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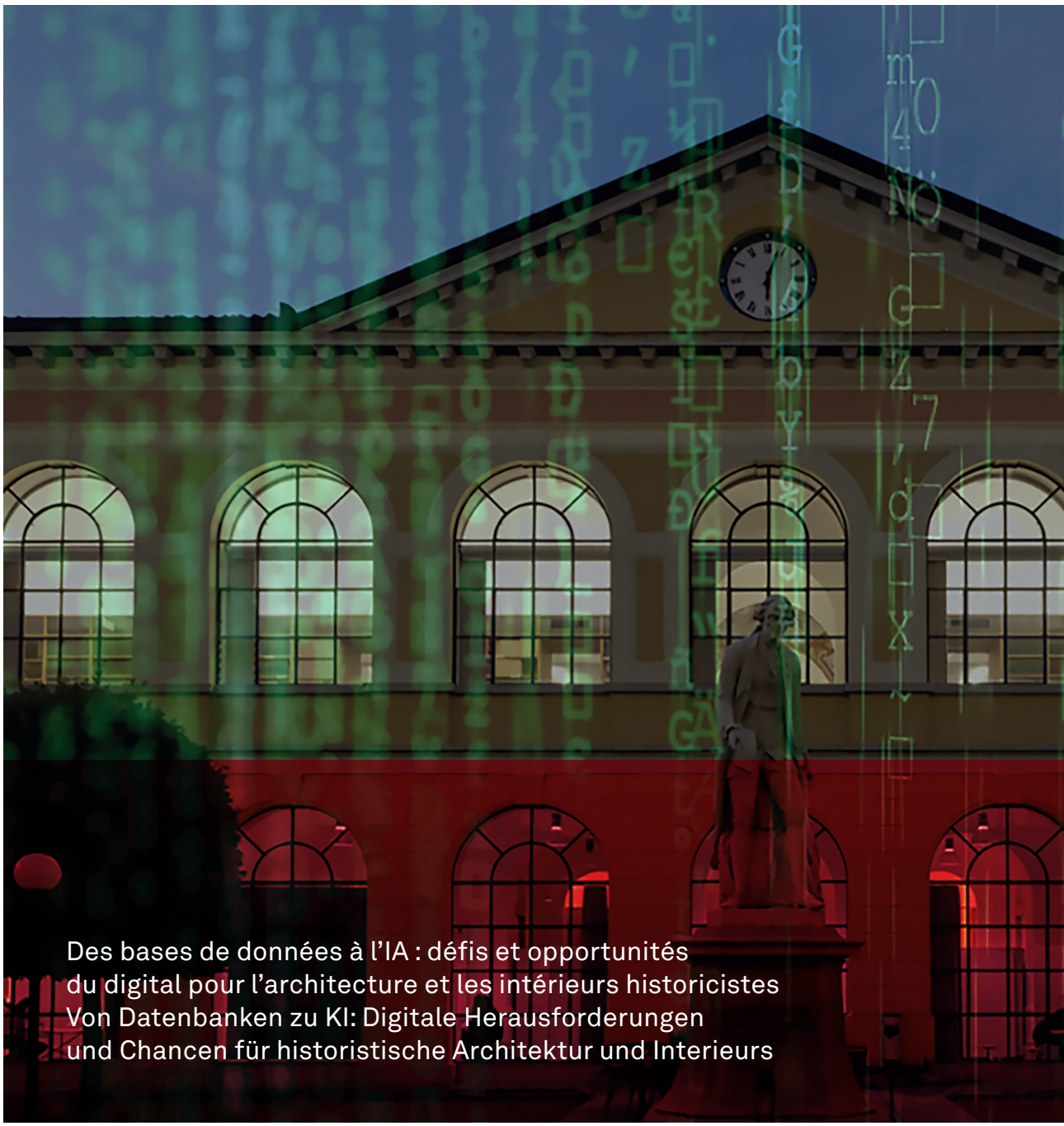

Des bases de données à l'IA : défis et opportunités du digital pour l'architecture et les intérieurs historicistes
Von Datenbanken zu KI: Digitale Herausforderungen und Chancen für historistische Architektur und Interieurs

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Des bases de données à l'IA : défis et opportunités du digital pour l'architecture et les intérieurs historicistes
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Digital Editions in the Toolbox of the Art Historian

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Academics complain about the computer. As a tool it has become ubiquitous in our work together with a host of applications and apparatuses associated with it. This constellation of digital devices has radically transformed what we do in every aspect: the way sources are stored, found and accessed, the way we record them for our use, the way we write, the way we teach, and, finally, the way we construct narratives.[1] It has also confronted us with a requirement to acquire new skills and to update them continuously, keeping up with rapid technological development. And it is perhaps this aspect of the digital that solicits the most frustration: competence in using the basic tools of research – once a bastion of scholarly skill and identity – has become a moving target.

