst many of his contemporaries who were unable to leave Europe are deported to camps in the East never to be heard of again. In the sky are traces of the nuclear threat. Science discovers atomic theory and makes great strides but at the same time facilitates the potential destruction of the species. (Fig 5)



Fig 5. *Epoch*, Section Eight: *Civilisation*, 2016, David Breuer-Weil, acrylic on canvas. Copyright: David Breuer-Weil (author), 2021.

Nine: *Possessions*. The heaps of looted belongings are mountains that overshadow both past and future, but mankind redefines itself through technological and medical innovation but against a backdrop of extremist ideas. (Fig 6)

Ten: *Blast-off*. The human ant leaves the world behind in search of new worlds. The swamp where it all started is empty. But as humanity departs, a new drop falls into the pond suggesting that another history might begin.



Fig 6. *Epoch*, Section Nine: *Possessions*, 2016, David Breuer-Weil, acrylic on canvas. Copyright: David Breuer-Weil (author), 2021.



Fig 7 *Epoch*, 2016, David Breuer-Weil, acrylic on canvas. Copyright: David Breuer-Weil (author), 2021.

To some degree, the whole of *Epoch* is an attempt to come to terms with my family history during World War II. Sections 8 and 9 show the massive impact of genocide and its redefinition of the human condition as well as the destructive elements of humanity that threaten the whole enterprise of life. *Epoch* Fig 7 was completed in 2016 and rolled up whilst other works of mine have been publicly displayed around the world.

***The Coviad*, a contemporary drawn panorama**

The Coviad is a panoramic drawing in seventy sections, executed in pencil and gold leaf on paper during the beginning of 2021. It is of identical size to the *Bayeux*

Tapestry that inspired it, 350,000 cm². A massive challenge, it tells the story in detail of Covid-19 from its beginnings in 2019 till the advent of vaccination in 2021 and happens to be one of the largest drawings in history.

It has its origins in more modestly scaled drawings. I had just published a book of *Golden Drawings* that I had made during the UK's first lockdown from March till summer 2020 with the Italian art publisher Gli Ori. [19] These drawings were my reflection on the apocalyptic times we were living through with the Covid-19 Pandemic. Images I had first drawn when first ill with Covid in March 2020, they became a series of works all about these extraordinary times: drawings of the threat to life, isolation, lockdowns, support bubbles, the importance of family, a reconnection with nature, a sense of the fragility and beauty of life, peons to the heroism of health workers and the National Health Service.

In January 2021, I happened upon a book about the *Bayeux Tapestry* [20] and, remembering my earlier panorama, *Epoch*, I thought I would embark on a second panorama based on what may arguably be the most famous "panoramic" artwork of all, the *Bayeux Tapestry* that records the Norman Conquest of England. I started by making rough sketches of interconnected works, exploring the different images that seemed relevant to the era of Covid. Over three months, I spent hours every day drawing each of the sheets that make up the total in great detail, and applying gold leaf to the backgrounds -- a very meditative process due to the time and concentration required.

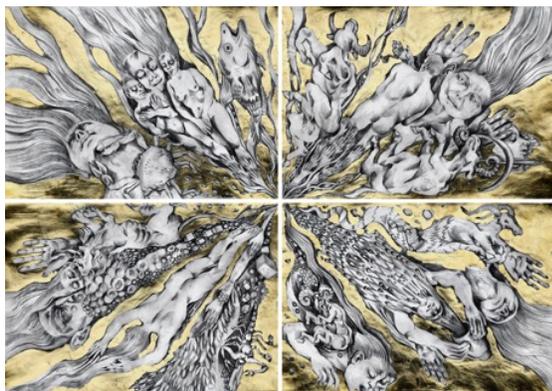


Fig 8. *The Coviad* – 'Zodiac', panels 025 - 028, 2020, David Breuer-Weil, pencil and gold-leaf on paper. Copyright: David Breuer-Weil (author), 2021.

One thing that making contemporary panoramas achieves is a deep engagement with panoramic works of the past. The *Bayeux Tapestry*, made to commemorate a period of trauma and change, seemed to me a strong template upon which to base a new work of art about the extraordinary and tragic year the whole world had lived through. The

tapestry is filled with images of travel, horses, boats, a comet, trees of life, and many mythical beings in the margins. I have interpreted many of these motifs in ways relevant to the period March 2020 -- February 2021. Here there were also poetic references: I called the work *The Coviad* based on the heroic poem *The Iliad* (Fig 8, 9, 10, 11).

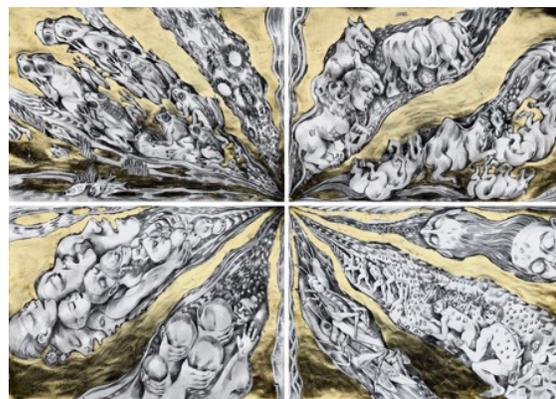


Fig 9. *The Coviad* – 'Ten Plagues', panels 033 - 036, 2020, David Breuer-Weil, pencil and gold-leaf on paper. Copyright: David Breuer-Weil (author), 2021.

Unlike *Epoch*, which has still not met the light of day, *The Coviad* was exhibited at a UK museum almost as soon as it was completed as the institution had already taken an interest in the *Golden Drawings*. The Ben Uri Gallery and Museum was very timely in having started virtual exhibitions even before the onset of Covid. Virtual exhibitions will be of significance to the genre of panoramic art. In this case *The Coviad* was exhibited online as a video which slowly reveals the whole panoramic sweep of the 70-part drawing executed in pencil and gold leaf in detail (<https://youtu.be/9yzHtRYC9cQ>). The video displays the whole work in sequence with a voiceover describing the unfolding motifs. In addition, stills of all parts of *The Coviad* are hosted on the museum website. *The Coviad* will be hosted online in this way for the life of the museum -- an interesting innovation that will doubtless be mimicked in other cases of panoramas where the sheer practicality of displaying the large physical works is unrealistic.

I would hope that one day there could be a panorama museum entirely online bringing together many of the panoramas spread throughout the world that can be viewed as sweeping videos or as virtual reality experiences. Although nothing can beat standing in front of an actual work of art, the virtual experience can be a valuable educational method recording works to diverse audiences and a record for the future. To some degree, it also matches the cinematic scope of the panoramic genre.

The Coviad is a panoramic work of close relevance to the times we have just lived through. I hope it demonstrates how this genre can maintain its urgency for new generations and express something profound about our times.

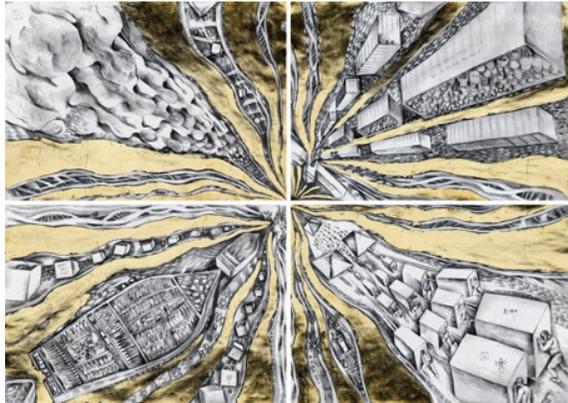


Fig 10. *The Coviad* – ‘Slavery’, panels 043 - 046, 2020, David Breuer-Weil, pencil and gold-leaf on paper. Copyright: David Breuer-Weil (author), 2021.

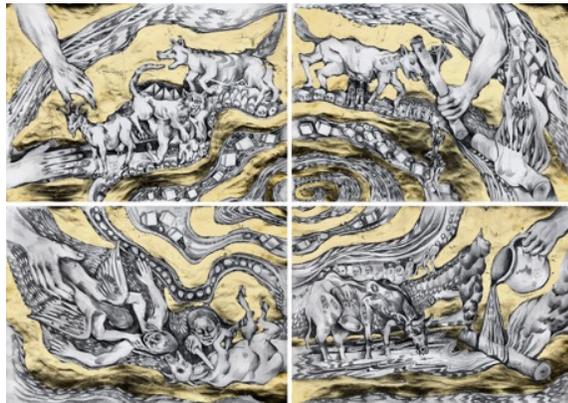


Fig 11. *The Coviad* – ‘The Song of the Goat’, panels 047 - 050, 2020, David Breuer-Weil, pencil and gold-leaf on paper. Copyright: David Breuer-Weil (author), 2021.

Conclusion

From my perspective, the panoramic format, in its broadest sense, can be a relevant genre for contemporary painters wishing to complete more ambitious, installation-like works. This is especially the case if these works seek to deal with subjects such as the passing of time and history, whether personal or otherwise. Both of my panoramas, *Epoch* and *The Coviad*, deal with or incorporate significant historical events. *Epoch*, a reflection on history, focuses on my family experience of the Holocaust as a defining moment of world history, and the psychological

ramifications upon “the second generation”. [21] *The Coviad* is a detailed reflection on the unprecedented year 2020-2021. That panoramas on recent and current themes are still being made in this way demonstrates, I hope, the longevity of panoramic art and the way in which panoramas, like some contemporary art, can reflect psychological states as well as events and topographies.

Notes

1. Catalogue European Fine Art Fair, European Fine Art Foundation, 2016.
2. John Sillevius, *Panorama Mesdag Album*, Scriptum, 2015.
3. Ben Hanly, et al, David Breuer-Weil, *Radical Visionary*, Skira Editore, 2011.
4. Anne Wagner, ‘Scale in Sculpture: The Sixties and Henry Moore: Rothenstein Lecture’, in *Tate Papers*, no.15, Spring 2011.
5. Sohrab Ahmari, *The New Philistines-Provocations*, 2016.
6. The Elgin Marbles are the carved relief sculptures that once formed part of the Parthenon and are currently on view in the British Museum where they comprise a continuous frieze. See: B. F Cook, *The Elgin Marbles*, 1997. Their current location remains controversial.
7. In 701 BCE the Neo-Assyrian Empire's besieged Lachish in 701 BCE., as documented in the Old Testament and the Lachish relief, formerly adorning King Sennacherib's Palace at Nineveh and now in the British Museum.
8. Julian Reade considers that these reliefs are *the supreme masterpieces of Assyrian art* (Julian Reade, *Assyrian Sculpture*, 1998 (2nd edn.), The British Museum Press, p. 73). These were an early influence on my work.
9. Charles Rivers (ed), *The Le Brea Tar Pits: The History and Legacy of One of the World's Most Famous Fossil sites*, Charles River Editors, 2019.
10. As a student at Cambridge, I was stuck by Shakespeare's mingling of comedy, tragedy and pathos, perhaps seen most poignantly in the figure of the Poor Tom in *King Lear*. Gillian Woods writes extensively about King Lear and Poor Tom. She contends overall that as a play King Lear represents a breakdown in civilization (Gillian Woods, *King Lear, Madness, the Fool and Poor Tom*, 2016). It is this aspect that impacted my work that reflected the breakdown of civilization during World War II.
11. These public sculptures were all exhibited under the aegis of the City of Westminster sculpture programme in key locations in London.
12. T. S. Eliot's poetic ruminations about the passage of time and history were a strong influence on my early work. *Epoch* and *The Coviad* are both intended to be epic poems

in visual form. Kenneth Paul Kramer, *Redeeming Time, T. S. Eliot's Four Quartets*, 2007.

13. Primo Levi, *If This Is A Man and the Truce*, 2003.

14. Kikuchi, Mitsuru, *Frontiers in Fusion Research: Physics and Fusion*, London: Springer Science and Business Media, 2011, p. 12 "Empedocles (495–435 BC) proposed that the world was made of earth, water, air, and fire, which may correspond to solid, liquid, gas, and weakly ionized plasma. Surprisingly, this idea may catch the essence."

15. Paul Gauguin, *Where Do We Come From, What Are We, Where Are We Going?* 1897-1898, oil on canvas, 137 by 375 cm, Museum of Fine Arts, Boston.

16. Pablo Picasso, *Guernica*, 1937, oil on canvas, 349 by 777cm., Museo Nacional Centro de Arte Reina Sofia, Madrid.

17. Claude Monet, *Nymphs*, in several panels, Musee de l'Orangerie, Paris.

18. Ralph Hyde, *Panoromania! : the art and entertainment of the 'all-embracing' view*, an exhibition at Barbican Art Gallery, London from 3rd November 1988 to 15th January 1989

19. David Breuer-Weil, *Golden Drawings*, Gli Ori, 2020. This book also includes a written diary in which 66 drawings are each accompanied with notes.

20. Norman Denny and Josephine Filmer-Sankey, *The Bayeux Tapestry*, The Norman Conquest, 1066, London, 1966.

21. Children of survivors of the Holocaust and other traumas have reported dramatic influences on their mental health and sense of identity see: Pumla Gobodo-Madikizela (ed), *History, Trauma and Shame: Engaging the Past through Second Generation Dialogue (Cultural Dynamics of Social Representation)*, 2020.

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Mechanical Theatres of Travel: Scroll Panoramas, Ribbon Maps, and Handheld Media

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Abstract

Mechanical theatrical presentations of landscape and travel can be traced to precedents in the late 1700s, having grown to a wider popular significance in the latter half of the nineteenth century. Their conceptual and cultural effects can arguably be seen also to have endured up to the present time. From the mid-nineteenth century as these effects were being set in motion, steamboat travel on the Hudson and the Mississippi Rivers was entering the popular imagination. A comparative range of travel and map-related artifacts, from that time and after, will be explored for the relationships they display with each other, and for their strong cultural relations to panorama performances of the mid 1800s. Alongside their practical uses, the artifacts in question additionally offer an opportunity for imagined and vicarious travel. In these respects, the material and cultural lineages of contemporary device-mediated experiences of landscape are also significant in the contemporary context. This reading of pre-digital archival artifacts draws a speculative line between nineteenth century panorama performances and contemporary travel as it appears to be mediated in social media orientated selfie-making.

