

Art Museum Collection Provenance as Data

Bailey Berry

INF 438 B: Archival Description and Access Systems

Dr. Jonathan Furner

March 19, 2021

Several art museums have recently made their collection's provenance available as datasets online. Behind this is the intersection of a few different movements including a more critical museology, the rise in provenance research, the open access movement, and the development of digital art history. Museums, more broadly, are at a moment of change and publishing collections data is evidence of this change and an opportunity to fully embrace it. The decision of whether to do so is thus a political one, but it is also a practical one: the labor necessary to prepare machine-readable datasets from archival records is intimidating and not all museums may have the resources necessary to take this on. It is important to explore why some feel this work is important, the political factors museums face in deciding to participate, and the practical barriers that make this work so challenging. While the call is for all cultural heritage institutions to publish collections data more broadly, this paper focuses on art museums and provenance data specifically. Digital art history is a growing field that relies on the publication of art museum collection data, and most often provenance data. As a discipline, it seeks to address some of the same challenges that museums are facing in trying to build a practice that reflects the issues and priorities of the twenty-first century. Through examining art museum provenance data, digital art history, and the shared challenges museums and art historians face in collecting and using this data, this paper points out the advantages of an active partnership between the two.

Museums are literally in the process of redefining themselves. In 2017, under the leadership of Jette Sandahl, members of the International Council of Museums (ICOM) began meeting to rewrite the existing ICOM museum definition, which lays out the purpose and functions of museums internationally. In an interview in 2017, Sandahl explained that she felt the existing museum definition did not speak the language of the twenty-first century.¹ The new definition reframes museums as “democratizing, inclusive and polyphonic spaces for critical dialog...” directly references the need to address contemporary issues and asserts “They are participatory and transparent, and work in active partnership with and for diverse communities to collect, preserve, research, interpret, exhibit, and enhance understandings of the world...”² Museums have faced growing controversy at the turn of the twentieth and into the twenty-first

¹ “The Challenge of Revising the Museum Definition” *International Council of Museums*, <https://icom.museum/en/news/the-challenge-of-revising-the-museum-definition/>, Accessed February 6, 2021.

² “ICOM announces the alternative museum definition that will be subject to a vote” *International Council of Museums*, <https://icom.museum/en/news/icom-announces-the-alternative-museum-definition-that-will-be-subject-to-a-vote/>, Accessed February 5, 2021.

centuries. Concepts like the “Exhibitionary Complex”³ and “Museum as Contact Zone”⁴, which critically examined the history, heritage, and motives of museums ushered in a new era of questioning these institutions. Around the same time that these articles were coming out, there were protests in front of the British Museum by Greek students who felt that its prized Elgin marbles were taken through illegal looting and should be returned to Greece. More museums were faced with a reckoning over the provenance of their collections, a lack of transparency about their practices, exclusion of more diverse voices on staff and among visitors, and a lack of effort to reach out to and interact with communities. Growing movements around decolonization have directly addressed colonial museums and their collections of indigenous and non-Western heritage. The recent Black Lives Matter movement has brought more attention to the ways in which museums and related institutions have historically excluded Black individuals in its collecting policies, hiring, and outreach. Clearly, the twenty-first century has marked a major and contentious shift in the way the public interacts with and thinks about museums.

The beginning of the twenty-first century also marked the growing Open Data movement. This movement gained traction, initially, in scientific disciplines where scholarship has relied on principles of validity and reproducibility, researchers’ individual data often belongs and contributes to the work of a network of colleagues, and reusing existing and published datasets has become a more encouraged form of scholarship. Perhaps best exemplified by the Human Genome Project, which began in 1990 and was completed by 2003, sharing open scientific data has more recently been formalized as a broad policy. The NIH released a mandate in 2003 that requires any research project funded by its grants to make their research available to the public.⁵ In 2004, the international Organization for Economic Co-Operation and Development presented a declaration calling for publicly funded scientific data to be made open.⁶

The humanities have had their own trajectory towards a more open sharing policy. Just as the internet has enabled new policies in sharing scientific data, it has brought new challenges and

³ Tony Bennett. “The Exhibitionary Complex” *New Formations*, 4 (1988): 73-102.

⁴ James Clifford. “Museums as Contact Zones” *Routes, Travel, and Translation in the Twentieth Century* (London: Harvard University Press, 1999).

