RE:SOURCE

THE 10TH INTERNATIONAL CONFERENCE ON THE HISTORIES OF MEDIA ART, SCIENCE AND TECHNOLOGY

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PROCEEDINGS

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Venice Centre for Digital and Public Humanities

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RE:SOURCE
the 10th International Conference on the Histories of Media Art, Science and Technology.
Proceedings

The 10th International Conference on the Histories of Media Art, Science and Technology – RE:SOURCE –celebrates Media Art Histories and the role that its main agents have had in the multiple developments of art, science and technology with a focus on the past 60 years.

The title 'RE:SOURCE' refers to a sub theme specifically introduced in the MAH Venice edition of the conference series. This theme will be centred on the climate crisis and questions of ecological sustainability considered in all their ramifications analysed through the lenses of Media Art (History).
The main historical theme of the conference series – the histories of Media, Art, Science and Technology – will form the core of the event. This will be integrated by a number of sub themes including the following:

- Track 1: "Memory. How to create future memories: documentation, preservation and new technologies" (media art conservation, preservation, documentation, archival research, role of researchers in curatorial practice).
- Track 2: "Climate Actions, Environment and Public Humanities" (public media art that addresses climate emergency and social topics).
- Track 3: "Pioneers of Media art" (media art history pioneers past and present, artists, curators, new technologies).
- Track 4: "Media art history outside and inside the museum" (curation, museology, cinema, games, media arts museums); re-enacting of exhibitions, new technologies and curatorial practice.

KEYNOTE SPEAKERS

Andrés Burbano

Jussi Parikka

Christiane Paul

RE:SOURCE

The 10th International Conference on the Histories of Media Art, Science and Technology
13 - 16 September 2023 - Venice, Italy.

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The international conference series, which was developed in 2004, Menaggio, Italy has been held in several international venues around the globe including Banff 2005, Berlin 2007, Melbourne 2009, Liverpool 2011, Riga 2013, Montreal 2015, Krems/Vienna 2017, Aalborg 2019, stream during CIHA 2022 in Sao Paulo, and Venice 2023. The conference series aims to engage the growing community of scholars from a range of disciplines including art history, contemporary art practice, art theory, history of science, history of technology, media studies, image science, visual studies, philosophy, cultural studies, anthropology, architecture theory, sound studies, computer science among others to develop and share new research and scholarship in the intersecting fields of the histories of media art, science and technology.

More info about the conference series at mediaarthistory.org

The International Network supporting this conference is based on:

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Editorial Note

In preparing the proceedings of *RE:SOURCE 2023*, we have encountered some minor variations in the formatting and presentation of contributions. We would like to briefly address these differences for clarity.

First, readers may notice slight discrepancies between the titles of papers and their corresponding abstracts. This is due to adjustments made by the authors during the final stages of submission, reflecting either expanded focus or refined arguments. We have opted to include both versions to preserve the full scope of each contribution.

Second, the academic formatting across papers may appear somewhat inconsistent. This stems from the diverse submission guidelines followed by participants from different disciplines and institutions. Rather than imposing a uniform format, we have chosen to honour these disciplinary distinctions, which contribute to the richness and diversity of the conference proceedings.

We trust that these differences do not detract from the academic quality of the contributions, but instead reflect the broad range of perspectives and methodologies presented at the conference.

We hope that this collection provides valuable insights and stimulates further discussion in the field.

Sincerely,

Francesca Franco and Andrés Burbano

Editors of the Proceedings of RE:SOURCE 2023

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FULL PAPERS

MEMORY

Reconstructions
Unfinished images on the Grand Canal in 1985

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Abstract

When the 3rd International Architecture Exhibition in Venice was established within the Architecture Biennale in 1985, design issues were introduced to be developed on punctual interventions scattered throughout the lagoon city. Among the competition themes, those of the Accademia Bridge and Ca' Venier dei Leoni constituted pivotal points of rethinking the urban texture and visuality of Venice. On the one hand, the temporary condition of a bridge that was designed to be replaced with a permanent one; on the other, the incompleteness of a facade compared with the double dimension of water.