Keywords

Scroll Panorama, Ribbon Map, Ambulatory Map, Mapping, Performance, Travel, Human Machine Interaction, Digital Humanities.

Setting Out (with All Good Intentions)

The material details of Coloney and Fairchild's *Ribbon Map Of the Father Of Waters* [1] (Fig. 1 and 2) are rich and illuminating. Made in 1866 for steamboat travelers on the increasingly domesticated Mississippi River, it is an object that meets the purposes of its time exceedingly well. It aims and succeeds in simultaneously representing the landscape in its details and its excesses. At only two inches wide, its fully extended length is ten feet nine inches. It depicts a map of the river from the Delta to the sources at Lake Itaskal, a journey of 2,600 miles. This is an artifact of popular travel without compromise, made to be carried as it would fit easily into a pocket or a small handbag. It is both a map and a souvenir, that when held in the palm of the hand, its details yield evidence as a confluence of art, craft, and

technologies. Its existence appears as driven by nation-building aspirations as much as it might also serve an individualized experience of the journey. The experience its encounter produces calls to mind mechanized manufacture, graphic replication, and an implied didactic purpose. Its use produces a performative effect upon the person who holds it. In very practical terms for the traveler, this object produced views that can be possessed in the service of an increasing will to engender conceptual and actual land possession.

The handheld experience places the traveler actively at the center of their experience, in the present, as it is unfolding and literally unrolling. Able to project themselves into the landscape as observer and protagonist, the traveler is simultaneously the impresario and the audience of their own journey. It is arguably also an educational object, producing an 'object lesson' [2] in map reading and navigation, physically demonstrating scale and proximity.



Fig. 1. Coloney & Fairchild's Patent Ribbon Map *Ribbon Map Of the Father Of Waters*, 1866. Gast, Moeller & Co. Lith. Cor. Third and Olive Sts. St. Louis. The Edinburgh Geographical Institute. Courtesy of the MacLean Collection.

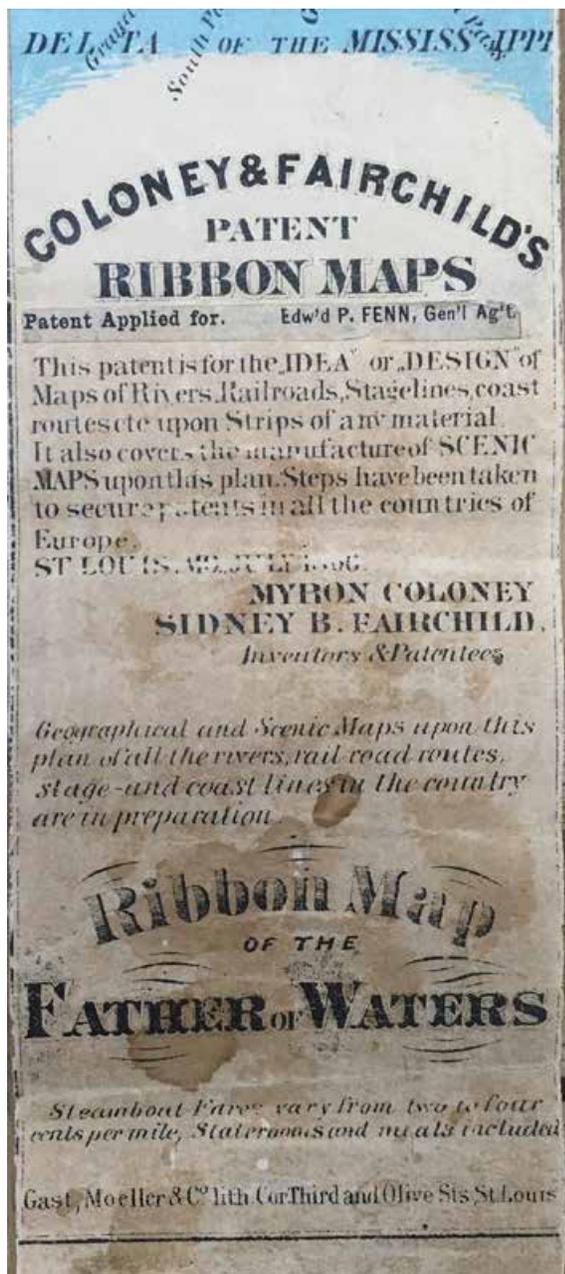


Fig. 2. Cartouche detail. *Coloney & Fairchild's Patent Ribbon Map Ribbon Map Of the Father Of Waters*. 1866. Gast, Moeller & Co. Lith. Cor. Third and Olive Sts. St. Louis. The Edinburgh Geographical Institute. Courtesy of the MacLean Collection.

For their effect and projected intent in relation to landscape, it is easy to connect the experience of taking a steamboat along the river with viewing scroll panorama performances. Imagine a traveler catching an evening panorama performance in St. Louis prior to their departure on the next leg of their journey up river to the homestead. The growth of nineteenth century travel and tourism bears a number of evident and related precedents, amongst which

steamboat travel and scroll panorama performances are prominent. William Wade's 1845 publication, the *Panorama of the Hudson River*, (Figs. 3, 4, 5, and 6) is acknowledged for these connections, and in many ways bucks the trend. John F. Sears writes, "While the steamboat transformed the Hudson and other scenic waterways into living panoramas, the panoramas themselves provided the illusion of travel. Panoramas also conveyed information about strange and distant places." [3] And, he adds, "Panoramas were democratic in their easily understood format and cosmic in scope." [4]

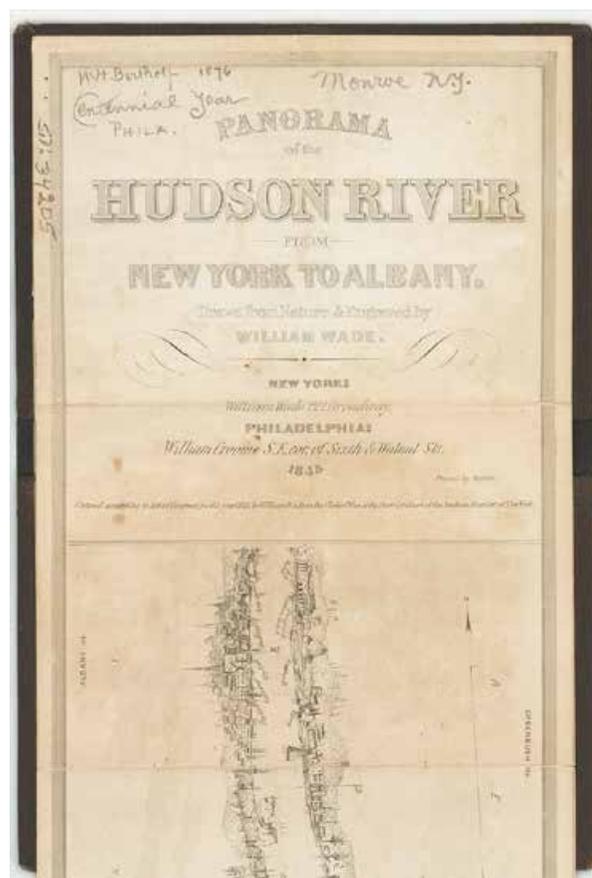


Fig. 3. Cartouche detail. *Panorama of The Hudson River From New York To Albany*, 1845. William Wade, Etching. William Croome, Philadelphia. Courtesy of the MacLean Collection.

Sears describes the development of tourism as an American cultural habit in connection with the wide distribution and increased availability of developing technologies, particularly in photography and printing but principally in literature. "These works both informed Americans of the

nature of these places and encouraged the touristic habit of consuming scenery as a series of views, a habit which would be reinforced later on by the stereoscope and the Kodak,” notes Sears. [5]



Fig. 4. *Panorama of The Hudson River From New York To Albany*, 1845. William Wade, Etching. William Croome, Philadelphia. Courtesy of the MacLean Collection.



Fig. 5. *Panorama of The Hudson River From New York To Albany*, 1845. William Wade, Etching. William Croome, Philadelphia. This detail depicts Albany in the upper portion opposite Greenbush in the lower. Courtesy of the MacLean Collection.



Fig. 6. *Panorama of The Hudson River From New York To Albany*, 1845. William Wade, Etching. William Croome, Philadelphia. Courtesy of the MacLean Collection.

Sears also articulates another important change in perceptions of landscape produced as an effect of steamboat travel. To see the Hudson River, “most tourists who set out to see its scenery did so by steamboat,” experiencing the landscape as a moving panorama. They might also have bought a copy of Wade’s panoramic print or on the Mississippi, Coloney and Fairchild’s *Ribbon Map*. The use of these objects beyond the journey itself was to additionally relive the journey countless times in its retelling, as a personal reminiscence and as a home-based, shared story-telling performance. Wade’s panorama was produced as a concertina book showing the river from Albany to Governors Island, with an accompanying guidebook text that describes locations and details along the way, providing a vicarious experience of the journey as vividly now as it might have for any reader in the 1840s.

It consists of numerous sheets of paper joined together to create the full image. The images are presented to replicate the relative proximity of each riverbank as they might appear facing each other. (Fig. 5) Viewing the book implicates a certain performance of activity in its handling. Traveling or viewing in one direction, say from Greenbush to the tip of Manhattan, the concertina is opened like a book, turning the pages from right to left. Traveling in reverse of

the rivers' flow, the book should be reoriented so that its top is now at the bottom. Beginning at Jersey City with the west bank of the Hudson in view, it follows along to Albany, again proceeding page by page by turning from left to right. The intention in its form is to view the journey a section at a time, in relation to the passing landscape, but it would also be possible to extend the concertina to its full length of twelve feet.

While it precedes the Coloney and Fairchild ribbon map by twenty years, Wade's panoramic print of the Hudson River also predates Henry Lewis's 'great national work' of the Mississippi River by three years. [6] Louis's first trips along the Mississippi River were in 1846 and 1847, [7] with a subsequent shorter journey by steamer in June 1848. Though no record or account of a direct influence exists, it is interesting to speculate if Wade's work inspired Lewis. In all accounts there are evident conceptual, material, and cultural connections between them.

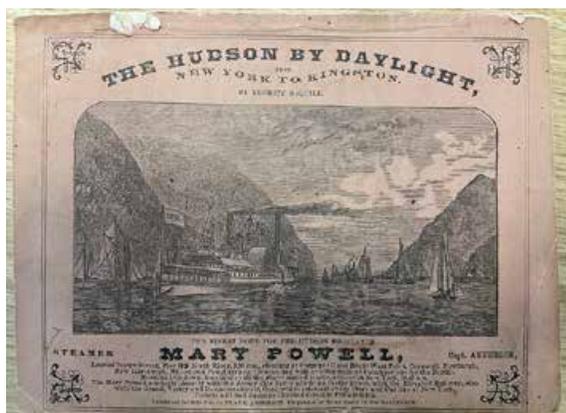


Fig. 7. *The Hudson By Daylight, From New York To Kingston, 1876.* Thursty McQuill. Published by Frank Anderson. Courtesy of the MacLean Collection.

The enduring popularity of publications depicting the Hudson River in particular is accounted for by the subsequent iterations of its representation. There are a number of printed map books, pamphlets advertising the merits of particular steamboat lines, and collections of postcard-like 'views,' all of which were intended for popular consumption. The first photographic image set came into print in 1888. Called the *Panorama of The Hudson. Showing Both Sides Of The River from New York To Albany*, it declares itself to be the "First Photo-Panorama of Any River Ever Published." Produced as a reference book and tourist guide, and compiled from over 800 photographs, this photo-engraving utilizes the same organizational image orientation as Wade's 1845 etching.

A handbill advertisement for the steamship *Mary Powell* from 1876 (Fig. 7) includes a river view illustration that is reminiscent of a moving panorama appearing inside a prosc-

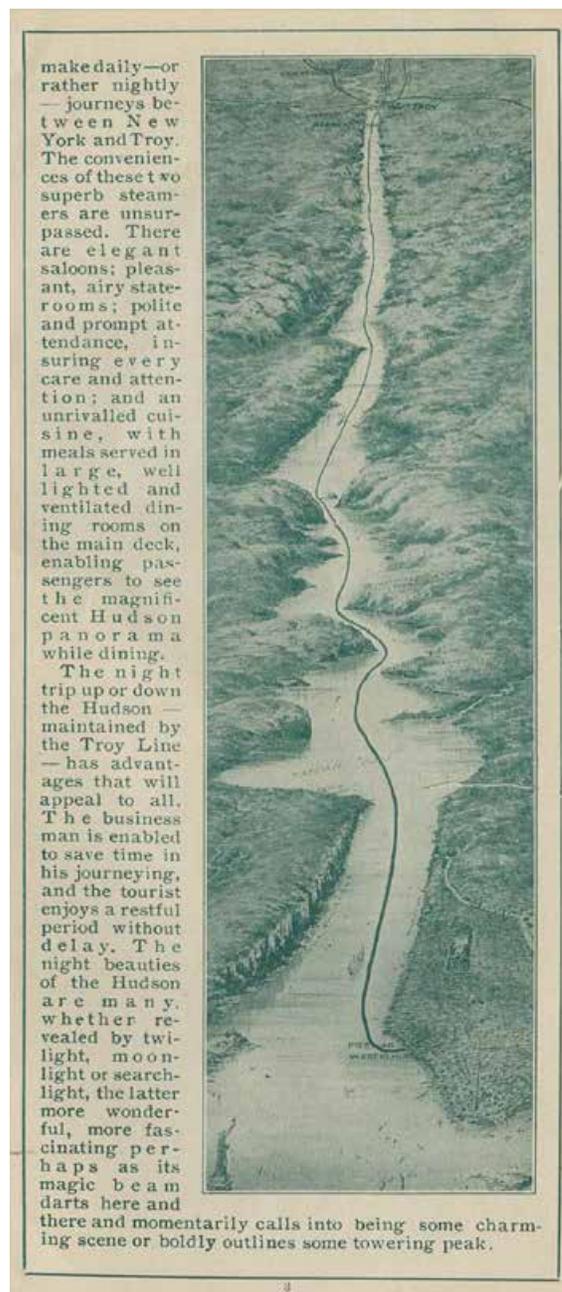


Fig. 8. *Troy Line, The Popular Hudson River Route Between New York, Troy, Saratoga And The North, 1905.* Courtesy of the MacLean Collection.

enium-like frame. Another handbill for the Troy Line, a pleasure and business route, from 1905 (Fig. 8) shows an extended dimensional vista of the entire Hudson Valley from a high vantage point. This is a depiction that applies significant imaginary license and is suggestive of a view from an aircraft or perhaps a hot air balloon.