⁵ “Final NIH Statement on Sharing Research Data.” *National Institutes of Health*, February 26, 2003. <https://grants.nih.gov/grants/guide/notice-files/NOT-OD-03-032.html>

⁶ “OECD Principles and Guidelines for Access to Research Data from Public Funding” *Organization for Economic Co-operation and Development*, 2007. <https://www.oecd.org/sti/inno/38500813.pdf>

initiatives for sharing cultural heritage. Early efforts for open access include Project Gutenberg, the American Memory Project, and the Universal Digital Library. Creative Commons was established in 2002 to encourage the publishing and reuse of creative works online through more flexible copyright policies.⁷ That same year, Google began its project to digitize the world's books.⁸ In 2006, the American Council of Learned Societies released a report titled "Our Cultural Commonwealth" calling for an investment in cyberinfrastructure for the humanities which "will benefit the public and the specialist alike by providing access to the breadth and depth of the cultural record."⁹ The digitization of texts and archival collections brought with it new possibilities to apply computational tools to literature and historical analysis. The burgeoning field of Digital Humanities considers both how information technology can be applied to humanities research, and more broadly how humanities research methodologies can shape and be shaped by these information infrastructures.¹⁰ As attention to and funding for Digital Humanities has grown along with the amount of digitized and open cultural heritage, more humanities disciplines are considering what role information technologies will play in their own work and have begun defining these resources as humanities data.

Much of the record of human cultural heritage is held within museum collections, so museums are implicated in calls for better access to cultural heritage and associated data. While many museums are working to digitize their collections, even this simple act comes with a lot of historical baggage around the history, identity, and definition of museums. Broadening access to collections online gives up some of the control museums have typically had over narratives about them and allows the public to interact with collections outside of a traditional museum context. Carl Hogsden and Emma K. Poulter, who organized the "Talking Objects" project at the British Museum, point out the ways in which digital collections can renew and reimagine the museum as contact zone by enabling multiple interpretations and understandings, even multiple surrogates of

⁷ "1.1 The Story of Creative Commons" *Creative Commons*, <https://certificates.creativecommons.org/cccertedu/chapter/1-1-the-story-of-creative-commons/>, Accessed February 11, 2021.

⁸ "Google Books History" *Google Books*, Archived on the Wayback Machine, <https://web.archive.org/web/20160206043510/http://books.google.com/googlebooks/about/history.html>, Accessed February 11, 2021.

⁹ "Our Cultural Commonwealth". *American Council of Learned Societies Commission on Cyberinfrastructure for the Humanities and Social Sciences* (American Council of Learned Societies, 2006), 2.

¹⁰ Patrik Svensson and David Theo Goldberg "The Field of Digital Humanities", *Between Humanities and the Digital*. (MIT Press, 2015): p. 9-16.

digital collections to exist simultaneously in connected networks.¹¹ They emphasize that the digital realm represents a new way to actively invite meaningful participation from diverse communities into the museum. The movement around digital repatriation asks how digital museum collections can return important cultural knowledge, and control over its dispersal and representation, to original communities.¹² Repatriation advocates have cited the importance of digitizing collections to allow for more transparency about what heritage is currently within museum collections and to enable colonized nations to find that heritage.¹³ Many will view the digitization of collections as a positive and necessary change, and for museums it represents a move towards the contested definition for museums in the twenty-first century.

A movement in digital humanities pushing museums further towards this new definition is the “Collections as Data” Initiative. In 2017, the IMLS funded Collections as Data National Forum released its “Santa Barbara Statement” outlining the ten principles of this initiative. The first principle states “Collections as data development aims to encourage computational use of digitized and born digital collections.”¹⁴ Cultural Heritage institutions are encouraged not only to digitize collections, but to do so in a way that enables them to be processed as data. In many ways this represents the intersection of the changing role of museums in the public sphere, the open data movement, and the digital humanities. When museums publish collections as data, they enable new digital humanities scholarship, invite an unprecedented level of engagement with their objects, and become more transparent institutions. While digitizing collections still allows some control over how these objects are presented and characterized, allowing for the large-scale analysis of these collections as data means truly inviting the public to interpret the collections in whatever way they see fit. This unprecedented transparency also enables a growing number of projects examining museum practices. This means, for example, articles pointing out

¹¹ Carl Hogsden and Emma K Poulter, “The Real Other? Museum Objects in Digital Contact Networks” *Journal of Material Culture*, 17, no. 3 (2012): 265-286.

¹² Joshua A. Bell, Kimberly Christen, and Mark Turin, “After the Return, Digital Repatriation and the Circulation of Indigenous Knowledge Workshop Report” *Museum Worlds*, 1, no. 1 (2013): 195-203. DOI: <https://doi.org/10.3167/armw.2013.010112>

¹³ See Susan Douglas and Melanie Haynes, “Giving Diligence its Due: Accessing Digital Images in Indigenous Repatriation Efforts.” *Heritage*, 2 (2019): 1260-1273. doi:10.3390/heritage2020081 and “Repatriation of Museum Objects” Webinar Recording, Cornell University Center for International Studies, October 23, 2020. <https://einaudi.cornell.edu/discover/news/watch-repatriation-museum-objects-webinar-recording>

¹⁴ “The Santa Barbara Statement on Collections as Data” *Always Already Computational – Collections as Data*, <https://collectionsasdata.github.io/statement/>, Accessed February 11, 2021.

the percentage of white male artists in museum collections.¹⁵ At a time when museums are embroiled in controversies over their relationship to the public, the provenance of their collections, and their broader role in society, opening their collections to analysis invites further scrutiny.

