
Johanna Drucker, Anne Helmreich, Matthew Lincoln et Francesca Rose

Digital art history: the American scene

Avertissement

Le contenu de ce site relève de la législation française sur la propriété intellectuelle et est la propriété exclusive de l'éditeur.

Les œuvres figurant sur ce site peuvent être consultées et reproduites sur un support papier ou numérique sous réserve qu'elles soient strictement réservées à un usage soit personnel, soit scientifique ou pédagogique excluant toute exploitation commerciale. La reproduction devra obligatoirement mentionner l'éditeur, le nom de la revue, l'auteur et la référence du document.

Toute autre reproduction est interdite sauf accord préalable de l'éditeur, en dehors des cas prévus par la législation en vigueur en France.

revues.org

Revues.org est un portail de revues en sciences humaines et sociales développé par le Cléo, Centre pour l'édition électronique ouverte (CNRS, EHESS, UP, UAPV).

Référence électronique

Johanna Drucker, Anne Helmreich, Matthew Lincoln et Francesca Rose, « Digital art history: the American scene », *Perspective* [En ligne], 2 | 2015, mis en ligne le 07 décembre 2015, consulté le 21 janvier 2016. URL : <http://perspective.revues.org/6021> ; DOI : 10.4000/perspective.6021

Éditeur : Institut national d'histoire de l'art
<http://perspective.revues.org>
<http://www.revues.org>

Document accessible en ligne sur :
<http://perspective.revues.org/6021>

Document généré automatiquement le 21 janvier 2016. La pagination ne correspond pas à la pagination de l'édition papier.

Johanna Drucker, Anne Helmreich, Matthew Lincoln et Francesca Rose

Digital art history: the American scene

- 1 *In the United States, as elsewhere, the continuous application and evolution of digital technology in art history research, publishing and teaching since the 1980s have had a profound impact on the discipline. The disappearance of slides in favour of digital images is widely cited as one of the first visible signs of the digital revolution challenging and revolutionising the discipline today. Digital tools have indeed led to a reshaping of the entire art history infrastructure, and to a renewal of methods and practice in the manipulation, study, presentation and dissemination of images and texts. New thinking and fields of activity have emerged, ranging from extensive campaigns to digitise artworks, and primary and secondary textual sources, to the creation of increasingly rich, user-friendly databases, and online publications. Paralleling this is a growing awareness of the importance of taxonomy and the standardisation of data and formats to facilitate the large-scale sharing of digital files. Never before has the international art history community had access to such an extensive pool of resources. In this constantly-evolving landscape, it seems appropriate to question the contribution of ‘digital art history’ to the discipline as a whole, beyond the optimisation of research methods and access to resources. Does digital art history have the potential for foundational change, revolutionising the discipline and its core practices?¹*
- 2 *Digital art history enjoys increasing prominence in debates about the future of the discipline in the United States, as evidenced by the growing number of research and teaching programmes in the field, together with conferences, lectures and publications, discussions and posts about the topic across social media (blog, Google Hangouts, Storify, Twitter, etc.). A handful of researchers are spearheading this activity. In the space of just a few years, they have become the leading advocates and spokespeople for American digital art history.² Through their experimentation with digital tools for the organisation and visualisation of research data, they have contributed to a better definition of what is covered by the term “digital”, and to debates concerning its implications for art history. Their projects fall broadly into four categories (these are also the categories comprising the digital humanities in the wider sense): text analysis, spatial analysis, network analysis and image analysis.³ Some combine a variety of approaches, notably Anne Helmreich and Pamela Fletcher in their online article “Local/Global: Mapping Nineteenth-Century London's Art Market”⁴, which uses network analysis and spatial analysis (historical cartography via a geographic information system or GIS facilitating the organisation, visualisation and analysis of data sets). In combination, these two approaches allow the authors to draw conclusions about the art market in nineteenth-century London that would have been impossible without the support of digital technology, given the complex local, international and temporal nature of the subject. This is one example among many: to cite just three examples, Mapping Gothic France is a major undertaking facilitating the visualisation and comparison of gothic buildings in minute architectural detail⁵; Digital Mellini is a critical edition of the inventory of the Roman Mellini art collection, and a model platform for collaborative working;⁶ and Photogrammar facilitates thematic and comparative analysis of the 170,000 photographs taken by the United States Farm Security Administration and Office of War Information (FSA-OWI) from 1935 to 1945.⁷ These projects draw on large, complex data sets that they make accessible and intelligible in unprecedented ways, facilitating new avenues of research, and new approaches to the history of art and the study of individual works.*
- 3 *The role of private foundations as the driving force behind this expanding research landscape is of course a specifically American phenomenon. Leading the way are The Andrew W. Mellon Foundation, the Getty Foundation and the Samuel H. Kress Foundation. All three are actively engaged in the development of digital art history through their support for research, modelling, publishing and teaching, especially summer institutes offered at US institutions in 2014 and 2015. The College Art Association (CAA) is another important player*