The article deepens some of the proposals collected in archive documents known as the "Progetto Venezia", showing the architectural possibilities explored for the Accademia Bridge and Ca' Venier dei Leoni, firing the debate on methods, operations, and techniques capable of laying the groundwork for a new motif of communication between the present and the past of architecture.

Reconstructing memory through images implies operating a critical reading on the relationship between temporality and spatiality that, in archive drawing, translates into quick sketches, annotations and schematic studies, latent with design intentions. Therefore, the reconstructed images trace the definition of the new architectural organism, evoking compositional values and urban issues that provide a further program of visualities along the Grand Canal suggesting future intentions on the processes of rethinking the architecture of the past.

Keywords

Digital representation, Graphic interpretation, Accademia bridge, Ca' Venier dei Leoni.

1. Introduction

The value of architecture is linked not only to the built work, but also to the apparatus of its drawings, a complex world of information often preserved in different places of conservation and treated in a non-homogeneous manner. Some reflections on the inputs that the discipline of Drawing can provide in the different spheres - knowledge, safeguarding, fruition and accessibility – is needed, such as the process of conservation and enhancement of architectural representations.

The images published in this paper are part of a research project that began in 2020 and ended in 2022, which involved the collaboration between the "Laboratorio di supporto al progetto" and the Archivio Progetti Iuav, which aimed to make known a still unpublished graphic heritage of the Venetian territory and landscape, contributing to the development of further lines of research capable of shedding light on constituent architectural and urban issues of Venice or of its pieces of the city, by means of an in-depth investigation of architectural design and project places.

As part of the preservation of the graphic heritage, contained at the Archivio Progetti Iuav, the research fostered the dissemination of the graphic heritage contained therein by means of both digital reconstructions, also published on open-source platforms, and interactive and immersive ways of processing the data, combining theoretical and design aspects of the investigated drawings while providing new strategies of narration. In the light of the current methods of accessing and consulting the documents, of the visualization possibilities and interaction with the graphic information now present in the archive for external users, the research project proposed an in-depth interpretation, digitization and graphic reconstruction activity through the elaboration of digital models, in order to offer an exploration also in immersive mode and a narration characterized by multiple and unpublished readings of a Venice both built and imagined.

The digital reconstructions, by making known design experiences and research lines adopted, shed light on the design work of architects, including those coming from different backgrounds and strongly linked to the issues and methods of design within the city's historical parts. The heritage of documents and drawings, photographs, and project diagrams contributes to reconstruct a slice of Venice history by restoring some of the possible images of the city, supplementing the material in the preserved collections with further graphic elaborations that can be consulted on open-source platforms about specific design issues, and at the same time, stimulating an ongoing dialogue with the Archivio Progetti Iuav.

2. Accademia Bridge and Ca' Venier dei Leoni in 1985: the context

Starting from the documentary apparatus provided by the Archivio Progetti Iuav, graphic interpretations and digital reconstructions of the projects presented by Gianugo Polesello (fig. 1) and Raimund Fein are shown, which summarize the cultural ferment taking place in Venice, also because of the heterogeneous cultural and geographic background of the protagonists providing numerous opportunities on possible images about the lagoon city.

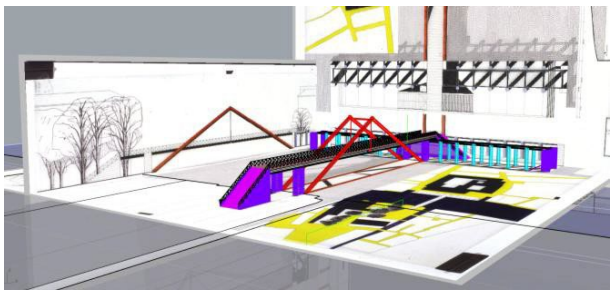

Figure 1: Digital model of the G. Polesello project for the ponte dell'Accademia (1985) 2022. Digital visual interactions betweeen original drawings and the digital reconstruction ©Archivio Progetti Iuav.