Pandæmonium, Home of All the Demons

The panoramic form entered popular culture concurrently with the unprecedented growth of mechanical reproduction of all kinds. In a bold and highly effective endeavor to explore the exponential effects of the industrial revolution, Humphrey Jennings's book *Pandæmonium* [8] presents readings on "the coming of the machine" on their own terms. Through the accounts of contemporary written observations between 1660 and 1866, Jennings lays a trail of breadcrumbs leading toward developing not only an understanding of massive cultural change but also an intuitive methodological approach. The period of time in question can be seen to have supported the development of so many technologies with lasting influence up to the present time. This is concurrent with a not-exclusive list of innovations including scroll panorama, cyclorama, immersive taxidermy and museum diorama displays, stereoscopic and two dimensional photography, still and moving film images, and theatrical Panorama performances.

For Jennings, the most applicable method for making sense of such diverse expansions in material applications is to read it as the traces of human imagination. His introduction asserts that, "Imagination is a function of man whose traces are more delicate to handle than the facts and events and ideas of which history is usually constructed." [9] Like Jennings, borrowing from his terms, my intention here is to 'present' rather than 'analyse' objects and artifacts as if they are indeed delicate, and like a trail of breadcrumbs on a path between the scroll panorama and handheld 'ambulatory' [10] digital technology.

Before following this trail of 'things,' I wish to offer a couple of additional lenses through which to look, and in doing so to hopefully avoid the 'methodological fetishism' of sociology, against which Arjun Appadurai cautions in his book *The Social Life of Things*. [11] Reframed by Martin Brückner, Appadurai's questions can be applied for use here as follows: What are panoramic images as things? [and,] What kind of work do they produce? [12]

There is an acknowledged relationship between the rise in popularity of scroll panorama performances in the 1840s and '50s, the growth of emigration and travel from Europe to the American continent, and the subsequent trans-continental flow from east to west. [13] To a large degree these relationships are well explored. Following up on Martin Brückner's suggested reading of mapmaking, as an almost wholly "Eurocentric pattern of knowledge production," [14] it might be added that panoramic modes of representation appear as articulations of power in human relationships with landscape. This idea is perhaps as applicable to moving panoramas, as it is to the equally popular immersive rotunda cycloramas and the concurrent array of museum display dioramas, miniature landscapes

and related museum display prosthetics. [15] These media follow in a longer tradition of mapmaking which Brückner describes as "science in action" because of the way they "mobilize locally collected data," by presenting it "as universal knowledge." [16]

The panoramic form entered popular culture as an array of inventions ready for work, and at this precise time in the nineteenth century, as part of the consolidation of a powerfully mobile Eurocentric cultural imagination, namely the ideological frameworks that became called manifest destiny. [17] Expressed in terms that are directly relatable to a handheld scroll panorama like the *Ribbon Map Of the Father Of Waters*, these are technologies for new ways of looking at, experiencing, performing, and above all possessing representations of space.

Scroll: Noun into Verb

These culturally entrenched practices relate to a range of object-based performances of travel and tourism. The following etymological excursion unpacks these expectations and cultural habits. Delving into Jennings's characterization of industrialization as Pandæmonium, the cultural precedents of panorama making might also be illuminated by examining etymological trails. In a parlance relative to the use of handheld device navigation and app-based experience sharing on social media today, the equivalents are seen in a range of terms and their corresponding physical actions that echo with terminology from mapmaking and of the panoramic too. [18] Visually advancing through a data source is understood as scrolling. As a verb (and an adverb) derived from the noun 'scroll', a precise physical and material origin is visible. What has historically been a tool for the demonstration of knowledge as fact has become part of a range of personal vernacular experiences. The scroll as muscle memory is embedded as a basic ubiquitous human function, as a series of minute performative finger-swipe actions on a touch screen.

Deeper considerations of the etymology of the noun 'scroll' come with distinct material implications. Again, a number of implied and embodied human relationships to material are invoked. In his *Dictionary of Etymology* [19] Walter W. Skeat allies the origin of the word 'scroll' to the word 'shroud'. As a noun it denotes a strip of cloth, "a 'shred' of stuff a piece cut or torn off." [20] And a shroud is also sometimes called as a winding cloth. Skeat offers a subsequent definition of the word scroll simply as 'a roll of paper.' Derived from French and Teutonic roots, and related to the Middle English, [21] 'scrowe' means literally a scroll. This group of words can also be traced into Old French [22] as 'escroue,' and in English as 'a scrowel.' And, "Old Dutch, 'schroode', meaning a shred, strip, slip of paper: allied to shroud (above)." [23] Cloth and winding are distinct material images that carry a number of functions in

this word picture. The winding cloth or shroud bring a conflated image of finality, totality, and lengthiness—a strip (of life) from its beginning to its end. Relatable in addition is the idea of cloth, a woven ‘fabric,’ as a metaphor for a life, simultaneously a single life and that of all human society.

It seems relevant here also to briefly ponder the linguistic origins of the word ‘map’, again as an image of entirety. The ‘Mappa Mundi’ is a cloth map of the world, at once a woven object that is a warp and weft grid and an image of the world. Mappa is the Latin word for ‘napkin’, and Mundi the ‘of the world’. A painted cloth and as another image of the known world in its entirety. Scroll panoramas, like maps, imply a similar excess in their attempt to represent vast space. No human mind is capable of holding such detail, and part of the experience of both maps and panoramas is the importance of the viewpoint and experiential location of the viewer. The work of mapping, and arguably likewise of panoramas, is to facilitate a series of imaginative leaps. Requiring the placing of oneself in the space that is depicted as an active agent, as a performer. There are plenty of precedents for this in landscape painting traditions, but what panoramas do most effectively because of their immersive quality, possibly more so than landscape paintings and conventional maps which project their meaning *authoritatively*, is allow a viewer to project themselves *imaginatively*, with agency and heightened physical sensations, into what is depicted.

Once in the landscape, a performance of an imaginary self can commence, conjuring a sense of dominion over not only the space but over the everyday self. Roland Barthes points to just such self-deception when discussing the birth and popularization of photography. The will to “see oneself (differently from in the mirror): on the scale of History, this action is recent, the painted, drawn, or miniaturized portrait having been, until the spread of photography, a limited possession, intended moreover to advertise a social and financial status.” [24] To apprehend an image of the self in such a self-determined manner, like the self-portrait photograph is the “advent of myself as other: a cunning dissociation of consciousness from identity.” The possession and manipulation of handheld panoramic representations and devices then becomes a totally self-oriented and self-driven experience. The fantasy of dominion that is implied in manifest destiny is placed within imaginable reach.

Going with the Flow

The material, physical, and temporal distances from Henry Lewis’s *Mississippi River Panorama* to the current iPhone generation are vast, but not an inconceivable leap. They both represent human will and demonstrate the capacity for

self-representation. Henry Lewis’s sense of dominion produced a traveling landscape performance innovation, or more directly, his boat trip might now be recognized as prophetic or at the very least an anticipation of, the handheld contemporary vernacular swiping and selfie-making performances of tourists. It is beyond the capacity of this paper to fully map an exhaustive lineage via a range of mechanical media between these two places; exhaustive mapping is perhaps best left to the Victorians. Rather, in following a trail of artifacts in Maclean Collection, a range of mechanical devices have readily presented themselves. Requests to see scrolled, rolled, and rolling maps, artifacts that relate to panoramic landscape representations even obliquely, have produced things that have a utility for illustrating or mediating experiences of landscape and that represent just such individualized progression through space as has been explored above.

A helpful distinction in thinking about map types has been drawn by Martin Brückner, between maps as static artifacts and what he calls “ambulatory maps”; and between items that are made specifically for travel and sources of centralized knowledge. In his own words, Brückner “pursues an interpretive model that, in-stead of approaching maps and cartography as in-stances of science in action, considers them as things in action.” Again, the analogy appears to be appropriate when applied to panoramas. How the scroll panorama made its way from a stage performance into a handheld device might be understood on the one hand as a logical outgrowth of nineteenth century exuberant manufacturing and the ensuing pandæmonium it has produced. But on the other hand, as ‘things in action,’ there is a clear cultural narrative function that relates to self-actualization and popular perceptions of truth.

Panoramas, like maps, are usually accompanied by an implied or actual linear narrative. The aim in both of these forms of landscape representation aligns with an asserted sense of ownership and dominion. Recording, expressing, and possessing knowledge of spatial relationships has a long historically strategic function in mapping. And while in the nineteenth century, for panoramas at least, something very different was at stake, a series of relatable outcomes are in play. When Henry Lewis undertook to record the Mississippi River by ‘floating’ upon it, from the head waters to the Gulf Coast, he had knowingly or otherwise anticipated another category of vernacular traditions in tourism. In very straightforward terms, the ‘River floats’ and ‘Wet-Jet’ experiences are an established part of river vacations. The performative episodic reportage of landscape, with its origins in Europe, through depicting or otherwise describing a sequence of locations, or an alignment of places on a track, has both produced and satisfied the popular imagination. A seemingly insatiable hunger for travel and of gaining experiences in the world aligns perfectly with the aspirations of Philip James de

Loutherberg's 1799 performances of the Eidophusikon, an early example of an immersive landscape experience, self-described as "Representing Nature Under Her Most Captivating Forms, in a succession of moving pictures." First-hand accounts of the Eidophusikon describe the encounter with an array of 'moving pictures representing nature, though without a blink of irony the closing scene grandiosely represents a work of fiction in a depiction of Milton's Pandæmonium. [25] The fluid representational tone in both De Loutherbourg's announcements and in contemporary accounts of its performances perhaps anticipates our own culture of travel and its attendant culture of mass-produced souvenir objects. [26] A will to take possession of the experience of travel has spawned a series of distinct performances of landscape, mediated at great risk sometimes to the personal safety of the protagonist. [27]

Are the *Ribbon Map Of the Father Of Waters* and the iPhone alike? They can both be understood as devices for witnessing the self as other. In relation to mapping history they also produce something that is akin to the possession of the world, through representations of it, alongside collecting curiosities and curios in an enlightenment cabinet of wonder. The contemporary habit of collecting portable images of the self—in the world—and of holding them enduringly in the palm of the hand does suggest a direct relationship between the object-ness of older forms of collecting, and mapping. Panoramic performance forms too seem to relate very strongly to the mass availability of media and technologies that continue to produce landscape representations currently in the popular domain.

Notes

1. Coloney & Fairchild's Patent Ribbon Map. Ribbon Map Of the Father Of Waters. Steamboat Fares Vary from two to four cents per mile. Staterooms and meals included. Gast, Moeller & Co. Lith. Cor. Third and Olive Sts. St. Louis. John George Bartholomew & Son, 1866.
2. See, Sarah Anne Carter, *Object Lessons: How Nineteenth Century Americans Learned to Make Sense of the Material World* (New York: Oxford University Press, 2018).
3. John F. Sears, *Sacred Places: American Tourist Attractions in the Nineteenth Century* (Amherst: University of Massachusetts Press, 1989), 51.
4. Sears, 51.
5. Sears, 51.
6. William J. Petersen, *Mississippi River Panorama: Henry Lewis Great National Work* (Iowa City, Iowa: Clio Press, 1979). Lewis began work on his painting on September 20, 1848, and exhibited its first section in May 1849.
7. John Francis McDermott, *The Lost Panoramas of the Mississippi* (University of Chicago Press, 1958). Lewis's initial journeys were with surveying and geologic expeditions.

8. Humphrey Jennings, *Pandæmonium 1660 – 1886: The Coming of the Machine as Seen by Contemporary Observers*, ed. Mary-Lou Jennings, (London: Andre Deutsch, 1985). Humphrey Jennings was born in 1907 and died in 1950. This collection of 'accounts', published posthumously, represents for Jennings a thirteen year project. Jennings was a film maker, painter, and poet who saw his compilation as akin to a film, presenting a sequence of images that are temporally and culturally connected.

9. Jennings, xxxv.

10. See below. Martin Brückner. "The Ambulatory Map: Commodity, Mobility, and Visualcy in Eighteenth-Century Colonial America," *Winterthur Portfolio* (2011): 141-160.

11. Arjun Appadurai (Ed.), *The social life of things. Commodities in cultural perspective*. Cambridge University Press. 1986.

12. Brückner, 147.

13. See for example, though not to the exclusion of the work of numerous others; Erkki Huhtamo, *Illusions in Motion: A Media Archaeology of the Moving Panorama and Related Spectacles* (MIT Press, 2013). Katie Trumpener and Tim Barringer, eds, *On the Viewing Platform: The Panorama between Canvas and Screen*. (Yale University Press, 2020).; Martin Brückner, "The Ambulatory Map: Commodity, Mobility, and Visualcy in Eighteenth-Century Colonial America," *Winterthur Portfolio* (2011), and previous contributions to the *International Panorama Council Journal*, 2017 to the present.

14. Brückner, 141-160.

15. Exhibition prosthetics: An idea borrowed from Joseph Grigely whose discussions of curatorial approaches includes questioning the boundaries between an artwork and the elements in an exhibition/museum display. His main thesis centers on understanding the nature of that which supports, contributes, and extends the meaning and material consequences of an artwork. See Joseph Grigely, *Exhibition Prosthetics* (London: The Bedford Press, 2011).

16. Brückner, 2011. Martin Brückner supports his discussion by citing Bruno Latour's *Science in Action* (Cambridge, MA: Harvard University Press, 1987), 215–24.