on the American scene. CAA supports art historians and practising artists, and has recently incorporated digital art history into its programme, hosting a dedicated *That Camp*, since 2013. CAA also seeks to advance new thinking in the field, in response to researchers' comments on the very real obstacles faced when embarking on digital projects, namely the problem of research evaluation criteria (which in turn affects project recognition in the promotion and tenure criteria for academic art historians), the lack of formal training, the thorny question of the sustainability of projects, inadequate resources (both budgetary and human), and the legal headaches provoked by copyright issues relating to both texts and images. In autumn 2014, the CAA created a task force examining the evaluation criteria for digital art history projects, in support of their recognition and validation within the American university system.⁸ Finally, and most recently, Pamela Fletcher has been appointed to the new post of "Field Editor for the Digital Humanities and Art History" with the online journal of the CAA, *caa.reviews* to give greater visibility to debate and projects in the field of digital art history.⁹

- 4 Everyone committed to promoting digital art history in the US agrees that digital tools open up positive avenues of exploration for art historical research. Criticism has been voiced nonetheless, citing current projects and questioning their contribution to the discipline so far, and the real extent of the digital revolution.¹⁰ But this, of course, is by no means a specifically American phenomenon. [Francesca Rose]

Francesca Rose. *What do you consider an inspiring example of digital art history research and scholarship? What are some promising current directions and new trends in digital art history today?*

Anne Helmreich. Answering this question naturally prompts consideration of what defines digital art history, a topic receiving increasing attention of late.¹¹ An entry point can be located in the report issued by the American Council of Learned Societies' Commission on Cyberinfrastructure for the Humanities and Social Sciences. It defines digital scholarship as including: building a digital collection of information for further study and analysis; creating appropriate tools for collection-building; creating appropriate tools for the analysis and study of collections; using digital collections and analytical tools to generate new intellectual products; creating authoring tools for these new intellectual products, either in traditional forms or in digital form.¹²

With this expansive definition, several compelling examples come to mind. We can consider, for example, scholarly editions such as *The Correspondence of James McNeill Whistler*, which amply demonstrates how digital editions can make searching much easier and faster, as well as *Vincent Van Gogh: The Letters*, with its side-by-side presentation of facsimile pages, transcriptions, and translations.¹³ With respect to tools, the one that comes most readily to mind is Omeka, a resource developed by the Roy Rosenzweig Center for History and New Media (RRCHNM), which allows scholars to build and organize collections and present them to the web with narrative text.¹⁴ The RRCHNM recently received a grant from the Getty Foundation to enhance Omeka to better serve the needs of art historians. The Getty Foundation, through its Online Scholarly Catalogue Initiative, has also supported the development of the OSCI toolkit, which allows museums to publish dynamic, media-rich catalogues of their permanent collections, as in the case of the Art Institute of Chicago's *Monet: Paintings and Drawings at the Art Institute of Chicago*.¹⁵

This leaves us with "using digital collections and analytical tools to generate new intellectual products," which I find to be the most challenging and exciting frontier of digital art history. In my own work, I am very interested in how approaches and techniques of network analysis can be adopted for art-historical questions. Visitors to the Museum of Modern Art's exhibition *Inventing Abstraction: 1910-1925* were greeted by a large network analysis of the artists who collectively reinvented the language of painting and sculpture in the early twentieth century. While some scholars might observe that we already knew that Pablo Picasso was at the heart of this quest, this network diagram also drew attention to the critical and central

role played by women artists such as Sonia Delaunay and Natalia Goncharova. More recently, the Art Institute of Chicago developed an interactive website that allows one to explore the relationships among the artists in the circle of James McNeill Whistler and Theodore Roussel.¹⁶ Another mode of analysis that is proving to be quite promising in digital art history is spatial analysis, which includes mapping projects as well as three-dimensional reconstructions. Paul Jaskot, Anne Kelly Knowles, Andrew Wasserman, Stephen Whiteman, and Benjamin Zweig have published an insightful article on the interdependent relationship between digital mapping methods and research questions.¹⁷ Lisa Snyder, who has developed a compelling digital reconstruction of the World's Columbian Exposition of 1893, is directing a National Endowment for the Humanities Summer Institute in collaboration with Alyson Gill on advanced problems and issues facing scholars working with 3D content, which will culminate in a symposium in 2016.¹⁸

Johanna Drucker. My choice might seem odd, since it is a research tool, not an artwork or collection, but the Getty Provenance Index demonstrates the value of computational methods for art history. Because the data in the Index have been culled from a wide variety of sources such as catalogues, inventories, auction data, and so on, the resource benefits from aggregation of its original sources, and thus provides researchers a way to track provenance without having to go to individual libraries or repositories to look through pages of obscure and often inaccessible materials. While it may seem counter-intuitive to art historians focused on objects, the strongest benefits of digital and networked technologies for art history are in the use of structured text and data. Images have to be so radically remediated when subject to digitization that any analytic work on them is simply being carried out on the files, on surrogates, and not on the objects or their features.