This frustration is present in academia in general, historical studies in particular, and art history specifically. The latter, like many disciplines in the humanities, has tried to deal with the digital challenge by pretending that the impact of the computer is limited to a specialized domain. This move is rather disingenuous, since the ubiquity of digital tools means that no scholar stands apart from them.[2] And this ubiquity, alongside many new problems, brings a considerable number of opportunities, if we choose to perceive them as such. In this article I would like to consider some of these opportunities by taking a look at digital editions in the context of research on historicism.[3]

Editions, Digital and Analogue

The domain of editions might be best described as that of textual criticism that is relevant to specialized lines of investigation. These are often literary, with a specific interest in the genesis of a particular text, or analytical, e. g. examining the transmission of a source where multiple copies (witnesses) exist. Alternatively, editions may represent compendia of reproduced sources that are united in some aspect (e.g. *Monumenta Germaniae Historica*). Editions are further divided into documentary and critical, histori-

1 Fickers 2012; Schmale 2010.
2 Milligan 2020.
3 Broadly defined as the study of cultural production that took place with a specific consciousness of its own historicity in 19th-century Europe and beyond.

cal and literary, and sub-divided into various approaches that reflect the concerns of scholars who make and use them.[4] But among this diversity it can be stated for certain that all editions aim to provide a reference work for scholars in a specific field, even if its exact intent varies. In doing this, digital editions hardly differ from their analogue forebearers. Nor are they different in the character of intellectual analysis that goes into their creation: whether the source is represented graphically on a page or encoded digitally, the people making decisions about its representation are asking the same types of questions. While the digital medium requires editors to develop new technical competences, to learn to work in new constellations, or even to consider new modalities of criticality, it does not change the fundamental nature of editorial work.[5]

The use of editions is different. A webpage or a dataset conjures up radically alternate affordances from a paper book, because the digital medium allows us to represent greater complexity.[6] On a computer screen, multiple layers of information may be embedded into the text; different layouts may be offered, as well as alternative structures for representing the content of the edition and its relationship to external material; commentary may be integrated in varied ways – all giving the user-reader a choice about what is visible, when, and how. A more technical user might even be able to download the dataset and manipulate it directly to suit the specific requirements of their investigation, changing the appearance and the structure of the information still further. These derivatives may be published in turn for the use of other scholars as part of the edition or outside of it. Some editions may apply a crowdsourcing approach where an element in their content is generated by their readers / users. Some begin allowing users to comment on parts of the text and to publish these comments. All these scenarios mark the difference between analogue and digital editions: the latter are use-oriented, and they force their editors to think in new ways to accommodate this distinction.[7] They also demand new skills from their readers, and they require that the scholars update their competences continuously in step with the evolution of the field and its technical possibilities.

Digitised Historical Sources

As user tools digital editions represent a sector within a broader landscape of digitization that has grown rapidly since the 1990s. Although the history of digital editing proper began in 1949 with the efforts of Roberto Busa (1913–2011),[8] it was the advance of the World Wide Web that has really made the field what it is today. It was helped along by the explosion in the volume

4 For overview see Pierazzo 2016, 11–15.
5 Many analysts may disagree with this or agree only partially, see for example Van Zundert 2015 or Camps 2021.
6 Robinson 2003; Pierazzo 2014.
7 Rehbein 2008.
8 Nyhan et al. 2019.

of scanning and associated technologies that made it easy to publish and access digital facsimiles on the Internet. Together with other resources, digital editions now build a large body of sources available to the historian but demanding careful methodological consideration. How to work with such sources, what they can offer, and what their limitations are, have all been questions actively discussed by scholars in recent years.[9]

A large part of the discussion of digitized historical sources has focused on the limits of their representativeness. Digitization is notoriously selective and comparatively expensive, meaning that only a fraction of sources gets scanned, and this effort tends to be concentrated in wealthy countries and large institutions. At the same time, digitized sources gain much higher visibility and become cited more often than non-digitized ones, exaggerating biases and exclusions that exist in the archive.[10] At the same time, viewing a source on a webpage leads to its decontextualization, where neither its archival container, nor adjacent sources can be perceived with the same degree of directness as in analogue work.[11] This means that the contextual information layer, which archives work hard to preserve, becomes obscured precipitating possible misinterpretations.