17. See my previous discussion of manifest destiny and panorama heritage: Lowe, N. "Remote Viewing: Panorama narrative, Landscape Experience and Heritage," *International Panorama Council Journal* 4: 98-105.

18. Referring here to the performances of tableaux vivant and other related theatrical interludes from the mid 1700s onwards and specifically to Philipp Jakob De Loutherbourg's Eidophusikon whose performances of the 1780s and after are acknowledged as being amongst the fore-runners of the moving panorama. These theatrical landscape representations align with the date range identified by Humphrey Jennings (1660-1886), above. Also see Erkki Hauhtamo, *Illusions in Motion* (MIT Press, 2013), 93-137.

19. Skeat's *Dictionary of English Etymology*, received its initial publication in various forms between 1879 and 1882.

It has been in print in a range of editions up to the present time.

20. Skeat, 434.

21. English from the thirteenth to the fifteenth century. Walter W. Skeat, *The Concise Dictionary of English Etymology* (Wordsworth Reference, Wordsworth Editions). (1995), xi.

22. From before 1660. Skeat, xi.

23. Skeat, 434. The punctuation and italicization are retained from the 1995 edition.

24. Roland Barthes. *Camera Lucida: Reflections On Photography* (New York: Hill and Wang, 1982), 12.

25. Pandæmonium is the invented citadel and capital of hell in book one of John Milton's *Paradise Lost*. 1667. Huhtamo, 98-99.

26. Huhtamo, 93-137.

27. "Selfie Deaths: 259 People Reported Dead Seeking the Perfect Picture." *BBC News*, October 4, 2018. <https://www.bbc.com/news/newsbeat-45745982>.

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Carter, Sarah Anne. *Object Lessons: How Nineteenth Century Americans Learned to Make Sense of the Material World*. Oxford University Press, 2018.

Grigely, Joseph. *Exhibition Prosthetics*. London: The Bedford Press, 2011.

Huhtamo, Erkki. *Illusions in Motion: A Media Archaeology of the Moving Panorama and Related Spectacles*. MIT Press, 2013.

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McDermott, John Francis. *The Lost Panoramas of the Mississippi*. University of Chicago Press. 1958.

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Maps and artifacts

Coloney & Fairchild's Patent Ribbon Map Ribbon Map Of the Father Of Waters, 1866. Gast, Moeller & Co. Lith. Cor. Third and Olive Sts. St. Louis. The Edinburgh Geographical Institute. Courtesy of the MacLean Collection. (SiD19265)

Hudson River By Daylight 1886 Courtesy of the MacLean Collection. (SiD34388)

Troy Line – Citizens Steamboat Co. 1905. Courtesy of the MacLean Collection. (SiD34389)

William Wade. *Panorama of the Hudson River*. 1845 Courtesy of the MacLean Collection. (SiD34385)

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The Union Square Florist Shop: A Case of Spectral Immersion

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Abstract

We examine the *Union Square Florist Shop* project at the Velaslavasay Panorama as a case study of immersive phenomena presenting a new model for curatorial practice: *spectral immersion*.

Borrowing from the philosophical and aesthetic concepts of hauntology, magical urbanism and unrestored restoration, *spectral immersion* establishes a new category of restoration, curation and presentation that moves beyond simply taking an object back to a former time, but taking it to another dimension in time.

The Union Square Florist Shop (created by Velaslavasay Panorama in 2020) presents a case study with which to outline the fundamental features of *spectral immersion*, which borrows key principles from the panoramic medium: archival research, compressed time, representation of memory, illusions and the sense of place rather than the rote accuracy of the place itself. With *spectral immersion*, visitors are transported to a realm of what-might-have-been, of time folded-in-on-itself to extend an experience of immersion via unconscious paradigms and “spectral” indicators.

Keywords

Hauntology, Window Display, Immersive Art, Floristry, Curatorial Practice, Velaslavasay Panorama

Introduction

“The desire to transform the world is not uncommon, and there are a number of ways of fulfilling it. One of these is by adopting a certain subjectivity, aggressive or passive, deliberately sought or simply the result of a mood, which alters experience of the world, and so transforms it.” [1]

The panorama uses time, perception and space as tools, or perhaps as toys, to produce an illusion of a landscape. There is also an element of eerie entertainment essential to complete the psychical illusion of an immersive, vanishing space. It is no coincidence then that the panorama emerged at the same time as other uncanny constructs of vespers and specters—the daguerreotype, séances, Spiritualism. Perhaps the reason for this is that panoramas can invoke the same surreal mood Hamlet felt when visited by the specter of his deceased father: “the time is out of joint.” [2]

Panoramas depict architecture that speaks and as panorama enthusiasts we are accustomed to observing the passing of space as though space itself were a canvas, advancing forward through landscapes that are constantly being rewritten, through architecture that bares the marks of both history and the future. This paper examines a project called *Union Square Florist Shop* which uses the role of the *flâneur* and the phenomenon of place to depict, as Patrick Keiller describes, an “historical palimpsest and/or an exposition of a state of mind,” [3] a time-out-of-joint mood. This mood is essential to what the writers are calling: *spectral immersion*, a form of curation, presentation and restoration that can be utilized in the exhibition of a panorama, as demonstrated by the Velaslavasay Panorama.



Fig. 1. *Union Square Florist Shop*, Evening Façade at Velaslavasay Panorama, 2020. Photo: Forest Casey.

A Glimpse of the *Union Square Florist Shop*

It was a dark and lonely night. We were under the thumb of an invisible oppressor, an ethereal force that shut down cities, emptied freeways, shuttered businesses and kept us locked in our homes, in our cars and in front of our computers for days on end. The year was 2020 (it is fairly obvious what we are referring to, but for posterity we will state), the oppressor was COVID-19.

To break the mundanity of life inside spaces—digital rooms and physical ones—I went for a walk like a modern-day *flâneur*, a wandering daydreamer with a camera phone.

The dark grey sky matched the asphalt and sidewalk until I happened upon a place as if it were out of a dream. A green building with white and amber neon shining through a haze of fog, adorned with lots and lots of flowers. I could hear a scratchy radio playing discordant ballroom music and when the fog began to part, figures appeared through the shop window, lit with a warm glow. A woman in flowy chiffon answered a rotary phone with one hand while spritzing mixed bouquets with another. It appeared as though beyond the shop window was another time, some point in the 1960s perhaps, not now but not really then, either.



Fig. 2. *Union Square Florist Shop*, view from spectator perspective, 2020. Photo: Forest Casey.



Fig. 3. *Union Square Florist Shop*, Dusk Façade at Velaslavasay Panorama, 2020. Photo: Forest Casey.

Other passersby, masked and anonymous, appeared and watched from the sidewalk, transfixed by whatever was happening on *the other side*, which seemed to be changing. Unknown figures would emerge in the window with a new set of purpose—floral arranging, taking orders, sweeping up and typing documents. The activities created a sort of moving still life, vignettes that suggested a narrative without producing a story. Banners on the building’s facade advertised flowers, but the marquee and neon implied it was, at some point in the past or future, a theater. I noticed a letterpress sign on the door that had a phone number,

which I dialed and heard a curious pre-recorded phone message beginning with the static sounds of landlines past. The message consisted of generic information about the *Union Square Florist Shop*, such that it was established in 1937 and boasts about its floral headdresses, with scratchy mood music in the background similar to what was playing on the radio under the marquee.



Fig. 4. *Union Square Florist Shop*, sidewalk viewers in fog, 2020. Photo: Forest Casey.



Fig. 5. *Union Square Florist Shop*, detail of lobby installation, 2020. Photo: Forest Casey.

A young man in a white car pulled up to the sidewalk and noticed the marquee advertised KFLOR, AM 540, the official radio station of the *Union Square Florist Shop*, broadcasting from the roof of the theater. When he tuned to the station the same music played. Near a pink window that seemed to look into a poker room, I found a table on top of which sat a stack of the *Floral Syndicate Society Gazette*, an amateur newsletter for the floral trade with promotions advertising the *Union Square Florist Shop*, tips and tricks for floral care and flower-related news.

It seemed like the various components of the place were referring to each other, reflecting each other and in the process adding a layer of distortion that both confused and illuminated. The more I stood there watching the woman in pearls and white gloves arranging her flowers, the less I seemed to know and yet somehow it all felt very familiar.

Then, a figure which I recognized from *the other side* approached me on the street. He was in a muted suit and matching fedora with a small notepad and pen. He asked me if I knew of the whereabouts of Gladys Chantrelle Peckinpah, whom I had just moments before read about in the gazette. And then he was gone again, behind the glass and seemed no longer able to see us, the invisible spectators, the unseen seers.



Fig. 6. *Floral Syndicate Society Gazette*, 2020. Photo: Forest Casey.



Fig. 7. *Union Square Florist Shop*, “reporter” character who appeared behind the glass and on the street, 2020. Photo: Forest Casey.

What is Spectral Immersion?

To understand the function of *spectral immersion*, it is helpful to briefly describe three concepts that examine media theory, architectural theory and aesthetic practice; hauntology, magical urbanism and unrestored restoration. All three concepts point to an abstraction inherent in the panorama: not here and not now. [4]

Hauntology

The panorama functions to virtually mobilize spectators through a distortion of space and time. This distortion is

mirrored by hauntology, a concept which hinges on a crisis of space and time. It describes things that move beyond real historical time and, as Jacques Derrida puts it, “marks a relation to what is no longer or not yet.” [5] As a concept, hauntology was first mentioned by Derrida in his construction of how specters work in Marxist theory of capital, and then was applied to music, film, television and literature in the 1990s by Mark Fisher and others. Specters and haunts are the foundation of hauntology and point to the mysterious relationship between ghosts, place and time. As Fisher explains, a haunting “happens when a place is stained by time, or when a particular place becomes the site for an encounter with broken time.” [6] Hauntology moves beyond this into the erasure of history, the non-places of consumerism and the foreclosure of the future, but for the purposes of this paper we will keep focus on the schism of time and place.

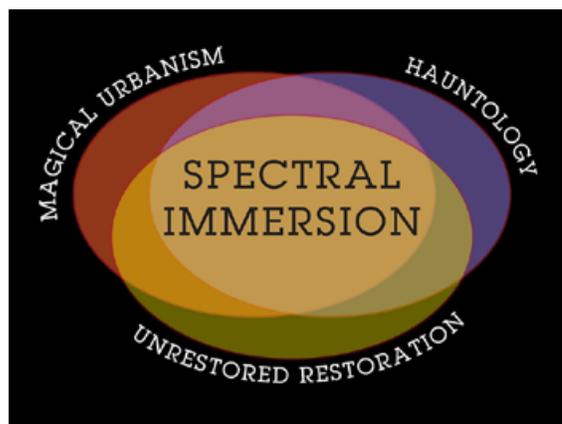


Fig. 8. *Spectral Immersion Diagram*, 2021. Concept & Design: Sara Velas and Ruby Carlson.



Fig. 9 *Union Square Florist Shop*, Van-Shire Florist, Wilshire Boulevard, Velaslavasay Panorama Hauntological Façade, 2021. Collage: Sara Velas.

Magical Urbanism

What is unseen but somehow felt is essential to the magic of the panorama, especially in its relation to controlled light, and is connected to other optical devices such as the magic lantern, which was so often used to project ghostly apparitions. Magical urbanism is a mode of architectural

theory that Thomas Mical describes as “atmospheres charged with obscure possibilities.” [7] Again, the hauntological indexing of *what is no longer or not yet* arises, but this time in relation to how a space manipulates the unseen. Mical writes, “this friction, between sense and the invisible, animates a charged space and subtle surface tensions of object-positioning within a ‘magical’ space. This space is not technically hinged between objects, but blurred, a fusion between the sensible and suprasensible realms as they encounter, intersect, and interrupt one another. This magical space is the co-mingling of the physical, psychical, and metaphysical.”



Fig. 10. *Union Square Florist Shop*, visitor in the fog, 2020. Photo: Forest Casey.



Fig. 11. Mole-Richardson Spotlight, 2021. Photo: Velaslavasay Panorama.

After the *Union Square Florist Shop* occurred, the Velaslavasay Panorama made a request for participants to leave voice messages commenting on their experience. The majority of messages shared a common note: the splendor of the fog. A fog machine was placed between the rafters of the marquee and flooded the area in front of the lobby glass with a thick cloud of ambiguity. For Mical, “the cloud, the fog, and the blur are the frequent modernist avatars for what is barely perceived but has no causal rational sense – clouds evoke sense and wonder (Rilke), but a sense-without-reason, the mist of pre-reflective consciousness...Though categorically distinct, these vaporous (dis)figures share

many of the characteristic attributes of the ghost.” [8] For the curators of *Union Square Florist Shop*, the fog was a symbol for a transition to uncanny reality, a *surface tension* for entry into a magical space. The fog was also a tool for optical control, along with a vintage motion picture spotlight that served as the main light source, which at times was adjusted to mark shifts in the tableaux. The motion picture light (a Mole-Richardson, which has been a staple of the film industry since 1927, in this instance a 1000 W. 6” Baby Cool Redhead® Solarspot) set the stage, so to speak, illuminating the lobby with its signature warm tungsten glow in a way that commanded the gaze of passersby.

In one voice message, a participant commented on enjoying the extended time spent lingering outside the building, taking note of architectural flourishes that had gone long since unnoticed. [9] This is a direct reflection of magical urbanism’s goal that “architecture and magic conspire to adjust sensibilities.” Mical writes, “...the eruption of magical urbanism gives us an everyday alterity, pulsing with the opportunity to design spaces of encounter as ‘everyday magical’ (as in the introjection of a Buñuel-like dream-sequence—an unexpected architectural prestige-maneuver that stages the architectural frame as a curtain between possible worlds).” [10]

Unrestored Restoration

Born from the limited capacity of economic resources, a fascinating equation arises amongst artists and artisans of various mediums: need minus money equals sublime creation. An aesthetic practice within the domain of historic restoration, unrestored restoration brings an object back to another dimension in time, in an all-possible-worlds sense, while intentionally preserving or recreating the erosion of time.