The purpose of the reflection around the design proposals of 1985 aimed at the intervention on the architectural monument in its quality as a process of adaptation or addition/integration in relation to the quality of the work. Both in the case of the bridge and Ca' Venier, the architectural volumes, articulations, and relationships with the context shaped the formal and expressive choices of the competition intervention.

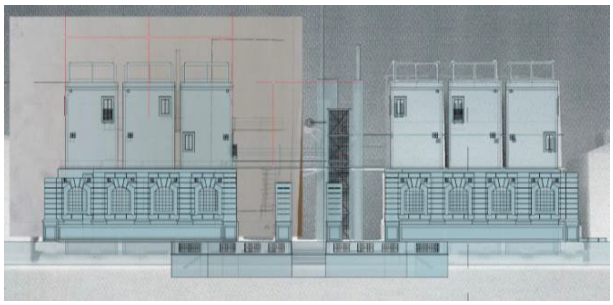

Figure 2: Digital model of the Raimund Fein project for Ca' Venier dei Leoni (1985) 2022. Original photo in the background ©Archivio Progetti Iuav.

In many cases these choices responded to theoretical inquiries into the role of contemporary architecture in the historical context, geometries, abstractions, interpretative readings of form, concurred to characterize the final configuration; in others, the need to resolve urban issues that best suited contemporary needs set the new directions of contemporary design. One of the issues investigated was the proposal of a new design for the Accademia Bridge, considering specific conditions that were: 1) maintaining the configuration of the bridge, providing a suitable formal definition of its structure, also considering its role as a junction between Campo San Vidal and Campo della Carità, areas to be considered in the project for the location of the bridge's connections; 2) to replace the original bridge with a different connection system; 3) to rethink the question of the Venetian viability, with particular attention to issues related to the crossing of the Grand Canal. The bridge's history, its temporariness, its significant architectural and structural events, are intimately linked to both the city's history and its function as an artefact.

Dealing with Ca' Venier dei Leoni there is the issue of a symbol of Venice to be reinterpreted in a renewed desire for the city's growth and the eventual need to expand the museum. Aldo Rossi stated that the current location of the Guggenheim Museum in Venice represented the last opportunity for the project of a building, of a palace on the Grand canal, even though the foundations and basement already exist, and the original project has existed since the middle of eighteenth century (1700s).

These two competition topics, because of their chronological connections, urban position, and of the visual and architectural relationships they establish, represented for some of the architects participating in the Progetto Venezia, a possibility of rethinking Venetian contemporaneity to be visualized and rebuilt starting from these two urban moments, treated in unison.

3. Raimund Fein's Project and digital interpretations

The source drawings for the Raimund Fein project include a large number of sketches, covering almost one year of the architect's reflections on the project and 3 photos of the model (front views at two scales). For the elaboration of the digital model of the project submitted by Fein, it was possible to work closely with the architect. Among the different evolutionary stages of his project, Fein identified some highlights, based on the design studies and the diagrams drawn up during the context of 1985, a working procedure to facilitate the identification of critical issues and key points of the project. Fein envisions a machine consisting of two triads of parallelepipeds. He reflects on two scales, as seen in the photo of the original model: one of the new proposals in its context and another in the detail of the connection between the two blocks of buildings (fig. 2).

Ca Venier is completed in height, the new intervention detached from the existing wall, a hi-tech architecture made of walkways and lattice towers. No specific function is given, the architect is interested in the manipulation of form, the figurative possibilities of hi-tech. He juxtaposes the volumes, locates the exterior vertical connections and the balcony behind. The 6 volumes end with tall railings and a tall antenna refers to technology and the idea of the device, the machine (fig. 3).

For construction of the digital model in relation with the architect proposals, the wireframe visualization, was necessary to verify measurements and manage the model compared to the original drawings (fig. 4). The reconstruction of the digital model fostered the position of the Fein's proposal in visual relation to the Ca' Venier state of art and the urban context too. The building was modeled on the basis of the underlying geometries: 3 rectangles, each at 1:77 ratio, arranged three by three, the width of a "three- pack" being twice its height. The distance between one turret and another is one-tenth the width of a turret.