Considering digital editions as sources for historical work makes this discussion more complex because the edited source, whether digital or printed, is always subject to selection, and it is always de- and re-contextualised by the editing process. To illustrate this we might take a look at the Semper Edition – an ongoing critical editing project that is being developed by the Università della Svizzera italiana together with the Federal Institute of Technology (ETH) Zurich.[12] The material of this edition is related to a single publication – *Der Stil in technischen und tektonischen Künsten* (1860, 1863), the magnum opus of German architect and theorist Gottfried Semper (1803–1879).[13] The project spans the period of 2017–2028 and it was conceived in 2014–2016. One of the first points that had to be addressed during its planning was the selection of documents to be edited, taking into consideration the relationships within the material, its publication history, accessibility, resources, and technical possibilities. As editors we are expected to explain and motivate our selection, and the Semper Edition will indeed publish such an explanation on its webpage in the coming year, together with a brief overview of what has not been included, and with pointers for where this material might be accessed. But however much information we provide, it is up to the reader to consult it and to include it as a factor in

9 Crymble 2021, 46–78; Owens/Padilla 2021; Graham et al. 2022; Milligan 2022.
10 Milligan 2013.
11 Putnam 2016.
12 <www.semper-edition.ch>, developed since 2017 with the funding of the Swiss National Science Foundation, currently Raphael Germann, Bernard Metz, Dieter Weidman, and myself are working on this project under the leadership of Prof. Dr. Sonja Hildebrand (USI) and Prof. Dr. Philip Ursprung (ETH). A full list of past contributors can be consulted on the webpage of the edition.
13 Chestnova/Vermeul 2020.

their analysis. Just as a multi-volume paper edition expects a degree of skill from its readers and an implicit understanding that they are working with a pre-selected corpus, so does a digital edition. Such skills form an extension to the methodologies of source criticism in both contexts.

Archival Context

The second big challenge of the digital is that of archival context. It is based on the fundamental principles of archiving: *respect des fonds* and *respect de l'ordre intérieur*.[14] While these have been established in state archives since the 19th century as a means to preserve provenance information, they were applied much later in the case of personal or artistic archives like Semper's. Here, the papers were initially ordered by members of Semper's family and only much later by professional librarians and archivists. The early ordering efforts were largely directed towards posthumous publications and involved re-structuring, which was in some cases substantial. For example, the print proofs of book chapters that were sent to Semper on different dates were clearly re-ordered to constitute a convolute that corresponds to that book chapter and is separate from the correspondence that had accompanied them originally.[15] The new order no longer reflected the chronology or the social context in which the text of the book developed. We can reconstruct the original order to some extent in the case of print proofs, but in many other cases we simply cannot know how the papers were organised by Semper himself and how much of that organisation has survived. The structure of the corpus as it is found in the archives today aligns strongly with the structure of the final book, but the documents themselves do not always support the idea that they were created as drafts or notes for a specific portion of the text. Nor do they always give a definite idea of their chronology. This opens a range of editorial possibilities. We may follow the archive as it currently exists and present the papers in an order that aligns with the final text of *Der Stil* and the status of the text in relation to it (notes, drafts, fair copies, proofs, etc.), or we can decide to present the text to the reader following another principle, e.g., a thematic grouping. The digital medium in fact allows us to do both, encouraging the reader to consider the sources in different constellations. Such an approach allows editors to compensate for the shortcomings of the existing archival context, particularly in situations where such contexts were affected by the circumstances under which the archive was constructed (e.g., colonial settings).[16] Digital recontextualization of sources has also proven effective in bringing together corpora that are stored separately in real-world archives due to geographic or institutional distinctions.[17]

14 Duranti/Franks 2015, 51.
15 I am grateful to Dr. Dieter Weidmann who has supported me in this observation.
16 Milligan 2022, 37–38.
17 A by now classic example of this is the Valley of the Shadow project <https://valley.newamericanhistory.org/about/history-project>, see Crymble 2021, 57–60.

Instability of the Digital

Another challenge of the digital is posed by its relative instability. The way we think of sources is strongly tied to the material carrier, be this a book, a sheet of paper or parchment, papyrus or some other writing surface. This has a knock-on effect on scholarly practice: the way we cite sources assumes the existence of a stable artefact that another scholar might consult in their effort to understand or challenge our findings. The digital presents a problem for this way of doing things, since sources in this form are mediated and often unstable.[18] A scan of a source may lead a scholar to different conclusions from the ones prompted by the original, requiring a new kind of citation practice that would specify the media in which a source was consulted, as well as the particulars of its material original.[19] This scan however, will always be viewed by each specific scholar within a technically determined context that may not be exactly the same as that of another. On the most basic level, even using different browsers may present scholars with different views of the source. The Semper Edition for example, allows the reader to consult its material on a portable device (smartphone or tablet) as well as the desktop computer. This permits the edition to reach a broader audience and give greater flexibility to its users. But it also means that the same page may be seen in two different views of screens of different sizes. And although we provide sharable links with a you-see-what-I-see functionality, their effectiveness is of necessity limited by the device on which they are opened.