The neon marquee, one of the central features of the *Union Square Florist Shop*, serves as an example of this practice. The Union Theatre, home of the Velaslavasay Panorama since 2004, is a purpose-built movie theatre constructed in 1910, at a time when neon had not yet hit the mainstream in Los Angeles. The theatre had no neon in its original manifestation, but when the Velaslavasay Panorama moved in, Founder and Artistic Director Sara Velas decided to replace and augment the neon that was installed in the 1930s as part of the marquee refurbishment. Instead of restoring the marquee back to any phase of its “original appearance” (impossible as no pictures of the theater have surfaced from before the early 2000s) the façade was reimagined with historically-minded neon and streamline moderne painted stripes. The eye-catching nature of the façade redux-combined with homages to the Velaslavasay Panorama’s founding location on Hollywood Boulevard—including the original glowing orange ball —

continued an architectural philosophy very much in place in Los Angeles' first half of the twentieth century. Preserving this sentiment and enforcing the "Velaslavasay Spirit" was the focus rather than restoring what was solely historically accurate (which was impossible anyhow).

Immersion Devices of *Union Square Florist Shop*

Spectral Immersion uses hauntological time to blend archival past with the present and possible futures. The immersion extended beyond experience of the on-site project to reach participants in other places at other times, including the distant future, through devices that are rooted in archival research and lingering echoes of our shared cultural past. For the *Union Square Florist Shop*, the *Floral Syndicate Society Gazette* was created as a physical and shareable manifestation of the project, as were the sounds of K-FLOR radio and the Florist Shop's telephone answering machine message.



Fig. 12. *Floral Syndicate Society Gazette* – January 2021. Design & Photo: Sara Velas.

Floral Syndicate Society Gazette

The *Floral Syndicate Society Gazette* (FSSG) remixed elements of floral trade magazines and catalogues from throughout the twentieth century including *Florist's Exchange and Horticultural Trade World*, *The American Florist* and the Los Angeles based *Bloomin' News*. The Gazette drew on additional archival references from local newspapers including the *Los Angeles Sentinel*, an African American owned and operated newspaper (established 1933), the *Los Angeles Times* (founded 1881), and the no-longer-extant *Los Angeles Herald Examiner* (final publication 1989). The first iteration of the FSSG was a simple black and white four-page newsletter available for visitors during the performance nights of the *Union Square*

Florist Shop (September 17-20th, 2020), serving as a tangible memento of the ephemeral evening experience, and featured archival articles mixed with fictitious gossip and reports. The ads in the FSSG were as important as the articles. They pointed to a way of commerce long since past and, in the contemporary consciousness of the pandemic, signaled a society barred with the continued extinction of small businesses.

The second edition of the *Floral Syndicate Society Gazette* took the first edition to new heights. A 12-page color printed newsletter featured news items, the five-day forecast, book review, tips and tricks, cartoons, short stories, a classifieds section, paranormal reports and an excerpted essay on rotational architecture in Southern California. Again, ads were a prominent feature and this time innovative localities were included, such as Zorthian Ranch, the Center for Land Use Interpretation and Rubel Castle, singular sites that deal heavily with archival material and the landscopic history of the greater Los Angeles region. FSSG #2 was sent to the Velaslavasay Panorama's mailing list of over 3,500 postal addresses and hand delivered to floral and non-floral businesses in and around the city. In designing FSSG, a conscious decision was made to make ephemera for the future with design language from eras past, displacing the creation date to the hauntological zone of *not here and not now*. The collage approach in the FSSG of disintegrative archival material mirrors The Caretaker's music, considered an emblem for hauntology and discussed in the next section.

KFLOR Radio and the Answering Machine

Including radio signals in the *Union Square Florist Shop* was important from the beginning. The curators devised the project as an experience mainly encountered by car, the modus operandi of isolated singular life in Los Angeles (especially during the pandemic). Amateur radio fit within the general landscape of the 1960s, the timeframe the project was dreamed to be set in. The question of music, archival sounds and sonic texture was a way to envelop participants in the world of the dream, to immerse them in an audio environment that is only heightened by the spontaneous interjections of the surrounding city. A week before the *Union Square Florist Shop* opened in September 2020, collaborator and cartoonist for FSSG #2 Mavis Figuls shared the album *Everywhere at the End of Time* by The Caretaker, a concept album that imagined music that might be playing at the Overlook Hotel in Stanley Kubrick's 1980 film *The Shining* and a meditation on the depiction of the progression of Alzheimer's disease in the mind. [11] The haunting tones of the album distorted and echoed ballroom, early jazz and dancehall standards of the late 1930s and early 1940s, adding an extra layer of static and disintegrating fuzz that points to the timeworn status of the

music, as if the more these sounds get repeated and reused to index the past, the more they break down and indicate an impossible future. Unbeknownst to the curators at the time, *The Caretaker* is the epitome of hauntology as a musical genre according to Fisher. As the *Union Square Florist Shop* sampled *The Caretaker*, *The Caretaker* had previously sampled unknowing artists including the jazz standards of Al Bowlly and Russ Morgan. Between *Caretaker*'s resampled songs such as *It's Just a Burning Memory* and *Misplaced in Time*, were archival station identifications for 540 AM, recalling the forgotten past of the frequency itself, foley sounds of scissors and spray bottles and other accoutrement and recordings of floral-related news and quotes from floral publications.

The transmitted radio recording was on a 40-minute loop that played on an AM radio hidden underneath the marquee. The recording was then excerpted and mixed with an audio message for participants that called the *Union Square Florist Shop* phone number (+1-213-268-4495) as another means to extend the experience to those who were and were not able to visit in person. The use and manipulation of these everyday devices (answering machine, radio and the postal service) fused with surrealist elements (*The Caretaker* music, articles of a fictitious past, the hum of a VHS machine mixed with foley sounds of a small group whispering), was a method of magical urbanism at work to bring a level of uncanniness to the structures of ordinary life.



Fig. 13. Lobby Tableau, *Union Square Florist Shop*, 2020. Photo: Forest Casey.

Surreal Inspiration

In the book *Window Shopping* writer Anne Friedberg makes a connection between the way the panorama transports a spectator (“...bringing the country to the town dweller, transporting the past to the present.”) [12] by way of an imaginary illusion of mobility, to the flâneur (Friedberg quoting Walter Benjamin: “In the panoramas the city dilates to become landscape, as it does in a subtler way for the

flâneur.”) and finally to the flâneuse “...whose presence in urban space is equated with the lure of the commodity.” [13] Friedberg writes, “In this imagery, the woman is almost a shop mannequin...it was as a consumer that the flâneuse was born.”

On June 10, 1960 “The After Hours” aired, the 34th episode of *The Twilight Zone*, which told the story of “Miss Marsha White on the ninth floor, specialties department, looking for a gold thimble.” The ninth floor is completely empty except for one salesperson who is selling one gold thimble and the confusion of this anomaly makes Miss Marsha White hysterical until she realizes that she herself is a store mannequin. At the end the narrator summarizes the tale, “Marsha White, in her normal and natural state, a wooden lady with a painted face who, one month out of the year, takes on the characteristics of someone as normal and as flesh and blood as you and I. But it makes you wonder, doesn't it, just how normal are we?...A rather good question to ask, particularly in the *Twilight Zone*.” This surreal episode served as a prime inspiration for the mood, time period and aesthetics of the *Union Square Florist Shop* and became a representation of the bizarre experience of lost time in twenty-first century consumerist society in the form of a hand painted advertisement with Miss Marsha White donning a corsage, hung on the façade of the Union Theatre.



Fig. 14. *Custom Corsages Available*, painted banner for Union Square Florist Shop, 2020. Photo: Forest Casey.

The aesthetics of defunct or waning flower shop storefronts also served as inspiration. Archival images of floral shops, particularly images from the 1990s or later showing flower shops that opened around the 1960s, recalled a bygone era of small businesses offering everyday delights that have become obsolete by virtual shopping. As Friedberg writes, “...whether or not life in the public realm diminishes, electronic flânerie further turns spaces into their virtual replacements.” In metropolis' like Los Angeles florist shops are disappearing and becoming ghosts of their former glory, relegated to the entrance spaces of grocery stores or websites full of stock bouquet imagery. Past

images capturing the glow of flower shop storefronts at night now signify the hauntological conviction: "...a foreclosed sense of the future, where the only imaginable option is a turning back onto the past." [14]

In a larger sense, the window-shopping experience is equated with the tableau of spectatorship and the storefront as a site for gazing, as if it were a painting. The shop



Fig. 15. *Union Square Florist Shop*, ante-room, 2020.
Photo: Forest Casey.

window becomes a psychological canvas for dream or fantasy projection, similar to a painting and also to a cinema screen. One of the most iconic American paintings of all time, [15] *Nighthawks* by Edward Hopper, commands the same sort of looking, the same voyeuristic gaze utilized as the *Union Square Florist Shop* and highlights a connection between the function of the gaze in cinema. Film Director Wim Wenders is quoted as saying that the reason why Edward Hopper appeals to filmmakers so much is because "You can always tell where the camera is." [16] In his 1997 film *The End of Violence*, Wenders recreates Hopper's *Nighthawks* in a film within the film. This pointing to the past through the lens of cinema is a recurring aspect of hauntology, which programs spectators to look at things in a certain way, much like the panorama commands a way of looking.

The Loose Script

During a dress rehearsal for *Union Square Florist Shop*, the curators filmed what could only be described as b-roll, supplemental or alternative footage, for a film that never existed. Although the project was not conceived as a cinematic/filmic/linear narrative production, the aesthetics of the storefront-as-stage were envisioned as a set of film noir fragments as well as a dramatic study for a singular painting. The gaze of the spectator was constantly being related to the glimpse of a film, so a script of action was created that crafted not a narrative, linear story but a series of concepts, as if for a painting full of narrative potential or a scene filmed from a never-completed movie. The loose script included film noir conventions, such as "dirty

accounting," "cat burglar," and "poker." These scenes pointed to the underbelly of what on the surface appeared to be a *normal* flower shop. After the *Union Square Florist Shop* project closed, the footage taken during the rehearsal was used to create another permutation of the project that could be shared with audiences not physically present. Rather than a straight documentation of the event, it is an ancillary experience of the non-place, in the non-time and very much so a non-film.

Conclusion

It is important to note that *spectral immersion* and its component concepts of hauntology, magical urbanism and unrestored restoration arose out of a necessity to contextualize what took place at *Union Square Florist Shop* and what has been taking place the Velaslavasay Panorama over the past 20 years. The writings of Mark Fisher and Thomas Mical came to the curators in the weeks after the project was "finished." In explaining the what and why of the project, resonances to other works started to take shape, such as Hopper's *Nighthawks*, Nabokov's *Ada or Adore*, Tanpinar's *The Time Regulation Institute* or David Lynch's *Inland Empire*, all of which pointed to a sense of broken time, or as Chris Petit puts it in the 2010 landscape documentary *Content*, "reversing into a tomorrow based on a non-existent past." [17] The writers will continue researching, exploring and outlining *spectral immersion* and how it relates to other cultural institutions in Southern California, pointing to a very real and identifiable theory of panoramic presentation.

Notes

1. Keiller, *The View From The Train*, 9. In 2007 Patrick Keiller served as keynote speaker for an IPC Conference held at Yale in New Haven, Connecticut, USA.
2. William Shakespeare *Hamlet* by way of Jacques Derrida *Specters of Marx* by way of "What is Hauntology" by Mark Fisher, *Film Quarterly* [University of California Press], 2012.
3. Keiller, 11.
4. Carlson and Velas detail the elements of *Spectral Immersion* as applied to the *Union Square Florist Shop* in their video presentation for the 30th IPC Conference. See link: <https://panoramaonview.org/ipc2021video>.
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15. "10 Most Iconic American Paintings," *BeFront Magazine*, July 4, 2016.
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Author Biography

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Sara Velas is an artist, graphic designer, gardener, curator and native Los Angeleno. She is the Artistic Director and Co-Curator of the Velaslavasay Panorama, a nonprofit museum and garden she established in the year 2000 to present variations on art forms and entertainments popular before the invention of cinema along with experimental immersive experiences. Her work with the Velaslavasay Panorama has been supported by the Andy Warhol Foundation, National Endowment for the Arts, and the LA County Department of Arts & Culture, among others. An active member of the IPC since 2004, she currently serves as Co-President. Born in Panorama City, California, she received her BFA in Painting from Washington University School of Art in Saint Louis, Missouri in 1999 and resides in downtown Los Angeles.

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Following Battle after Battle: Henry Darger's Panoramic Tale

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Abstract

American self-taught artist Henry Darger (1892-1973) penned and illustrated an epic saga of make-believe warfare known as *In the Realms of the Unreal* (c.1911-1970). Totalling over 15,000 pages, this story is accompanied by over 300 paintings on paper along with an archive of fabricated documents. Many of the paintings depict panoramic landscapes that showcase raging battle scenes and approaching storms. This paper contends that Darger embraced the panorama as a visual format and immersive storytelling device that he exploited in both his imagery and prose. Infinite horizons in Darger's art fabricate an imagined world big enough to hold a tremendous amount of detail. Likewise, turbulent vistas lend themselves to depictions of bloody military battles and weather patterns replete with implied movement and latent danger. Furthermore, written passages from his epic disclose a yearning to construct a sensation akin to travel through excessive details and all-encompassing views. Notions of time, space, and immersive engagement conflate in such passages as: "Let the reader follow battle after battle...let him follow every event and adventure in this volume and then he can if he sets his mind and heart on it take on as if he himself was an actual participator."

Keywords

Henry Darger, outsider art, panorama, Realms of the Unreal, battles, horizon

Introduction

American self-taught artist Henry Darger (1892-1973) penned and illustrated an epic saga of make-believe warfare entitled *The Story of the Vivian Girls, in What is Known as the Realms of the Unreal, of the Glandeco-Angelinnian War Storm, Caused by the Child Slave Rebellion* (hereafter as *In the Realms of the Unreal*) (c.1911-1970). [1] Totalling over 15,000 pages, this tale about an imagined world of warring nations is accompanied by 300 paintings on paper along with an archive of fabricated "documents"—a trove of fictional casualty ledgers, drawings of military regalia, and hand-made maps—each further elucidating his story. Many of the paintings are double-sided and depict panoramic landscapes that showcase raging battles and approaching storms.

