I am passionate about the opportunities databases offer art-historical research. They provide the ability to document findings in a structured format, making them searchable and opening new ways of approaching information. As a digital humanities expert at the Berlin-based software company Navigating.art, I contribute my background in art history and provenance research to the development of our digital tool for cataloging and publishing art information. I ensure our efforts always keep up with the standards of the field and focus on our users’ needs. I also support the production of catalogues raisonnés and similar digital projects in a hands-on capacity, from the first introduction to the public launch.

Using digital tools to produce a catalogue raisonné is standard for both hard-copy and digital publications. But the commitment to the digital format opens more opportunities that can impact the reach and reusability of a catalogue raisonné beyond its completion. Making the most of this potential should be one of the main objectives of every digital project. That is why I start new collaborations by educating the project team about the requirements of digital catalogues raisonnés and the possibilities of our platform. When I discuss the benefits and features of the medium, I often hear the response: “So . . . it’s a database?” While this assumption is not wrong, it simplifies the complex system needed to facilitate the production and publication of such a project. There are three main components to most digital catalogues raisonnés. The database marks the first step to unlocking the endless possibilities for digital catalogues. As a collection of structured information, the database itself is invisible to the end user, and so a project also needs an interface in the form of a software tool to manage the data. Finally, a separate presentation format for publication constitutes the third layer of the setup. I am emphasizing these three aspects because the interplay of the organization of the database, the capabilities of the editing tool, and the usability of the public presentation ultimately represent the translation of (art-)historical practice and scholarship into the digital format. They require thorough planning and consideration of future necessities from the beginning. Attempting to synchronize or extend these elements after the fact presents challenges that can hold up a project for long periods. To eliminate obstacles and compatibility issues, we designed the Navigating.art platform as a single source of truth that integrates all these applications, enabling long-lasting digital publications that stay on the cutting edge of technology.

Let us take a closer look at what these three aspects entail. The information structure of the database lays the foundation for everything to come. It provides a dedicated place and
format for various types of artwork data and allows for connecting pieces of information in a meaningful way. After details about each artwork, exhibition, or person have been captured in database entries, they become processable for further analysis. For example, they can be used to find shared characteristics: Which artworks were created in the same year or place? How often did an artist use each medium and technique in their oeuvre? An intricate data structure enables more complex queries, like tracking geographic movements of the works or examining collecting behaviors and exhibition trends during a certain period. Structured information can be used to answer such questions and produce new insights into an artist’s life and work.

Through this depth of information, digital catalogues raisonnés establish a new level of clarity in art-historical research. One way to achieve this is a concept called event-based data entry. This method breaks down the history of an artwork into separate incidents and captures each of them as an individual record. On our platform, this describes an artwork’s provenance through multiple events, each focusing on a single change of ownership at a time. Within one event, all involved parties are assigned contextual roles, and circumstances are described through controlled vocabulary. We decided on granular documentation to allow a clear record of provenance, which provides the basis for creating a uniform provenance style. Compared to a continuous text note, an event-based approach to data entry enables researchers to annotate each fact and incorporate scans of consulted primary sources. Throughout a year- or decade-long production phase, this helps researchers review the quality of their work. Built on this information structure, the published digital catalogue raisonné is able to present a full disclosure of the authors’ diligence, inviting readers to check the truthfulness behind presented facts for themselves. This also guarantees the reliability of the digital-born resource.

![Fig. 1. Screenshot of the editing interface of the Navigating.art software, showing a catalogue raisonné entry example.](image)

Digital tools become most valuable when they enable workflows that avoid wasting labor on repetitive tasks. This increases productivity and reduces workloads. Especially in the compilation of a catalogue raisonné, sometimes the same small detail needs to be fixed in
hundreds of entries. Literature references are one of the first things that come to mind. Researchers add the same publication note to multiple catalogue entries in the same style while maintaining a complete bibliography. For the Navigating.art platform, we saw an ideal opportunity to streamline this job, because cohesive citations come down to following the rules of a style guide, such as the *Chicago Manual of Style*. Our team integrated these rules into our tool to generate citations automatically, which adapts the citation to any context of the digital catalogue. A researcher only needs to create one publication record for the bibliography, which is linked to the relevant catalogue entries. Managing bibliographic entries separately from the artwork entries offers the benefit that any necessary corrections only need to be made in one place. Artwork records that link back to a publication are subsequently updated when bibliographic details change. These steps save time throughout a project’s run time, freeing resources more valuably spent on research efforts.

