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Introduction:
From Database to AI – Digital Challenges and Opportunities for the Study, Communication and Conservation of Architecture and the Interiors of Historicism

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The growing impact of digital humanities on the study of art and architectural history has led to a profound transformation in the ways scholars access, analyze, and interpret historical sources. Digital methodologies have not only broadened the scope of research but have also introduced new epistemological and methodological questions. The rapid development of artificial intelligence has further expanded these possibilities, offering tools capable of recognizing patterns in vast corpora of images and texts, generating visual reconstructions, and facilitating new forms of interaction with historical materials. However, these advances also raise concerns regarding the sustainability, accessibility, and critical interpretation of digital data, necessitating ongoing reflection on the implications of these technologies for the discipline.

With the title *From Database to Artificial Intelligence: Digital Challenges and Opportunities for Historicist Architectural History,* the fifth Swiss Historicism Day, which took place at the SUPSI_DACD and the USI Academy of Architecture in Mendrisio in October 2024 was dedicated to the role played by digital humanities in the research, study and valorization of historicist architecture and interiors. The thematic focus was motivated by research activities at the two host institutions, namely the SNFS research project *In the mirror of the past: rediscovering identity and form in antiquity. The graphic corpus of Tito Vespasiano Paravicini between Renaissance and Neo-Renaissance* at SUPSI (PI Roberta Martinis, researcher Edoardo Rossetti) and the digital Semper Edition (semper-edition.ch), an edition and research infrastructure project funded by the SNSF which is being developed at the Academy of Architecture in collaboration with ETH Zurich (PIs: Sonja Hildebrand, Philip Ursprung, director: Elena Chestnova). By bringing together scholars from diverse backgrounds, the event fostered an interdisciplinary dialogue on how digital methodologies are reshaping the ways in which historical materials are studied, preserved, and interpreted. In particular, the discussions emphasized the need for a critical engagement with digital tools, recognizing their capacity to enhance but also to challenge traditional historiographical frameworks.

The long 19th century, characterized by the proliferation of historicist styles, industrial advancements, and new modes of artistic and architectural discourse, presents a particularly rich field for digital research. The sheer volume of textual and visual sources from this period – including architectural treatises, periodicals, pattern books, exhibition catalogues, and

personal correspondence – has encouraged extensive digitization efforts, making previously inaccessible archives widely available to scholars. Computational tools now enable large-scale text analysis, network visualization, and spatial reconstructions, providing fresh perspectives on the circulation of ideas, artistic influences, and material practices. At the same time, the visualization and simulation techniques developed within digital humanities projects have introduced new ways of engaging with historical architecture and interiors, allowing for dynamic reconstructions of lost or altered spaces. These methodological innovations invite a reconsideration of established approaches to the study of 19th-century architectural and artistic history, raising fundamental methodological and epistemological questions: To what extent do digital tools reshape our understanding of historical data? How do we ensure that computational analyses remain grounded in historical context rather than being purely data-driven? What biases do digital archives introduce, and how can researchers critically engage with them?

Beyond their analytical potential, digital methodologies also prompt discussions about the sustainability and ethics of data management. The implementation of FAIR data principles – ensuring findability, accessibility, interoperability, and reusability – has become a central concern in the field, particularly as the volume of digital research continues to grow. Digital archives and databases must be maintained with a long-term perspective, avoiding obsolescence and ensuring that the vast quantities of historical data being generated remain accessible for future scholarship. Many digital humanities projects suffer from the fragility of their technological infrastructures, often dependent on short-term funding cycles, proprietary software, or institutional constraints. Addressing these challenges requires collaborative efforts between academic institutions, museums, libraries, and technology specialists to develop sustainable models for digital research and preservation.

As the field of digital humanities continues to evolve, it remains essential to reflect on the theoretical and methodological implications of these technologies. The study of 19th-century architecture and art, with its complex interplay of historical references, technological innovations, and global exchanges, offers a particularly fertile ground for such inquiries. The articles presented here reflect the contributions made during this study day, highlighting not only the achievements made possible by digital research but also the ongoing debates surrounding its applications, ethical considerations, and long-term sustainability. In doing so, they offer a comprehensive reflection on the role of digital humanities in shaping the future of art and architectural history.