Darger spent approximately twenty years writing *In the Realms of the Unreal* and nearly five decades creating artworks referencing its story. The fictional narrative of his

opus describes holy wars between practitioners of child-slavery—the satanic nation of Glandelinia—and the abolitionist Catholic kingdoms united under Abbieannia. In this mythic saga, the Vivian Girls, seven young Abbieannian princesses become the catalyst for insurrection and subsequent liberation of millions of indigenous, child slaves. Set on an unnamed, imaginary planet, the narrative describes, with journalistic detail and cyclic repetition, battle scenes, acts of martyrdom, storms, and cataclysmic fires. The conclusion of Darger's story remains unclear. Scholars note one finale celebrating the eventual triumph of the Vivians and their allies, while another storyline asserts the continuance of the battle and thus, the yet-to-be-written ending. Unbound later volumes and unpaginated sections add to this ambiguity. [2]

Darger embraced the panorama as a visual format and immersive storytelling device that he exploited in both his imagery and prose. As a result, several passages from his epic narrative disclose a yearning to construct a sensation that is akin to what scholar Alison Griffiths has called, "revisitation," or the witnessing again of an event that has taken place in a different time and location. [3] Darger prepares the reader for such a spectacular journey in one introductory paragraph:

But the reader, if he so wills, may keep his eye on all scenes that follow each other on and along the Aronburgs Run and its valley, for the final drama of the war will occur at or on the banks of the Aronburgs Run where the final ending of the hopes of successes for Glandelinia will ensue ... Let the reader follow battle after battle with the others, let him follow every event and adventure in the volume and then he can if he sets his mind and heart on it take on as if he himself was an actual participator. [4]

This investigation into Darger's panoramic mode of representation reveals his familiarity with this convention through an examination of his work and source material that he studied and replicated. From a wealth of cultural sources, Darger gleaned common panoramic tropes and conventions, namely those relating to physical relocation, perspectival illusionism, and expressions of immensity.

Witnessing Battle Scenes

Darger went to extraordinary, arguably obsessive, efforts to tell his story in both word and image. Concerned with establishing accuracy in his fictional tale, he created an extensive visual archive by assembling files and scrapbooks of clipped newspaper articles, magazine photographs, and comic strips, among other pop culture sources. This ephemera provided real and fantastic images of fires, explosions, cloud formations, soldiers, flora and fauna, architecture, and most importantly, little girls—the brave protagonists of his story. Along with this material, Darger’s imagery grew from compiling addenda on warfare and imperialistic regalia—hundreds of drawings/collages of flags, soldier’s uniforms, and weaponry—appropriated from popular culture sources and amended by his hand. Newspaper coverage of World War I and II, as well as, reports on the Spanish Civil War and commemorative pieces on the centennial of the American Civil War provided rich sources for historicized militaristic adornment and weaponry. While some resource material is fully colored and naturalistic, Darger oriented his collecting efforts towards graphic and stylized black and white imagery that could be easily transferred into his fictional world. Tracing became Darger’s essential tool for artmaking. This method of drawing coupled with an extensive trove of stock images allowed for a seemingly inexhaustible amount of recursive and reworked material to fill his paintings.

With so much visual information to offer, Darger turned toward a panoramic vision to articulate his opus. Readily available in twentieth-century American mass media, panoramic imagery served as a popular visual standard for illustrating battles, ruins, and majestic landscapes. One example from Darger’s collection, an article from a 1961 edition of the *Saturday Evening Post*, illustrates clashing lines of Union and Confederate cavalry. The troops’ formations recede along a diagonal track that begins in the lower left and extends to the upper right. In the far distance, lines of infantry hug the shape of rounded hills. The depiction of cropped bodies in the foreground along with the lack of framing devices on either side of the scene add to the illusion that this is a detail of a larger military skirmish.

In contrast, Darger’s renditions of military conflicts appear much less orderly. Furthermore, they reveal his desire to amplify an impression of being transported to a particular moment and place. Spilling beyond the containment of the immediate scene, *At battle of Drosabella-maximillan. Seeing Glandelinians retreating Vivian girls grasp Christian banners, and lead charge against foe* depicts the heat and intensity of warfare. In the foreground, six of the story’s protagonists—the Vivian girls—run with their nation’s flags and urge troops to pursue

their enemy. One looks backwards while defiantly raising a banner that ripples in the wind. Dead soldiers litter the foreground. Others recede into the background as they march on in waves of violet-blue, yellow, and red. The farthest troops appear as small slashes and dots of color. Explosions, flying shrapnel, and tiers of rising smoke pepper the distance.

Without the conventions of compositional framing devices or an outer physical frame, the viewer finds visual footing on the horizon line while being immersed into the dimensional illusionism produced by small vignettes of animated bodies and an endless vista. As a result—and in spite of the scene’s simple, traced visual elements—Darger succeeds in eliminating boundaries between the viewer and his depicted battle. He invites us to “follow” this battle while producing a momentary sensation that we are witnessing this scene.

Likewise, Darger also thrusts the viewer into a battle in 2 *At Cederine She witnesses a frightful slaughter of officers*. Its caption announces that a little girl—perhaps a surrogate for the viewer—observes a horrific event. However, she is hidden amongst the plumes of gunfire and fighting soldiers. The scale of this scene (over six feet long), its detail, and slight aerial perspective encourage the viewer to employ an active eye to find her.

Stormy Horizons

While these two battle scenes reveal Darger’s love of depicting action, danger, and even death, his collaged inclusion of Martin Johnson Heade’s *Thunderstorm on Narragansett Bay* suggests his penchant for infinite scenes awash with sublime natural forces. Although many scholars would argue that Heade’s intimate landscape is not a strong example of a panoramic scene, nonetheless, this painting does skillfully manipulate spatial dynamics and evokes portentous mood. An amorphous storm emerges via the horizon, a mysterious site signifying endless space and incalculable measurement. The blackened sky sustains a palpable tension, the presence of danger, slowing building, and becoming.

Darger seamlessly incorporates the Heade reproduction into his art as an exterior view in the image with the caption, *At Jennie Richee. While sending warning to their father watch night black cloud of coming storm through windows*. Presenting *Thunderstorm on Narragansett Bay* as a window to the exterior world, Darger affirms this painting’s realistic, atmospheric power. The *mise-en-scène* of girls before windows, watching and waiting, informs the viewer’s perspective exposing Darger’s theatrical staging of picturing a picture, re-presenting a representation. Soldiers and storms within *At Jennie Richee* equally remind the viewer that the Realms are at war. Scholar David Miller argues that paintings of approaching storms, especially

those by Heade and his mid-to-late nineteenth-century contemporaries, bear anxieties concerning the Civil War. Through stormy imagery, Americans confronted “the helplessness of humanity before uncontrollable natural forces,” resulting in a realization of, “the precariousness of civilization in a world in which traditional meanings are jeopardized.” [5] Such moment-to-moment temporality equally sets the tempo of Darger’s paintings as his rolling, panoramic landscapes usher in and out battles, thunderstorms, and firestorms.

Suspenseful anticipation aligns with infinite horizons in Darger’s panoramic landscapes as a means, to fabricate not only an imagined vista big enough to hold a tremendous amount of detail, but also to build a sensate expanse implying time and metamorphosis. Consider for example, this passage from chapter fifty-nine of *In the Realms of the Unreal*, entitled “A View Before Gautamula. A Grand Panorama of Activities”:

There was probably no one in the world who ever had the opportunity to gaze upon such a grand and magnificent scene as which was spread out before the vision from the summite (sic) of Gautamula ridge that bright early June day, 1913. Where ever you could look, from front, to rear, from left to right, the valleys stretched away in expanses of beautifully colored fields, and orchard and groves, and forests. And the very air was laden with the perfumes of all various spring flowers and of grasses, fresh pine and of fruits...And through this fine setting of scenery in Northern Angelinia state passed an unusually magnificent panorama. If one looked down from the heights he could observe something long and gray following like the long windings of a snake, the meanderings of numerous roads, and thither to left and right up hill, and down dale, in sunshine and shadow, and this long line of gray, was tipped with shining steel, and threaded its way, a long serpent one reads of in fairy stories of old, here and there...the bright brass of the cannons alternating with the dull color of the steel bayonets. And then away in the background and alongside of the marching army rising and falling with hill and valley outlined against the bright green of the field and wood, or the clear blue sky the long wagon stretched out...[6]

Note the manner by which Darger describes the whole valley while weaving back and forth between the expanse and the detail, the general and the particular. He stuffs the scene full with palpable descriptions: perfume-laden air, fresh pine, snaking movement, bright brass and dull steel. From this fluid narrative, a troop of soldiers emerge, first appearing in the distance like a giant serpent, and, then, slowly turning into marching lines of gray-garbed men, their steel weaponry glinting in the sunlight. Darger explores a

boundless and expansive view, gradually offering a plethora of sights, textures, and smells. Here, Darger employs a panoramic scene as a schema for imagining. He strives to provide enough detail and phenomenological sensation to eliminate the distance between his fictitious world and the space of the reader. The level of minutiae in Darger’s text asserts that nothing is of irrelevance. His world is being delivered to a reader in its completeness, its vivid reality.

Conclusion

Throughout his visual art and writings, Darger molds the viewer/reader into a persistent, surveying eye. In word and image, his art speaks the vivid language of panoramic representations and possibly cycloramic entertainments. While there’s no definitive evidence connecting Darger’s art to cycloramas in Chicago, it is important to note that during his childhood, six were exhibited downtown: *The Battles of Gettysburg and Shiloh*, *The Confrontation of the Monitor and the Merrimac*, *Jerusalem and the Crucifixion*, *The Siege of Paris* and two variations of *The Great Chicago Fire*. [7] The largest version of the Fire, in particular, signals the height of the city’s cycloramic enthusiasm in 1892, prior to the World’s Columbian Exposition, and marks its demise after being sold in 1913 (when Darger was twenty-one). [8]

Cycloramic themes pertaining to historic battles, Christian piety, and fiery conflagration would have certainly appealed to Darger. It is very likely that he was drawn to the visual drama and hyperbolic rhetoric of such entertainments and may have even read about them in the newspapers. However, while much remains unknown about the possibility of cycloramic influences on Darger’s art, it is clear by the images that he collected and modified that panoramic formats informed his work. Written passages from *In the Realms of the Unreal* disclose a yearning to construct a visage that describes expansive, all-encompassing views and feelings of revisitation. Likewise, works such as *At battle of Drosabella-maximillan...* and *At Cederine...* underscore a shared visual vocabulary. Although modest in materials, the resulting paintings deliver their own form of cinematic intensity that aligns Henry Darger’s art within a larger cultural dialogue encompassing panoramic representation.

Due to licensing restrictions, images of Henry Darger’s art can be found at the American Folk Art Museum’s website: <http://collection.folkartmuseum.org/search/henry%20darger>

Notes

1. For approximate dates of Henry Darger's production see Michael Bonesteel *Henry Darger: Art and Selected Writings* (New York: Rizzoli Press, 2000), 10-11 and John M. MacGregor, *Henry Darger: In the Realms of the Unreal* (New York: Delano Greenidge Editions, 2002), 19.
2. Bonesteel approximates that Darger began writing in long-hand between 1910 and 1912. He switched to typing his manuscript in 1916 and began hand-binding his volumes in 1932. His final seven or eight volumes remained unbound and thus, the ending of Darger's story shows no obvious, final conclusion. Michael Bonesteel, "Henry Darger's Search for the Holy Grail in the Guise of a Celestial Child," in *Third Person: Authoring and Exploring Vast Narratives*, edited by Pat Harrigan and Noah Wardrip-Fruin (Cambridge: MIT Press, 2009), 25.
3. Alison Griffiths, "'Shivers Down your Spine': Panoramas and the Origins of the Cinematic Reenactment" *Screen* 44:1 (Spring 2003): 2.
4. Henry Darger, *The Story of the Vivian Girls, in What is Known as the Realms of the Unreal, of the Glandeco-Angelinnian War Storm, Caused by the Child Slave Rebellion* (unpublished, c. 1911-1939), Volume IV, Chapter 59, 914.
5. David C. Miller, "The Iconology of Wrecked or Stranded Boats in Mid to Late Nineteenth-Century American Culture" in *American Iconology: New Approaches to Nineteenth-Century Art and Literature*, ed. David C. Miller (New Haven: Yale University Press, 1993) 186.
6. Darger, *The Story of the Vivian Girls*, Volume IV, unnumbered first page.
7. Chicago was a major stop on a national circuit of approximately thirty cycloramas through the 1880s to the early 1900s. Most from this series originated in Milwaukee, Wisconsin. See Perry R. Duis, *Challenging Chicago: Coping with Everyday Life, 1837-1920* (Urbana: University of Illinois Press, 1988) 208.
8. See Carl Smith, "Fanning the Flames," *The Great Chicago Fire and Web of Memory*, Chicago Historical Society and Northwestern University, published 2011, <http://www.greatchicagofire.org/fanning-flames/>.

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Miller, David C. "The Iconology of Wrecked or Stranded Boats in Mid to Late Nineteenth-Century American Culture" in *American Iconology: New Approaches to Nineteenth-Century Art and Literature*, ed. David C. Miller. New Haven: Yale University Press, 1993, 186-208.

Smith, Carl. "Fanning the Flames," *The Great Chicago Fire and Web of Memory*, Chicago Historical Society and Northwestern University, 2011. <http://www.greatchicagofire.org/fanning-flames/>.

Author Biography

Leisa Rundquist is an art historian, professor, and curator who specializes in the fields of modern, contemporary, and self-taught art. She holds a PhD in art history from the University of North Carolina at Chapel Hill and currently serves as Professor of Art History at UNC Asheville.