Despite pushback from museums about their changing definition, major institutions such as the Getty, the Metropolitan Museum, and MoMA have made their collection data open through a combination of digital collections, API's, and published datasets on Github. In February of 2020, The Smithsonian premiered "Smithsonian Open Access", which released copyright restrictions from 2.8 million digital collection images and "nearly two centuries of data."¹⁶ This new model takes the idea of public participation and dialog to a new level. Beyond presenting exhibits or educational products that inspire dialog, it invites the public to do what they will with the information without the interference of the museum. As the Smithsonian states in their press release, "With Smithsonian Open Access, we're inviting people everywhere to make that knowledge their own—to share and build on our digital collections for everything from creative works, to education and scholarly research, to bold innovations we have yet to imagine."¹⁷ Museums have increasingly factored the public into how they are run and what they exhibit. Now they are removing traditional barriers to collections access and are inviting the public to examine, research, and make sense of those collections on their own terms.

Art museums and their collections present an interesting case study for the advantages and challenges of cultural heritage collections as data. Their collections are closely tied to the developing Digital Humanities turn in art history and the rise of Provenance research. The Getty Provenance Index, which was a project that the curator of European paintings, Burton Fredericksen, began in the 1980's, is an early attempt to make provenance and collection data more available to a wider research community. In 2016, the Getty Provenance Index began a "remodel" to republish the index as Linked Open Data sets and began distributing completed sets

¹⁵ See Julia Halperin and Charlotte Burns, "Museums Claim They're Paying More Attention to Female Artists. That's an Illusion" *Artnet News*, September 19, 2019. <https://news.artnet.com/womens-place-in-the-art-world/womens-place-art-world-museums-1654714>; and Chad M. Topaz et al. "Diversity of artists in major U.S. Museums" *Plos One*, (March 20, 2019). <https://doi.org/10.1371/journal.pone.0212852>

¹⁶ "Smithsonian Releases 2.8 Million Free Images for Broader Public Use." *The Smithsonian*, February 25, 2020. <https://www.si.edu/newsdesk/releases/smithsonian-releases-28-million-free-images-broader-public-use>

¹⁷ Ibid.

on Github. This ambitious project reflected and continues to reflect a growing emphasis on provenance research in art history. This is partially due to demands for better transparency from museums around their collection practices. In fact, the Getty Museum has been involved in several controversies around Italian and Greek antiquities collected between 1977-1996.¹⁸ Provenance research is associated, as well, with the growing trend of the Object Biography, a theory attributed to Igor Kopytoff in 1986 which argues for the importance of researching and publishing information about the lifecycle of objects through creation, exchange, and consumption. Art history, museum studies, and anthropology have embraced the process of studying the biography of an object through museum collection records and metadata. Object biographies and museum metadata have increasingly been associated with a movement to confront the colonial legacies of many universal and ethnographic Museums. For example, in 2001 Susan M. Vogel created the film “Fang: An Epic Journey”, which traces the fictional biography of an African sculpture as it is removed from Africa and recontextualized through the art market and displayed in an art museum. The film is based on similar life histories of African objects in the Metropolitan Museum, where Vogel was a curator of African art.¹⁹ The recently published book *The Brutish Museums: The Benin Bronzes, Colonial Violence, and Cultural Restitution*, by Dan Hicks, calls for the study and publication of “Object Necrographies”, which draw attention to the silences in the ‘lives’ of objects, traced through museum provenance records, and the colonial legacies they represent.²⁰

Digitized collection data, and specifically provenance data, has become the centerpiece of an emerging digital humanities shift in art history. In 2010, before the remodel began, Maximillian Schich and a team of colleagues proposed applying network science to the Getty Provenance Index data. The result was several maps of British, French, Belgian, and Dutch sales data from 1801-1820 presented at conferences at the National Gallery, London and the

¹⁸ Hugh Eakin. “An Odyssey in Antiquities Ends in Questions at the Getty Museum.” *The New York Times*, October 15, 2005. <https://www.nytimes.com/2005/10/15/arts/design/an-odyssey-in-antiquities-ends-in-questions-at-the-getty-museum.html>

¹⁹ Susan M. Vogel “Fang: An Epic Journey” *Rand African Art*, (2001). https://www.randafricanart.com/Fang_an_epic_journey.html

²⁰ Dan Hicks. *The Brutish Museums: The Benin Bronzes, Colonial Violence, and Cultural Restitution*. (Pluto Press, 2020).