This is a thorny problem when considered from the perspective of something we might call «classic citation practice» of historical scholarship. But citation practices are not set in stone – they vary hugely between disciplines and are conditioned culturally and historically.[20] If we cast about a little wider in search for responses, it becomes apparent that this challenge asks us to re-think how we present the historian in relation to their source. The idea is not new: Arlette Farge in her classic *Allure of the Archives* has eloquently described how scholars battled the perpetual cold and invented various stratagems to stay focused while surveying interminable volumes of monotonous sources.[21] The embodied experience of historical research has changed radically since 1989, when Farge first published her book. It now includes the digital camera, the online database, the computer, the tablet and the mobile phone. But these things shape our research no less than the feeling of undoing a knotted ribbon that nobody has touched since the documents it holds together were deposited in the archive. And they deserve equal attention. It is time that embodied experience and interaction with digital media started to be reflected as part of scholarly practice

18 Pierazzo/Stokes 2019, 685.
19 Milligan 2022, 36.
20 Grafton 1999.
21 Farge 2013, 1–13.

and methodology. Such reflection may also help us to overcome the frustration we often feel when dealing with digital environments and to begin taking advantage of their positive aspects.

Editions as Digitised Sources

Methodological reflection around digitized sources may also be usefully extended to editions. These are not traditionally considered to constitute historical sources as such but rather works of textual criticism addressed to literary scholars. However, the richness and technical possibilities of the digital environment mean that editions can serve as extremely rich sources. An example of this may be found in the Semper Edition. As already mentioned, its material relates to the evolution of one book, which represents a milestone work of theory of art and architecture, and which was a product of a particularly complex development with many draft stages, where some of the content never made it to the printed page.[22] This makes the Semper Edition, on the surface, a classic text critical undertaking, where the specialists consulting the website will be primarily interested in the development of this or that passage. But the richness of the text means that its usefulness extends much beyond narrow specialism. While originally intended as a theoretical work on architecture, the final *Stil* covers an extraordinary breadth of references, both in its bibliography and in terms of material artefacts that appear on its pages. And it is this that makes the Semper Edition a valuable source for an historian, at least an historian with an interest in cultural analytics of mid-19th century in Europe.

As a specific example we might take the geography of artefacts that we find mentioned in Semper's writings. Both the text and the images that accompany it are packed with everything from Classical archaeology to contemporary imports from China and products of feminine handicrafts of the Victorian home. Mapping this data in different ways can help us ask new questions about the circulation and valuation of artefacts around 1850. Situating the references in context of artefacts collections presented in other textual sources that Semper has consulted can help us understand which artefacts were experienced by him at first hand, and which were mediated. Tracing the latter category through different printed works and manuscript corpora in a network analysis approach can establish more precisely how 19th-century scholars engaged with material culture, and what kind of reception accompanied different types of artefacts.

Considering the dataset of Semper's object references in the context of historical information about institutional collections would allow a researcher to understand what was not included in *Der Stil*. For example, if we take a (currently hypothetical) structured dataset of the collection of the British Museum in the early 1850s and overlay that with Semper's ref-

22 Luttmann 2008, 55–195.

erences that came from this institution, we can understand much more about ways in which he engaged with this material, and with the museum space. We can also compare the dataset of Semper's references with those of other writers on theory of art during that period, and thus better understand if his view of artefacts may be considered more canonical for the time, or rather an outlier. Finally, we may take a category of objects, say embroideries, and trace them through various 19th century corpora (writings on art, journals and newspapers, literary works) to gain a better understanding of a history of an art form that has until now remained understudied and often poorly preserved.

These are all questions of a type that get explored in art historical investigations that engage with network analysis. This field until now has worked with a strong emphasis on visual material.[23] Integrating textual data from digital editions in this context would help enrich investigations of this type and open avenues for new research on the interactions between word, image, and material culture. These types of investigations, like many other questions that can be successfully explored with digital methods and data, would be oriented towards broad patterns and the *Longue Durée*, making them suitable for economic, social and cultural history, and for studies of historicism.[24] But these opportunities will only bear fruit if scholars engage with the development of digitized sources and methods that allow to study them in new ways, and, importantly, with the critique of these developments. The digital demands more, not less, in terms of the understanding of material evolution of sources and their archival contexts. This does mean that competence will continue being a moving target, but it does not mean that it must be frustrating. With the right mindset it can become stimulating and even adventurous.

Dr. Elena Chestnova is a researcher at the Academy of Architecture in Mendrisio and the leader of the Semper Edition project. Her research interests include material culture and theory construction in 19th century Europe, migration and domesticity, and public discourses of art and architecture. She is working on integrating computer-assisted methodologies with traditional practices of close reading.

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23 See for example Schich 2016; Langmead et al. 2021; Joyeux-Prunel et al. 2024.
24 Crymble 2021, 161–70; Patel 2011.

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