Her 2021 book, *The Power and Fluidity of Girlhood in Henry Darger's Art* speaks to the intersections of childhood, religious piety, gender, and race in the art and writings of Henry Darger. Recent curated exhibitions include *Henry Darger: The Room Revealed* (2021) and *Between and Betwixt: Henry Darger's Vivian Girls* (2017), both at Intuit: The Center for Intuitive and Outsider Art, Chicago. Other directions in her research explore curatorial strategies that construct the representation of marginalized artists and their artistic practices, specifically those categorized as self-taught and "outsider."

Mapping the World-as-Exhibition: Expressive Typography in Immersive Media

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Abstract

The popular nineteenth-century attractions known as panoramas, which offered transporting virtual experiences of distant places and times, were typically accompanied by interpretive printed ephemera including visitor guidebooks and diagrammatic “panorama keys” drawn in stereographic perspective. Panorama keys did more than label the view; they also served as transporting devices in their own right. Representational conventions employed in panoramas and their keys describe a visual and material culture of seeing, sensing, and imagining a changing world during the period of British colonial expansion. Transporting graphic strategies were also used in printed media not directly affiliated with panoramas, including maps and bird’s-eye views. This article describes the immersive features of panorama keys and compares them with features of contemporaneous Arctic maps in order to demonstrate the pervasiveness of panoramic representational strategies. In particular, we examine the role of perspectival and expressive typography in the immersive articulation of the picture plane in keys and maps. This analysis elucidates the viability of typography as an object for studying the subjectivity inhering in images whose power derives from their explicit assertion of objectivity.

Keywords

Panorama keys, stereographics, immersive media, design history, printed ephemera, typography, cartography, arctic maps, spectacle, nineteenth century

Introduction

The nineteenth-century panorama was a hybrid medium that coordinated painting, architecture, sculpture, lighting, and printed matter to produce compelling virtual experiences of significant places and times. Visitors were typically provided with guidebooks containing diagrammatic “panorama keys,” the earliest of which were drawn in stereographic perspective, a projection system more commonly used in cartography. [1] The relationship between the panorama and its key is different from the relationship between a map and its legend, for whereas a map’s legend is subordinate to the map and meaningless on its own, a panorama key functions as a freestanding map. Furthermore, keys did more than just label the view: stereographic panorama keys amplified the transporting experiences offered inside the panorama, and by providing

visual cues to somatic sensation, they even functioned as immersive devices in their own right. Cues to immersive sensation also appeared in other popular forms of printed matter, including maps and bird’s-eye views. This paper describes the role of stereographic keys in producing immersive experiences, paying particular attention to the role of perspectival typography in coordinating visual and somatic sensation. Then it considers the relationship between panoramas and maps of the polar north in order to reflect on the interactive role of typography in constructing the imperial worldview. [2]

Panoramas, Stereographics, and Maps

Panoramas are central exemplars in a broad culture of immersive media that also includes the diorama, georama, cosmorama, moving or “peristrepic” panorama, and many other transporting period devices. The popular sense that such artifacts could close distances of space and time also shaped conjunctions of form and content in popular books, journals, exhibitions, theatrical productions, and maps. All visual media is transporting in one or another way way; immersive media takes its transporting effects by blurring the boundaries between the representation and extant phenomena surrounding the viewer or reader in a distinctive and culturally-specific manner.

Early panoramas by the medium’s inventor and most prolific showman, Robert Barker (Irish, 1739-1806), focused on sites associated with British colonial agency. [3] This was a period in which citizens and government shared a mutual investment in public engagement with the places that constituted the empire: the government needed citizens to know and value those places so they would support colonial projects, while citizens needed to make sense of their place in a rapidly changing world. Often described as the first mass medium, the panorama proved to be an ideal vehicle for inducing a popular sense of personal connection with the empire.

A panorama’s immersive effects can be experienced without the use of printed materials, but it is clear that

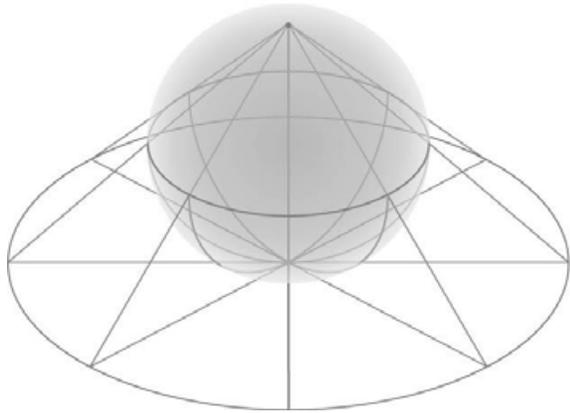


Fig. 1. Stereographic Projection from the North Pole. Image, Mark Howison, Wikimedia Commons, public domain.

panoramas were almost always accompanied by a guidebook and key, and examining that material illuminates any given panorama's cultural and political significance. The first keys were drawn in *stereographic* (or *planispheric*) projection, a grid system for mapping a spherical object onto a two-dimensional plane developed for celestial mapping in Egypt and Greece in the second century BCE (fig. 1). [4] Like all systems of geometric projection, stereographics reflect 3D form accurately in some ways, but they also introduce characteristic distortions. A stereographic renders accurate scale “along a circle concentric about the projection center,” but “scale increases moderately with distance from the center within a hemisphere” (fig. 2). [5] For this reason, stereographic projection is “recommended for conformal mapping of regions approximately circular in shape” and therefore “commonly used in the polar aspect for topographical maps of polar regions.” [6] Because the view inside a panorama is spherical, stereographics work well for rendering keys.

Stereographic landscape views precede the invention of the panorama by at least 40 years. In 1745 a British army draughtsman rendered the stereographic view of a village in the region now known as Flanders in Belgium (fig 3). The caption is hand-lettered caption around the edge: “A circular view of the Horizon, from the Steeple of the church of Dieghem, with the situation of the incampments of the army of the allies, commanded by His Royal Highness the Duke of Cumberland.” Distant cities and villages are labeled in script at the horizon.

34 years later, Swiss naturalist Horace-Bénédict de Saussure (1740-1799) responded to popular interest in polar exploration with a stereographic engraving of the *Circular View of the Mountains as Seen from the Summit of the Buét Glacier*, projected from the position of the two surveyors shown working at the center (fig. 4). Barker's experience consulting for military cartographers likely familiarized him with the of grid systems used for projecting measured views of geographic sites like these.

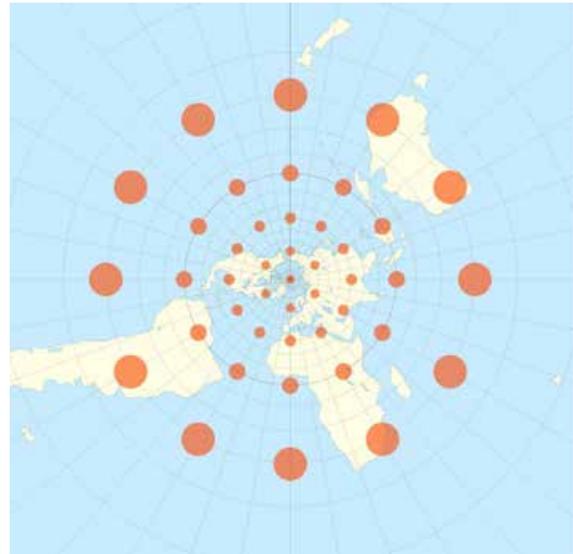


Fig. 2. Stereographic with Tissot's Indicatrice of Distortion. Image, Justin Kunimune, Wikimedia Commons, CC BY-SA 4.0.



Fig. 3. George Augustus Schultz (attributed) (British, active 1734-49.) *View of Dieghem (Flanders, Belgium) 50°53'50"N 04°26'00"E*, 1745 or later. Pencil, pen and ink on paper, diameter 25.6 cm. Image, Royal Collection Trust / © Her Majesty Queen Elizabeth II 2021.

Barker's key to the 1791 *Panorama of the Grand Fleet Moored at Spithead* adopts a bilateral (rather than fully stereographic) system for marking the position of royal battleships anchored between Portsmouth and the Isle of Wight (fig. 5). Typography indicates the directional manner in which the key was meant to be used. Three frigates are arrayed in the water separating two rows of battleships



Fig. 4. Horace-Benedict de Saussure (Swiss, 1740-1799). *Circular View of the Mountains as Seen from the Summit of the Buet Glacier*, 1779. Engraving on paper. Image, Wikipedia (US), public domain.

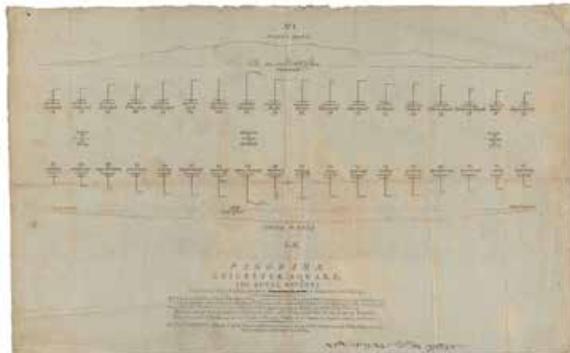


Fig. 5. Robert Barker (Irish, 1739-1806). *Key to the Panorama of the Grand Fleet Moored at Spithead*, 1791 (drawn 1793). Engraving, 27.5 x 45 cm. Image, Yale Center for British Art, public domain.

anchored in the Spithead strait of the English channel. Gazing toward Portsmouth, simple but precise line graphics describe ships which are labeled with their names and the year they were built. Beneath them, the frigate *Iphegenia* is labeled twice—once right side up, and once upside down. Beneath this appears a second row of ships, with labels upside down. If we rotate the key 180 degrees, we find ourselves gazing toward the Isle of Wight, and now can read the names of ships arrayed before it. Visitors standing on the panorama platform would have used the key to study the fleet from their virtual vantage point on the deck of the *Iphegenia*.

By 1805, Barker's keys were consistently issued in elaborate full stereographic perspective drawn by his son, Henry Aston Barker (Scottish, 1774-1856), as for example in the key to the panoramic *View of Edinburgh* (fig. 6). Much as a map can be used not only to navigate actual

terrain but also as a compelling tool for imaginative and intellectual travels, a stereographic key does more than label the visible points of interest. It also orients those points to the cardinal directions, thus connecting them with existing maps and real space, and it renders the panorama's full scope at a glance, information which otherwise can only be accessed as the time-based phenomenon of embodied motion. And when the visitor uses the key to explore the view while moving around the platform, the relationship between the two representations implies the larger of the two is real, thus serving as a powerful amplifier for the panorama's uncanny reality effects. [7]



Fig. 6. Henry Aston Barker (Scottish, 1774-1856). *A View of Edinburgh*, 1806. Engraving on paper. Sheet, 27.80 x 22.50 cm. Image, National Galleries of Scotland, Creative Commons CC by NC.

If stereographic projection originated as a mapping system, and a stereographic panorama key serves as a map of the region visible from the panorama platform, it is also the case that the 360-degree panorama is itself a kind of map. Map historian Matthew Edney argues that the panorama epitomizes the ideal of cartography, noting that the medium's invention and proliferation coincides with the late eighteenth-century "flourishing of an array of new forms of imagery and of visual technologies [that] complemented the ideas of rational geometry and archive." [8] The panorama's perspectival formulation of a view from above—that is, from an elevated landscape position affording an overview of the surrounding geography—exemplifies a "specifically nineteenth-century rationalization of vision and observation." [9]

Perspectival Typography in Barker's *Edinburgh* Key

In order to reflect on the role of typography in stereographics, it must first be observed that typography is much more than type design. In addition to letterforms, the art and craft of typography lies in the way letters are arranged to convey meaning on a page that is, itself, arranged to convey meaning within a larger structure such as a page among other pages that form chapters in a book or a broadside posted alongside other broadsides on a publicly accessible wall (or website.) Canadian poet and book designer Robert Bringhurst defines typography as “an art that can be deliberately misused” and “a craft by which the meanings of a text (or its absence of meaning) can be clarified, honored, and shared, or knowingly disguised.” [10]

When Bringhurst argues that “typography with anything to say therefore aspires to a kind of statuesque transparency,” he echoes the clarion insight of British typographer Beatrice Warde, whose now-classic 1932 address to the [British] Society of Typographic Designers compared good typography to a crystal goblet whose every designed aspect “is calculated to reveal rather than to hide the beautiful thing [that is, the meaning of the text, analogized to fine wine] it was meant to contain.” [11] [12]

Barker's *Edinburgh* stereographic accompanied the 1805 mounting of the *View of Edinburgh and the Surrounding Country* in the upper circle at Leicester Square. [13] The typographic scheme we see here amplifies two kinds of graphic congruency: the key's congruency with the space depicted in the panorama, and the panorama's congruency with the actual view from Edinburgh's Calton Hill. The layout presents three at least 3 levels of text: the footer grounds the image in the built space of the city of London by offering practical information about the inventor and proprietor, the cost of admission, and the availability of an on-site interpreter. Meanwhile, the floating banner at the top evokes the extensive view from above that the Leicester Square rotunda purports to command. The center conveys not only the subject of the panorama and its disposition in the uppermost of the rotunda's two viewing spaces but also its significance as the site where Barker claimed to have first conceived of medium he would invent: “The contemplation of the grand and delightful scene, and an earnest desire to represent it entire, were the first circumstances which impressed Mr. Barker's mind with the idea of the panorama.” [14] This information is printed in the space where the viewer would stand—on the panorama platform, if we read the image as a key to the panorama; or the hilltop overlooking the city, if we read the image as a panorama in its own right.

The key is oriented to the south, inasmuch as the view to the south is available without turning the key from the original position in which we read the graphic. Yet it is worth noticing that the centered text is set not exactly

parallel with the header and footer, which are themselves parallel to the outer contours of the sheet, but rather the lines are rotated a few degrees to the right, as are the indications of the cardinal directions. It is unlikely that the designer was careless, but rather more likely that the type has been intentionally set to indicate the key's readiness to be rotated.