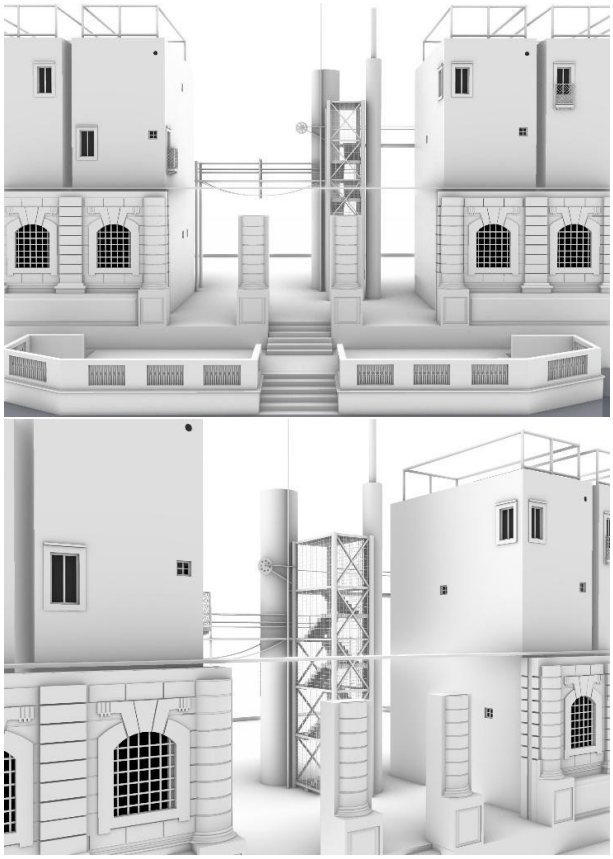

Figure 3: 3D modelling reconstruction of the R. Fein project for Ca' Venier dei Leoni.

Following operations concern the completion of the model and verification with documents related to the former versions. The final model was checked with Raimund Fein on the basis of the second version, from the plans one can appreciate the advancement of the backside compared to the first hypothesis, to obtain the correct dimensions and proportions of the buildings. Comparison with photos constitutes further verification for completion of the digital model.

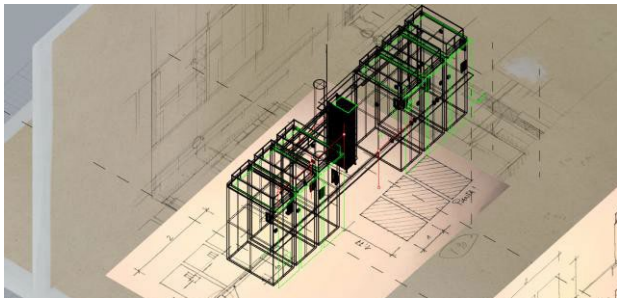

Figure 4: 3D modelling reconstruction of the R. Fein project for Ca' Venier dei Leoni in wireframe visualization with the integration of the archive drawings. ©Archivio Progetti Iuav.

Subsequently, additions, modifications and integration were made with other design reflections proposed by Fein on the basis of the digital model made: the position of two windows, the height of the railing in roofing. Orbiting around the model, it is possible to appreciate its relationships with the architectural pre-existence, its relationship with the Grand Canal and the interrupted verticality of Ca' Venier. Digital rework in double projection, rendered perspective and axonometric views provide integrated information-architectural, formal, visual-often missing in documentary sources by restoring more and more geometric- compositional qualities and multiple viewpoints of project information preserved in the archives (fig. 5).

Figure 5: 3D modelling reconstruction of the R. Fein project for Ca' Venier dei Leoni.