International Conference for Network Science in Berkeley in 2013.²¹ In 2009, Beatrice Joyeux-Prunel and colleagues at the Ecole Normale Supérieure in Paris began the Artl@s project, which supports a spatial art history. The project advocates visualizing digital art historical and provenance data in mapping software to construct a more global and pluralistic network of artistic exchange.²² Artl@s is an ongoing digital project that continues to compile art catalogs from the 19th and 20th Century in order to trace the internationalization of the art market during that period.²³ In 2015, IMLS funded the “Art Tracks” project by the Carnegie Museum of Art that developed a suite of open-source tools for turning art museum provenance records into data. They also developed the Digital Provenance Standard which provides guidance for making museum provenance data machine-readable.²⁴ In May of 2020, the first edition of the *Routledge Companion to Digital Humanities and Art History* was published with an entire section devoted to “Archives, Networks, and Maps” with several examples of projects that have used provenance data in art history to create maps and network diagrams.²⁵

Practitioners of digital art history projects point out that the more collections and collections provenance data are digitized, the more it opens the profession up to a distance viewing research practice. Aligned with movements to reform the museum, these scholars are interested in broadening the scope of art history and shifting its center away from traditional Western points of focus. Instead of focusing on individual objects or actors of note, art historians using provenance data analysis can examine the broader movements, shifts, and networks of art history. This can mean that traditionally overlooked artists or movements are more likely to be found- as Harold Klink states, Digital Art History brings the ‘Great Unseen’ to scholarly attention.²⁶ Joyeux-Prunel elaborates on this concept in discussing her own work, stating that with new trends in art historical mapping and digital art history, “Research has become more

²¹ Maximillian Schich, et al. “Network Dimensions in the Getty Provenance Index”. *ArXiv: Physics and Society* (June, 2017).

²² Beatrice Joyeux-Prunel. “Spatial Digital Art History: A Total Art History? – The Artl@s Project”. *Visual Resources*, 29: 1-2 (2013): 47-58.

²³ “Data” Artl@s. <https://artlas.huma-num.fr/map/#/>, Accessed February 1, 2021.

²⁴ “Overview” *Art Tracks*. Carnegie Museum of Art, <http://www.museumprovenance.org/>, Accessed February 1, 2021.

²⁵ *The Routledge Companion to Digital Humanities and Art History*. Edited by Katheryn Brown (New York: Routledge, 2020). <https://doi.org/10.4324/9780429505188>

²⁶ Harold Klink, “The Digital Transformation of Art History”, *The Routledge Companion to Digital Humanities and Art History*, (New York: Routledge, 2020): 35.

global and includes the ‘peripheries’ as well as the traditional ‘centers’; more social, insofar as it takes into account groups and populations as opposed to canonical artists; and more art historical in its tracing of the circulation of artifacts and images in diverse contexts.”²⁷ This trend in art history, which relies on the partnership of museums who make their collections and metadata open and available, builds on the larger movement for a focus on the contexts behind objects in museums, transparency about networks of collection and trade, and a shift towards more inclusive and complete narratives in the cultural information being conveyed by these institutions. Digital Art History projects also have the potential to visualize and clarify problematic provenance data, contributing to better transparency about museum collections and the art market. Jodi Cranston, who has built websites mapping the journeys of European artworks, states “Shameful pasts are easier to conceal in a list of text. Gaps in provenance are far more obvious when noted in a map where there is no place for a pin to land or where a painting essentially disappears from history because of the incompleteness of archival information that is typically relied upon to guarantee authenticity and originality.”²⁸

These projects center around the process of turning provenance records into computational data. This process is complicated, however, in the same way that the idea of “humanities data” is complicated. As Miriam Posner has stated, calling something data means that “its meaningful qualities can be enumerated in a finite list; that someone else performing the same operations on the same data will come up with the same results.”²⁹ The truth is that something like provenance “data” is messy and the act of compiling it or collecting it requires a complex series of interpretive, subjective decisions. Eric Hormell, who currently works on the Getty Provenance Index project, described the complications of converting even one data value, sales prices, into linked open data. He explains that prices can be in different forms, written by hand and difficult to read, or reflect estimations instead of an exact price. Translating this into fixed data is a difficult and time-consuming task.³⁰ It also requires making decisions about what is included, how it is presented, and how missing information is conveyed (or whether it is

²⁷ Beatrice Joyeux-Prunel, “Digital Humanities For a Spacial, Global History of Art”, 88.