For me, the key benefit of the digital catalogue raisonné lies in making the latest and most accurate information available to the general public, even after publishing. If the editing tool interlinks seamlessly with the public presentation, any recent developments, like corrections, updates, and additions, can be published with little effort. This allows reworking specific terms that need reevaluation based on changes in scholarship and language. Our goal in integrating a publishing interface into our platform was to give a project team autonomy over making such changes at any time. Keeping the research up to date contributes to the continued relevance of the project. Yet changing or disappearing content represents a frequent concern for readers relying on online sources. Digital catalogue raisonné websites earn trust by ensuring stable access to the information. To establish themselves as dependable reference points, they have to make updates transparent to readers. Our platform supports this by versioning each update of a public catalogue entry and displaying the date of its last change. Potentially, the complete history of those changes could be made visible to highlight exactly which details were altered, added, or removed with each update.

What I also find exciting about the dynamic nature of the digital catalogue raisonné is how it evokes new ways of thinking about conventional modes of publication. Like printed volumes, each focusing on specific periods or techniques of an artist’s oeuvre and released separately over multiple years, digital catalogues can publish one group of works at a time. But this process can be split into even smaller increments. For example, a group of works could be published with just the main details first, while future updates expand the records to include publication references, exhibition history, provenance, and more.

Standing out with “a new approach to catalogue raisonné research” is the *Tom Wesselmann Digital Corpus*, published by the Wildenstein Plattner Institute. This project uses the Navigating.art platform to incorporate ongoing research that is continually updated while working toward a forthcoming catalogue raisonné. This kind of flexibility in terms of when and what to publish is unique to the digital format. It permits access to research findings much earlier. New information may be shared in real time instead of being kept on hold until the whole catalogue is completed. As an added benefit, publishing to the web also raises global awareness of a project’s existence and further promotes a call for information to reach unknown owners.

The expectations for accessing information have changed along with our daily habits, which have adapted to using digital tools. As research tools meeting the demands of
today’s world, catalogues raisonnés find their ideal shape in the digital, interactive format. Over the past decade, various approaches have explored the path for publishing catalogues raisonnés online. But as technology constantly evolves, where will this lead next? I see great potential for joining research results together into a collective research network. Through stable reference points, artist catalogues have the opportunity to interlink with one another. Such a network of information creates the opportunity to explore new perspectives on how the lives, work, and research histories of different artists overlap. Interlinking with other projects extends a catalogue raisonné’s relevance past its completion. By providing licensing or open access to reuse the published data, the research might even extend beyond its field of study, encouraging new and interdisciplinary research projects. There are still challenges to overcome to make this a reality. Technical solutions are already advancing, and the options for readily available software are growing. This situation opens more opportunities for creating a digital catalogue raisonné without needing in-depth technical knowledge. As this fairly young medium still evolves and adapts, it is exciting to witness how more publications take this leap and drive the transformation of traditional art-historical research practices.

*Lisa Weiß is a digital humanities expert at Navigating.art.*

**Notes**


2 Reusability of research data is one of the ultimate goals of the FAIR principles, developed to improve the Findability, Accessibility, Interoperability, and Reuse of digital assets; see M. Wilkinson et al., “The FAIR Guiding Principles for Scientific Data Management and Stewardship,” *Scientific Data* 3, article no. 160018 (2016), [https://doi.org/10.1038/sdata.2016.18](https://doi.org/10.1038/sdata.2016.18); “FAIR Principles,” GO FAIR International Support and Coordination Office, accessed May 17, 2023, [https://www.go-fair.org/fair-principles](https://www.go-fair.org/fair-principles). Such research data management guidelines are widely accepted in scientific disciplines, but they apply all the same to the humanities and other research areas that collect research data.