4. Gianugo Polesello's Project and digital interpretation

The source drawings for the Gianugo Polesello project include: a floor plan at a scale of 1:500, a floor plan and a section at a scale of 1:100; furthermore, 3 photos of the model (top view, a side view and a front view on the ramp). The terms of the problem tackled by Polesello concern the width of the bridge and the consequent height of the decking, the width comparable to a wide pavement, and two areas of ground connection free of architectural constructions, important architecture on either side of the Grand Canal (fig. 6).

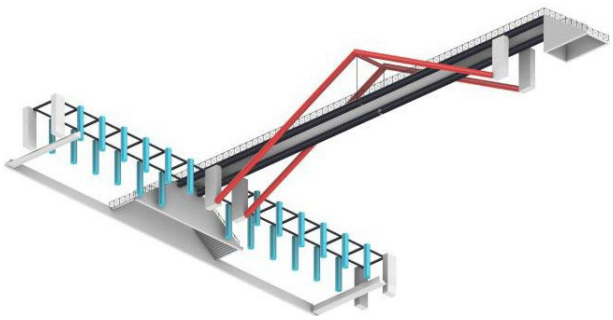

Figure 6: 3D modelling reconstruction of the G. Polesello project for Accademia Bridge.

Polesello looks at Palladio's work, the two bridges for Rialto, the old Rialto bridge in Carpaccio's painting and Jacopo de' Barbari's engraving, the Arsenale bridge, the Venetians' naval technique, and the Palladio's capriata. The design response consists of four steel struts, with a circular section, arranged symmetrically with respect to the centreline and inclined according to a 1/2 ratio. Between the pair of struts is the steel and timber deck, placed transversally (fig. 7).

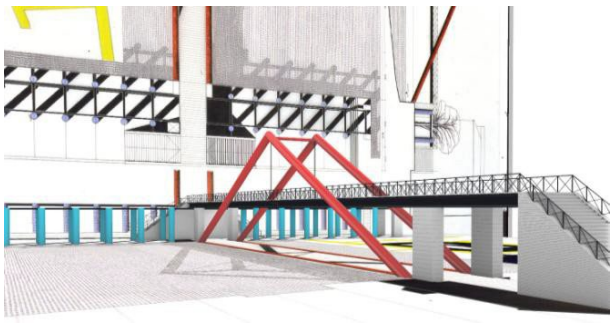

Figure 7: 3D modelling reconstruction of the G. Polesello project for Accademia Bridge.

Towards the Accademia, the bridge is set in a pergola consisting of blue polished stone columns and upper metal beams, arranged in an orthogonal grid, which can act as a support for a green sky of creepers. The accesses are configured by two systems of stairs, made of white stone (one central and two lateral), the pergola is arranged orthogonally to the grid of the bridge. The orthogonality is also conceived in relation to the direction of the Austrian bridge and Miozzi's bridge with respect to the canal, so that the new design is reduced to the function of crossing the canal according to a technique that develops in modules. The bridge, for Polesello, is reduced to its silent functions of crossing the canal, functions expressed in a natural technique, repeating timeless architectural modules (fig. 8)

.

Figure 8: Digital model of the G. Polesello project for Accademia Bridge in its urban context.

5. Conclusions

Each in-depth project was observed from different points of view, in relation to the available material, formal qualities and graphic outcomes. For all three aspects, the techniques of representation chosen were placed at the service of the meaning, the reasons for the project. The narration of the objects studied, the construction of images, the identification of descriptive paths and graphic strategies were treated by drawing up storyboards or mind maps that, in the schematic synthesis of their nature, were able to shed light on the outstanding aspects of the project. The constant graphical comparison between the digital processing and the archive document gave shape to open-models, thus understood as potential final configurations to which modifications could be made in a flexible and simple manner, starting from an articulated project of hierarchical organization of the architectural elements modelled within the software. Graphical comparison and observation of further images of the project is useful to deduce/reconstruct/understand some unclear elements in the archive drawings (fig. 9).