²⁸ Jodi Cranston, “Mapping Paintings, or How to Breathe Life into Provenance”, *The Routledge Companion to Digital Humanities and Art History*, (New York: Routledge, 2020): 117.

²⁹ Miriam Posner “Humanities Data: A Necessary Contradiction”, *Miriam Posner’s Blog*, June 25, 2015. <https://miriamposner.com/blog/humanities-data-a-necessary-contradiction/>

³⁰ Eric Hormell, “The Ripple Effect in Provenance Data Standardization”, *Iris*, The Getty, August 21, 2018. <https://blogs.getty.edu/iris/the-ripple-effect-in-provenance-data-standardization/>

conveyed) that inevitably represent an institutional perspective or worldview. Differences in how these decisions are made between institutions can make aggregating data from several sources difficult. Communities of Practice, such as OpenGLAM and LODLAM have emerged to shape policies to address and standardize these decisions in support of broader sharing of and access to collections data. The Carnegie Museum of Art provenance standard, which builds on the American Association of Museums' provenance standard, is designed to aid in resolving data ambiguities in provenance specifically. Acknowledging the need for new data models that better support event-based models for provenance, more closely aligned with the computational-friendly CIDOC-CRM ontology, the CMOA provenance standard offers a way to work with existing document-based provenance models. Its solutions are deceptively simple: for example, standardizing how to express period uncertainty (with the inclusion of the word "possibly"), where to begin provenance records (with "Artist as first period"), or providing a list of standardized terms for methods of acquisition.³¹

The difficult decisions involved in applying even these simple guidelines are especially evident when considering non-Western collections. The more institutions are asked to make complex data conform to a standardized, computational form, the more their perspective and worldview becomes expressed in that data. This can mean that, instead of revealing marginalized and diverse narratives, publishing and interpreting collections data risks further centering a Western, European worldview. In the "Mapping Senufo" project, art historians point out that the metadata in archival records is often socially constructed. They explore how the art historical label "Senufo", referring to a particular tribe in Africa, was in fact a label given to an artwork for the convenience of European art markets looking to credit a "creator".³² Thus, an instruction as straightforward as listing the "artist as first period" can become complicated when applied to non-Western art forms. Mary Nooter Roberts points out that most African artworks taken by colonial officials were done so without the collection of any accompanying metadata. Even if art historians do attribute, after painstaking archival research, an artist- it is often not a traditional

³¹ "The CMOA Digital Provenance Standard" *Art Tracks*, Carnegie Museum of Art, October 20, 2016. <http://www.museumprovenance.org/reference/standard/>

³² Susan Elizabeth Gagliardi, "Mapping Senufo" *The Routledge Companion to Digital Humanities and Art History*, (New York: Routledge, 2020).

name, but a constructed title created by an historian or curator, like the “Warua Master”.³³ Nooter goes on to point out that, in the case of the Luba people of West Central Africa, the same weight is not given to identifying an artist because the importance of an object has always been its use, and not its creation.³⁴ These issues only become amplified with concepts of linked data, which rely on authority records. Determining what is considered an authoritative version of an object’s title, its creator, or its culture is fraught with complicated power dynamics. Standardizing terms for “method of acquisition” is also especially loaded when applied to collections in colonial museums. Many museums will have to think carefully about how they would like to characterize the ways in which objects were collected by colonial officers.

Art museums hoping to publish their provenance data face an unenviably difficult task. Using archival documents and related materials to create datasets takes time and a lot of labor. Building these datasets means facing complex decisions about how to convey uncertain, contradictory, or missing information. Publishing these datasets means, often, exposing some skeletons in these museums’ collection practices. Anne Luther outlines the five stars of making provenance data truly open access. At the lowest level, museums can simply digitize records, such as catalogs. To truly be part of the movement and achieve five stars, however, means putting in the labor to convert this material to a structured data format, linking data to other sources, and adding context.³⁵ Smaller museums who have a more limited budget may be hesitant to participate. Even larger museums may be tempted to wait until their provenance data is polished enough to publish. However, for institutions who prioritize connecting diverse communities with their collections to allow for meaning making to occur, it is a question of quantity and not quality: publishing a digitized version of catalog records is better than not publishing anything at all.

Museums do not have to take on this responsibility alone: digital art history scholars are an important and eager partner in this work. In defining the Collections as Data Imperative, Thomas Padilla challenges cultural institutions not to think of “target audiences”, but to think about partnerships.”³⁶ By making imperfect or messy provenance data sets open to digital art

³³ Mary Nooter Roberts. “The Naming Game, Ideologies of Luba Artistic Identity” *African Arts*, 31, no. 4, 56-73, 90-92.