In the distance we recognize the distinctive landforms of the Salisbury Craigs, while immediately at our feet lies Calton Hill, labeled not once but twice, as if to insist we are standing on the hilltop in the public park widely recognized as Edinburgh's ideal vantage point for surveying the complex geography of a rapidly growing city with two distinct centers. Points one through eight, immediately legible in the region marked “old town,” are numbered in the view and labeled in a dial set around the central title. These points include a church, tollbooth, brewhouse, surgeon's hall, school, English chapel, infirmary, and college. In the foreground stands an edifice labeled “Bridewell,” the new state-of-the-art prison designed by Robert Adam (Scottish, 1728-1792) to meet the specifications of the panopticon, philosopher Jeremy Bentham's concept for institutionalizing invisible supervision, which entered the media lexicon is same year Barker took his panorama patent, 1787. [15] [16] [17]

The order of the numerals, combined with the direction of reading from left to right, moves our attention to the west and it soon becomes necessary either to rotate the stereographic (if we are viewing it on its own) or turn our body in space while holding the stereographic flat (as visitors would while exploring the view from the panorama platform.) As soon as we begin to turn, the title texts recede from legibility, allowing the directional view to claim our attention. That is, the perspectival disposition of the text labels plays an active role in directing our attention westward, while the titles are rendered comparatively more difficult to read and therefore subordinate. The close proximity of the dial to the view supports the immersive sensation of visual access to Edinburgh's “new town.” As we continue to pivot, we find that the region to the north is less developed. Key points of interest include the body of water known as the Frith of Forth and the nearby village of Leith. In the middle ground appears the Botanic Garden, and just beneath is a rotunda labeled “panorama.” [18]

Turning toward the east, we find the foreground is dominated by the recently-built “new observatory” atop Calton Hill. As we continue to turn we may notice a sensation of seasickness; even this is in no small part due to the perspectival disposition of type, for the illustrative marks comprising the drawing, which could seem abstract on their own, are insistently grounded by the continuously shifting orientation of the label text. As we return to the southern view, the titles reemerge and now we may find that their messages take on renewed interest.

This perspectival typographic system plays a significant role in amplifying the key's immersive capacity and the interactive, time-based performance of an image that is

remarkable for the depth and breadth of spatial and historical information it condenses.

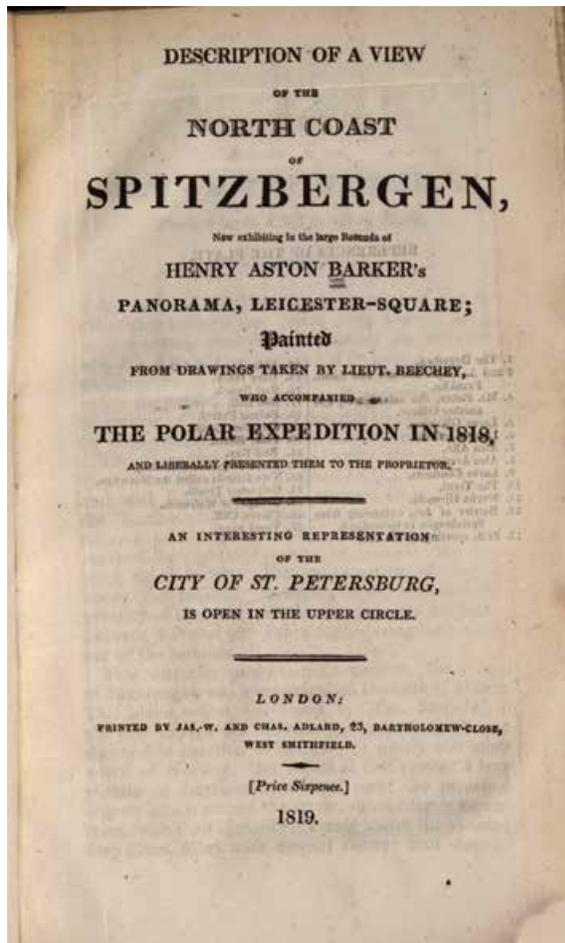


Fig. 7. Henry Aston Barker (Scottish, 1774-1856). *Description of a View of the North Coast of Spitzbergen, now exhibiting in the Large Rotunda of Henry Aston Barker's Panorama, Leicester Square; Painted From Drawings Taken by Lieut. Beechey...* [title page.] London: Adlard, 1819. Image, Hathi Digital Trust, public domain, Google-digitized.

Mapping the Arctic Spectacular

As the Napoleonic wars of the early 1800s gave way to relative calm, the year 1818 saw a resurgence of Arctic exploration by the British Royal Navy in pursuit of the elusive Northwest Passage and the North Pole itself. The very idea of the Arctic was panoramic in a meta sense, for British pursuit of the North Pole and elusive Northwest Passage aimed to claim a global vantage point that would reconfigure geographic relations.

John Barrow, second secretary to the Admiralty, directed Captain Sir John Franklin and Royal Navy Lieutenant Bavid Buchan to sail over the North Pole to the Orient. They did not know then that the expeditions launched in 1818 and

1819 would be the last British attempts to sail over the top of the world. Based on findings from these voyages, subsequent efforts would aim to *reach* the pole (rather than cross it) and rely on boats and sledges rather than sailing ships. [19] Franklin and Buchan were accompanied by naval officer and visual artist Frederick William Beechey (British, 1796-1856), whose charge was to record the journey's sights in sketches and prose.

Soon after the ships' return in 1819, Beechey's drawings were broadcast to the broadest possible public as the basis for the Arctic panorama at Leicester Square (fig. 7). Subtitled, *Painted from Drawings Taken by Lieutenant Beechey, Who Accompanied the Polar Expedition in 1818, and Liberally Presented Them to the Proprietor*, the panorama was mounted in the large first-floor circle of the double-decker rotunda and accompanied, as was by now the custom, by a key drawn pictorial perspective, rather than stereographic projection (fig. 8). [20] [21]

Spitzbergen was likely selected as the subject for the panorama because its north coast, which lies just above the Arctic circle, was the northernmost land which had been mapped prior to the voyages of 1818-19. Moreover, the Admiralty's confidence in the search for the open polar sea was spurred by whalers' recent accounts of sighting 2000 square leagues of ice-free sea north of Spitzbergen. [22]

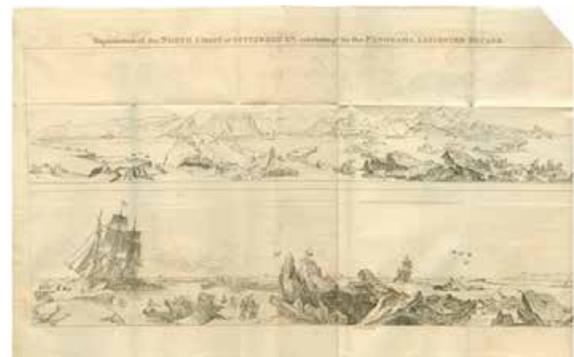


Fig. 8. Barker, Henry Aston (Scottish, 1774-1856). *Description of a View of the North Coast of Spitzbergen.* London: Adlard, 1819. Engraving. Image, Russell Potter.

This key is the only surviving image of Barker's *Spitzbergen* panorama, but Beechey's *plein air* sketches provide a fair vision of the panorama's design (fig. 9). The panorama was received with enormous interest and was followed by an outpouring of spectacular entertainments proffering immersive virtual access to the polar north in the succeeding decades. [23] [24]



Fig. 9. Rear-Admiral Frederick William Beechey, F.R.S., P.R.G.S. (British, 1796-1856). *North Coast of Spitzbergen, Red-Cliff Sound*, 1818-1820. Pencil & watercolor on paper, 44 x 75 cm. Image, University of Calgary, public domain/fair use (Canadian Copyright Act 29.1.)

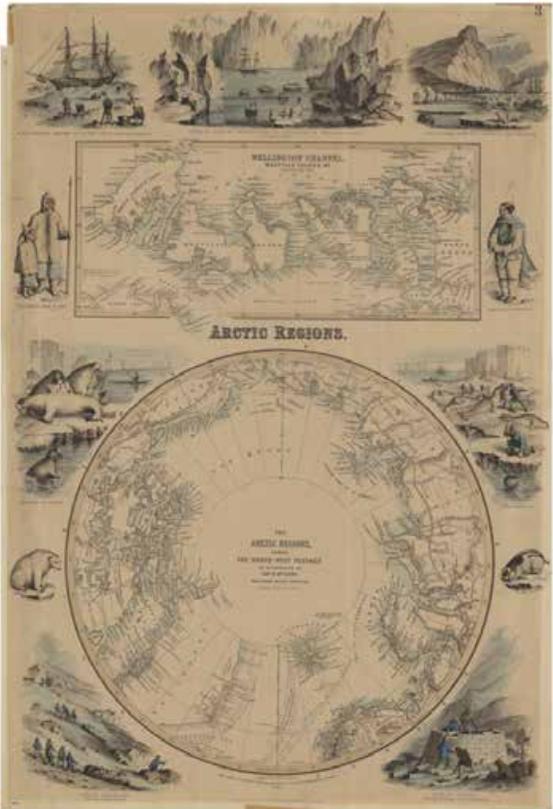


Fig. 10. Johnson, John Hugh. *The Arctic Regions, Showing the North-West Passage as determined by Cap. R. McClure and Other Arctic Voyagers*, 1856. Engraving on paper, 47 x 32 cm. Image, York University Libraries, public domain, material digitized as part of an Academic Innovation Fund (AIF), awarded in 2018.

Among them were popular maps such as John Hugh Johnson's *The Arctic Regions, Showing the North-West Passage as Determined by Cap. R. McClure and Other Arctic Voyages*, 1856, typical in its manner of amalgamating information from multiple expeditions and *Arctic Voyages*, 1856, typical in its manner of amalgamating information from multiple expeditions and pairing round and square projections with perspectival vignettes (fig. 10).

Drawing on existing published accounts of numerous expeditions, its maps and vignettes subsume geography, local wildlife, and even Inuit people (misidentified as "Esquimaux") as resources for the imperial project. [25] The information in such maps was typically derived from Admiralty charts, maps produced by Britain's Hydrographic Office of the British Admiralty, two examples of which are held in the Rare Book & Manuscript Library at the University of Illinois.

Figure 11 shows one of two Admiralty charts produced from the Franklin expedition of 1818-19. By now we are familiar with the stereographic format, which is so well-suited to depicting the circumpolar view and the void at its center, that tabula rasa for the public imagination which it was the expedition's mission to fill. It is one of a pair of charts, the other being rectangular. Both are remarkable for the skilled use of typography to assist in constructing the world according to the logic of exhibition.



Fig. 11. Franklin, Sir John, 1786-1847. *Illustrations of Franklin's Expeditions*, 183-? Image, Molly Briggs.

Iceland appears near the bottom left. The lettering looks like type but is actually hand-drawn throughout (fig. 12). The name "Iceland" appears first in Icelandic and then, parenthetically, in English. Place names also appear in Icelandic, language that reflects the island's settlement by Norwegians beginning in the ninth century. The words hug the complex shoreline and amplify its contours with lines set at individuated curved angles that elaborates the shape of the island. It is as if the words are as organic and natural as the land itself.

A second, rectangular chart (fig. 13) provides a close-up view of the Barrow Strait and Boothia Gulf. Each of the map's four outer contours is broken by landforms that

‘objective’ form, the means of its production.” [27] Typography plays a foundational but little-studied role in producing the immersive spectacles of the world-as-exhibition.

Notes

1. Oleksijczuk, 2011.
2. See Helphand, 2002, for a study on typography in circular artifacts.
3. Oleksijczuk, 2011.
4. Snyder, 1989, 120. See also Edney, 2021, n.p.
5. Snyder, 1989, 120.
6. Snyder, 1989, 120.
7. Snyder, 1989, 120.
8. Edney, 2019, elaborates a thesis about the difference between the cartographic ideal and practical mapping, arguing that only the latter is an actual behavior, while the former is an uncritical belief system, 134.
9. Edney, 2019, 134. Edney also argues that “the fixation on the view from above is strictly a post-1800 product of the ideal and is otherwise invalid” (invalid with regard to the cartographic ideal before 1800, 77).
10. Bringhurst, 2004, 17.
11. Bringhurst, 2004, 17.
12. Warde, 1955, 1.
13. This had also been the subject of his father’s first panoramic exhibit in 1787, the year in which his patent was registered. That 1787 iteration was a half-circle, Cook, 1963, 32.
14. It continues, “The public may now form a judgment of the comparative excellence of three views, reckoned by men of taste the finest in Europe, namely, of Constantinople and Plymouth, which have been exhibited; and Edinburgh, which is now open.”
15. Kinghorn, n.d.
16. Cook, 1963, postulates that Barker conceived of the panorama while reading a letter by light admitted to a grate high in the wall of a prison cell when he was incarcerated for debt. The usual stories of the invention suggest it occurred to him while walking arm-in-arm with his daughter Catherine (presumably Henry’s mother) but the theory that it was actually conceived while in prison suggests an interesting spatial relationship among city, hill, and cell, 32. See also Briggs, 2018.
17. Bentham, 1787 (1995).
18. This is neither the site where this panorama was located (London), nor the site where the first, hemispheric panorama of Edinburgh was presented (Archers’ Hall in Edinburgh, which lies in the other direction looking toward the Salisbury Craigs).
19. Hayes, 2003, 56.
20. See Hayes, 2003 and “Frederick William Beechey,” n.d. By this time Robert Barker had passed away and his son Henry Aston Barker was the proprietor of the Panorama at

Leicester Square. In 1819-20 the younger Barker mounted the panoramic view of the north coast of Spitzbergen.

21. The shift in format from stereographics to perspectives may indicate that the public’s interest was shifting to other media.
22. Hayes, 2003, 56 and 59.
23. Of the Spitzbergen panorama the poet John Keats wrote, “I have been very much pleased with the Panorama of the ships at the North Pole with the icebergs, the Mountains, the Bears, the Walrus the seals the Penguins and a large whale floating back above the water it is impossible to describe the place.” Keats, 1814-1821 (1958), 95.
24. Potter, 2007, surveys 60 arctic spectacles, produced and exhibited primarily in London and New York.
25. Gapp, 2021, n.p.
26. Mitchell, 1989, 220.
27. Mitchell, 1989, 222.

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