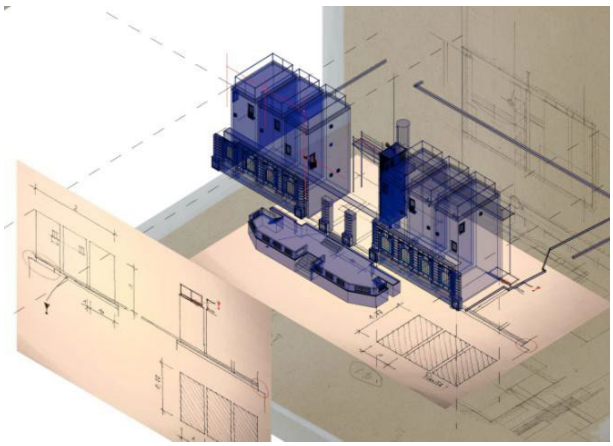

Figure 9: Graphical comparison between the digital model of the R. Fein's project for Ca' Venier dei Leoni and archive drawings. ©Archivio Progetti Iuav.

The last step is the export of the model in different formats for readability on open source platforms or application/manipulation on other software. The final objective becomes the exploration and visualisation of digital models inserted in the urban context or isolated by parts, so as to integrate and enrich the knowledge of the starting graphic heritage. Now, the questioni s: how is the computer influencing architectural thought? If the primary ideal is the thought, then the next is the ideal of each discipline you utilize to manifest that thought, which is the architectural drawing. The next step is the model. And then the use of the computer as a survey device to help overcome geometric complexities that would be harder for the hand to draw.

The computer cannot substitute for this process. But at least during the elaboration of the drawing the computer is already confronted with matter, as it could anticipate it.

Drawing, for its various theoretical speculative, analytical, and applicative declinations and ability to take a holistic approach to the issues under investigation can contribute to the development of new knowledge scenarios. Reflecting on samples collected in archive collections becomes an opportunity for experimenting with different digital techniques to explore the architectural characteristics and spatial configurations proposed, creating new contents that enhance accessibility and comprehension for different audiences. The creative aspect of content production concerns the concept of reproducibility. The digital product of a physical asset can be understood as an original content of a virtual transformation process of the archive source in which, in a dynamic flow, references, memories and cultural contaminations that originated the source coexist (fig. 10).

For this reason, one phase of the research was dedicated to experimenting with technologies that would make it possible to obtain different digital products from the 3D model that would guarantee various levels of accessibility and use of the reconstructions created, while keeping track of the levels of reliability of the reconstructions themselves.

Figure 10: Digital visualizations of the Accademia Bridge (G. Polesello) and Ca' Venier dei Leoni (R. Fein) inserted in their urban context.

On the identification of these theoretical trajectories, digital explorations provided by the interpretation of archive drawings return images of an unbuilt and unknown city, finding formal meaning in the design boards and study drawings, in those original drawings that not only divulge the work of architecture, but also manage to provide additional information about its aesthetic, functional and technical conditions. It is therefore a matter of recognizing, to the archive drawing, an autonomy with respect to the built work, a condition of self-representation, a witness *in absentia* of architecture that intervenes in the design value of the unfinished or unbuilt, returning a path that, from the initial reflections, breaks down and examines the architectural object by means of the graphic communication of its most significant parts.

Being imagined places and evocative insights of concepts often oscillating between the abstract and the utopian, the graphic elaborations show monochrome digital models, a methodological approach adopted to emphasize the project's condition of incompleteness, understanding the digital dimension and model as a place of theoretical speculation and convergence of spatial visualities. The digital model, in the absence of chromatic and material definition, maintains the value of the visualization possibility that the eye can continue to experience in the attempt to visually complete the project. The reading of the drawings, which covered the entire process of graphic restitution, makes it possible to identify some of the criticalities and/or inconsistencies, both graphic and design, of the case study during the making of the digital model. This is possible because of the tridimensional exploration of the architecture built. These moments of knowledge constitute the core of the reflections involved in the digitization and construction of the digital model.

Acknowledgments

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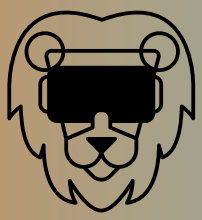

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