³⁴ Ibid, 66.

³⁵ Anne Luther, “Digital Provenance, Open Access, and Data-Driven Art History”, 450.

³⁶ Thomas Padilla, “On A Collections as Data Imperative” UC Santa Barbara (2017): 2.

historians, museums can share some of the responsibility of clarifying them. For digital art history scholars, investigating, filling in, and problematizing missing data is central to their practice. The digital art history projects that have already taken place often center precisely around, as Cranston states, investigating and “filling in” gaps in the archival record and revealing where they represent a bias or worldview. While museums may be hesitant to share provenance data with large gaps, “As an academic, I see those gaps not as barriers but as invitations for interpretation and as symptoms of some related, yet distinct, historical event or moment.”³⁷ Opening their imperfect provenance data to scholarly partners offers an opportunity for museums and scholars to build richer, more nuanced data sets over time.

While complicated, developing and adopting new metadata standards and ontologies that support the creation and exchange of collections provenance data, is a necessary step. The CMOA provenance standard represents an important development in this direction. However, critical work must take place to ensure that there is flexibility and diversity within these standards. Museums and museum professionals will have to consider and consult more diverse voices, definitions, languages, and uses in their development. Here, again, partnerships between museums and art history scholars offer rich opportunities for growth. One example of where this partnership has been effective is the Numisma Linked Data project. Scholars from the coins of the Roman Empire community developed a standardized metadata set with discipline-specific terms to address the need for linked open data sets of digitized coins. For this scholarly community, tracing the dispersal of these coins and their uses within different contexts was vital for research- creating standardized metadata for publishing roman coin collections allowed scholars to trace the movement of coins internationally.³⁸ Scholars continue to suggest how these vocabularies should be expanded, which is essential when considering such an international network of owners and contexts. Through its website, Numisma actively invites feedback on its standards and new contributions to its vocabularies. Of course, there is a precedent for partnership with scholarly communities in developing standards. The Getty Vocabularies, a major source of authority records, welcomes the contributions of independent scholars as an important part of its development. As art historians make data analysis a more essential aspect of their work, they will become even more vital resources for identifying gaps in existing standards

³⁷ Jodi Cranston, “Mapping Paintings”, 117.

³⁸ Robert Wellington, “Metadata, Material Culture, and Global Art History”, 330.

and vocabularies and offering a broader perspective for enabling discoverability on an international scale.

Part of a more open access practice, and embracing collections as data, is also considering how information about these collections can be disseminated online and in the museum. Digital art history projects have shown the potential for better methods of communicating complex metadata in a way that invites further questions and open dialog. These methods extend beyond the traditional exhibit or museum catalog. Digital art historians are considering how new tools can breathe life into art historical data. In describing a project that digitally projected a recreation of a Studiolo based on archival research, Stefania De Vincentis and Luca Nicolo Vascon write, “By initiating a dialogue between the academic study of the history of the artwork and current museum practices, DAH [Digital Art History] can focus on the purposeful dissemination of research results and configure a novel space of interaction between the artwork, scholars, and visitors”.³⁹ The Mapping Senufo project aims to build a relational database and layered map to reveal and complicate the positionality of assigning Senufo as a marker of identity in art historical metadata. The team plans to publish findings as a digital publication, enabling interactivity. Readers of the publication will be able to “isolate and investigate particular objects, images, people, places, and events integral to the ongoing definition of a single category of art.” In doing so, “Mapping Senufo will thus embody complexity and contingency at the core of identities, style labels, and knowledge construction.”⁴⁰ At the “Art History in Digital Dimensions” conference sponsored by the Getty Research Institute and the Samuel H. Kress Foundation, participants also voiced the hope that Digital Art History could help build a more accessible Public Art History that considers and includes a broader audience.⁴¹ Digital art historians as partners offer new ways to present collections and data about collections. Opening collections to these projects can expand the possibility for knowledge distribution and engagement with the public.

³⁹ Stefania De Vincentis and Luca Nicolo Vascon, “Digital Languages for Art History, Audience Engagement, Virtual and Augmented Reality”, 276.

⁴⁰ Susan Elizabeth Gagliardi, “Mapping Senufo”, 137.

⁴¹ Stephen Bury, et al. “Art History in Digital Dimensions, The White Paper” *Digital Art History Lab Committee*, Frick Art Reference Library, February, 2017, 6.

For both museums and art historians, this new type of scholarship means learning the conventions and best practices of the larger data community. Museums and humanities scholars who want to build and share datasets must know how to manage, document, and preserve that data. Increasingly, as more scholars take on the work of building provenance datasets that represent global networks of cultural exchange, they will have to think about how to allow their colleagues to use and build off their data. This will require an even more active participation in the open data movement and critical engagement with traditionally scientific practices, such as FAIR (Findable, Accessible, Interoperable, Reusable) data principles. Thomas Padilla points to issues in lack of documentation for library collections data that prevent this open exchange. He cites the vital importance of making it clear how the data was cleaned and processed, what schema were used, the purpose behind choices for which collections are digitized, and data quality overall.⁴² For museum provenance data, which is the product of a myriad of choices and often includes imperfect and incomplete datasets, this documentation is especially important. While museums may not have to wait until their data is perfect and “complete” to publish it, they do have to ensure that every choice made in preparing that data, the stakeholders and authors involved in the dataset, any associated schema or standard consulted, and potential imperfections in the data are well documented and readily available to a potential user. Scholars and museums will also have to turn a critical eye to how data is collected and visualized. As Harold Klink points out, they must develop “data literacy”, or broader critiques of how data was gathered and potential biases, the algorithms used to gather that data, and the visualizations used to represent that data.⁴³ Johanna Drucker is often cited when discussing the dangers of simply applying visualization tools created for quantitative data to humanities data. She explains that these visualizations often carry assumptions about data as “given”, a realist perspective “fundamentally at odds with approaches to humanities scholarship premised on constructivist principles.”⁴⁴ Scholars and museums who visualize provenance data must be critical of themselves and their colleagues, pushing the presentation of this data to reflect the more constructivist, humanistic lens traditional to art history. They must adopt scientific methods and question them, moving back and forth between qualitative and quantitative analysis to “make

⁴² Thomas Padilla, “On a Collections as Data Imperative”, *Scholarly Communications*, 79, no. 6 (2018): 3.

⁴³ Harold Klink, “The Digital Transformation of Art History”, 38.

⁴⁴ Johanna Drucker, “Humanities Approaches to Graphical Display”, *Digital Humanities Quarterly*, 5, no. 1 (2011).
<http://www.digitalhumanities.org/dhq/vol/5/1/000091/000091.html>

research of a particular subject more systematic or precise, while at the same time complicate the very process of classification and quantification.”⁴⁵

For museums and for art historians, to engage in the collections as data movement requires potentially major shifts in their current practices. Museums will have to make difficult decisions about allocating staff and budgets to undertake this work. It may mean a fundamental reordering in institutional priorities for education and exhibition. For art historians to be active participants in this work, they will have to expand the definition of art history research. Researchers will need to learn about data mining, analysis, and visualization rather than or alongside more traditional uses of archival databases. Both will have to learn about, and engage in, data literacy. Museums and scholars will have to learn best practices for ensuring their data is legible, findable, and reusable. They will have to be active in creating, editing, and implementing metadata standards.

This does not mean that the risks or challenges outweigh the potential rewards of this work. Publishing collections as data presents an opportunity for museums to embrace the twenty-first century role advocated by the new museum definition. By taking on the challenge to make not only their collections available for wide public use, but data about those collections, museums are creating space for a more participatory and collaborative public. Allowing the scrutiny and complicated politics that may result from this transparency will not be comfortable but could foster a meaningful interaction with contemporary issues in social justice, decolonization, and equity. For art historians, engaging in this work could facilitate the presentation of more diverse, overlooked narratives in art history. It could expand the field and pave the way for new research questions. The partnership between the two could enable a new level of access to museum collections and a critical engagement with the worldviews and biases implicit within them. As more museums develop their digital collections and more data becomes available to art historians, the question may become not “whether”, but “how soon” will these changes occur. At this point an active partnership will be important not only in carrying out the work, but doing so in a way that is careful, critical, and inclusive.

⁴⁵ Miriam Kienle, “Between Nodes and Edges: Possibilities and Limits of Network Analysis in Art History.” *Artl@s Bulletin*, 6, no. 3 (2017): 6.

Works Cited

- Bell, Joshua A., et. al. "After the Return, Digital Repatriation and the Circulation of Indigenous Knowledge Workshop Report" *Museum Worlds*, 1, no. 1 (2013): 195-203.
DOI: <https://doi.org/10.3167/armw.2013.010112>
- Bennett, Tony. "The Exhibitionary Complex" *New Formations*, 4 (1988): 73-102.
- Bury, Stephen et al. "Art History in Digital Dimensions, The White Paper" *Digital Art History Lab Committee*, Frick Art Reference Library, February, 2017.
- "The Challenge of Revising the Museum Definition" *International Council of Museums*, <https://icom.museum/en/news/the-challenge-of-revising-the-museum-definition/>, Accessed February 6, 2021.
- Clifford, James. "Museums as Contact Zones." *Routes, Travel, and Translation in the Twentieth Century*. London: Harvard University Press, 1999.
- Cranston, Jodi. "Mapping Paintings, or How to Breathe Life into Provenance", *The Routledge Companion to Digital Humanities and Art History*. New York: Routledge, 2020.
- Douglas, Susan and Melanie Haynes, "Giving Diligence its Due: Accessing Digital Images in Indigenous Repatriation Efforts." *Heritage*, 2 (2019): 1260-1273.
doi:10.3390/heritage2020081
- Drucker, Johanna. "Humanities Approaches to Graphical Display", *Digital Humanities Quarterly*, 5, no. 1 (2011).
<http://www.digitalhumanities.org/dhq/vol/5/1/000091/000091.html>
- Eakin, Hugh. "An Odyssey in Antiquities Ends in Questions at the Getty Museum." *The New York Times*, October 15, 2005. <https://www.nytimes.com/2005/10/15/arts/design/an-odyssey-in-antiquities-ends-in-questions-at-the-getty-museum.html>
- Gagliardi, Susan Elizabeth. "Mapping Senufo." *The Routledge Companion to Digital Humanities and Art History*. New York: Routledge, 2020.
- Halperin, Julia and Charlotte Burns, "Museums Claim They're Paying More Attention to Female Artists. That's an Illusion" *Artnet News*, September 19, 2019.
<https://news.artnet.com/womens-place-in-the-art-world/womens-place-art-world-museums-1654714>
- Hicks, Dan. *The Brutish Museums: The Benin Bronzes, Colonial Violence, and Cultural Restitution*. Pluto Press, 2020.
- Hogsden, Carl and Emma K Poulter, "The Real Other? Museum Objects in Digital Contact Networks" *Journal of Material Culture*, 17, no. 3 (2012): 265-286.
- Hormell, Eric, "The Ripple Effect in Provenance Data Standardization", *Iris*, The Getty, August 21, 2018. <https://blogs.getty.edu/iris/the-ripple-effect-in-provenance-data-standardization/>

- “ICOM announces the alternative museum definition that will be subject to a vote” *International Council of Museums*, <https://icom.museum/en/news/icom-announces-the-alternative-museum-definition-that-will-be-subject-to-a-vote/> , Accessed February 5, 2021.
- Joyeaux-Prunel, Beatrice. “Spatial Digital Art History: A Total Art History? – The Artl@s Project”. *Visual Resources*, 29: 1-2 (2013): 47-58.
- Kienle, Miriam. “Between Nodes and Edges: Possibilities and Limits of Network Analysis in Art History.” *Artl@s Bulletin*, 6, no. 3 (2017).
- Klinke, Harold. “The Digital Transformation of Art History.” *The Routledge Companion to Digital Humanities and Art History*. New York: Routledge, 2020.
- “OECD Principles and Guidelines for Access to Research Data from Public Funding” *Organization for Economic Co-operation and Development*, 2007. <https://www.oecd.org/sti/inno/38500813.pdf>
- “Our Cultural Commonwealth”. *American Council of Learned Societies Commission on Cyberinfrastructure for the Humanities and Social Sciences*. American Council of Learned Societies, 2006.
- Padilla, Thomas. “On a Collections as Data Imperative”, *Scholarly Communications*, 79, no. 6 (2018).
- Posner, Miriam. “Humanities Data: A Necessary Contradiction.” *Miriam Posner’s Blog*, June 25, 2015. <https://miriamposner.com/blog/humanities-data-a-necessary-contradiction/>
- “Repatriation of Museum Objects” Webinar Recording, Cornell University Center for International Studies, October 23, 2020. <https://einaudi.cornell.edu/discover/news/watch-repatriation-museum-objects-webinar-recording>
- Schich, Maximilian, et al. “Network Dimensions in the Getty Provenance Index”. *ArXiv: Physics and Society* (June, 2017).
- “Smithsonian Releases 2.8 Million Free Images for Broader Public Use.” *The Smithsonian*, February 25, 2020. <https://www.si.edu/newsdesk/releases/smithsonian-releases-28-million-free-images-broader-public-use>
- Svensson, Patrick and David Theo Goldberg “The Field of Digital Humanities”, *Between Humanities and the Digital*. MIT Press, 2015: p. 9-16.
- “The Santa Barbara Statement on Collections as Data” *Always Already Computational – Collections as Data*, <https://collectionsasdata.github.io/statement/> , Accessed February 11, 2021.
- Topaz, Chad M. et al. “Diversity of artists in major U.S. Museums” *Plos One*, (March 20, 2019). <https://doi.org/10.1371/journal.pone.0212852>
- Vogel, Susan M. “Fang: An Epic Journey” *Rand African Art*, (2001). https://www.randafricanart.com/Fang_an_epic_journey.html