Virtual museum and site preservation work, such as that being done by Sarah Kenderdine, is also promising. She is creating digital documents of cultural heritage sites that are at risk from natural or cultural disasters. The historicity of vision is something we are oblivious to in our own moment, however, and her documents may later look dated to us, as quaint and specific as sepia photographs.

Major benefits to art history arise from networked resources and the ability to bring together geographically distributed resources virtually (this was an early tenet of digital humanities, and it still holds). In the phases of digital scholarship, initial activities focused on collections management, automation of record keeping, and structuring data for machine processing. Then came desktop computers and the production of born-digital works as well as the use of digital platforms as meta-production tools – digital formats absorb other media and allow them to be used. Large-scale digitization projects in museums, libraries, and cultural institutions became a realistic possibility by the 1990s, and network speeds for image delivery and processing have increased exponentially. Image analytics – the processing of the digital information of images – has progressed, often in the natural sciences, surveillance fields, and other areas where pattern recognition and analysis of features of files can be cross-referenced to create information that is not, strictly speaking, part of the visual world, but can be made visible (I'm thinking of ultrasound technologies, various dating techniques that use isotopes, radar sounding, MRI, heat maps, etc.). But the aggregation of structured data and metadata (the information *about* works of art, their attribution, history, material form, iconography, and so on) is where humanities fields stand to benefit from digital methods – because the scale of search, processing, analysis, and data mining, as well as access to primary sources, so far exceeds what can be done without these tools. For instance, what the Getty Provenance Index allows a researcher to do in a several-second search would take years if it had to be done using the original archival materials.

Matthew Lincoln. Successful digital art history research must unite the macro-scale description offered by computational analysis of large datasets with micro-scale interpretations of individual artists and artworks. An excellent example of this work is Pamela Fletcher's and Anne Helmreich's data-driven research into the roles that local city geographies and international dealer networks played in the nineteenth-century London art market.¹⁹ Fletcher

analyzed a spatial database of public galleries, private dealers, and exhibition venues in London between 1850 and 1914. By dynamically visualizing the changing locations of these key institutions, she discerned geographic relationships that influenced business and display practices in the London art world. Complementing this local perspective, Helmreich used social network analysis to parse the stock books of Boussod, Valadon & Cie, identifying highly central actors and network structures in the web of art trade between London, continental Europe, and America.

Computational research like Fletcher's and Helmreich's is only possible with data prepared in formats amenable to digital analysis. Thus, some of the most crucial, forward-looking work in digital art history involves infrastructural work that might not be recognized as "art history" per se. Museums comprise the largest data stores in our field, acting as repositories of objects, but also of decades and centuries of knowledge about those objects. It is these institutions, along with organizations such as the Rijksbureau voor Kunsthistorisches Documentatie and the Getty Research Institute, that have pioneered vocabularies and ontologies to richly and completely describe the contextual knowledge associated with art objects. The British Museum has led the field in releasing their collections data using the CIDOC-CRM ontology: a model for representing the host of interactions that objects have with people, places, events, and concepts while also characterizing their complexity and uncertainty.²⁰ This rich model invites nuanced analysis with digital methods. The data these institutions choose to disclose, the methods they use to expose it, and the number of institutions that decide to produce interoperable datasets, will demarcate the types of questions that can be asked. Art historians must engage closely with these infrastructural projects now to help maximize creative research possibilities in the future.

Francesca Rose. *How do artworks as physical objects studied by art history lend themselves to computational techniques and methodologies? In what ways do they comply or challenge digital tools and methods? What are the epistemological issues and consequences for the discipline?*

Matthew Lincoln. Art objects' physical histories are a boon for empirical research. Artworks are both actors in, and indices of, a host of historical trade networks of patronage, gift-giving, commerce, colonization, theft, and other forms of physical movement and exchange. Objects and their images can also illuminate the shape of artistic networks, documenting the transmission of iconography and stylistic influence. Artworks are thus ideal subjects for inferring patterns and trends in a variety of complex historical networks. In addition, the sheer numbers of extant art objects (particularly multiplicative works such as prints and photographs) present art historians with problems of scale that quantitative methods promise to address.

But physical objects resist both the structured description and the abstraction these methods rely upon. Compared to structured data for libraries' generally homogeneous collections of books, museums do not yet have interoperable standards for describing their heterogeneous collections of unique objects. While library data are produced through broad consensus about the facts of a book's publication and classification, knowledge about historical objects tends to be advanced through iterative and conflicting scholarly argumentation – a process that is difficult (though not impossible) to model as structured data.²¹ Moreover, whereas the relative abstractability of text has facilitated scholars' adoption of computational linguistics methods for literary research, the contingency of image and physical object in art-historical interpretation will complicate efforts to integrate analogous methods into our discipline.²² Certainly, not all art-historical questions ought to be expressed as structured data. The precision required for certain types of description – for example, how the artist manipulated a particular pigment in a certain section of a painting, and the interplay between that technique and its visual effect – recalls the specter of Jorge Luis Borges' impossibly mimetic 1:1 map. As with other disciplines, discovering the ideal fit between digital methods and our theoretical frameworks will be a process of negotiation and evolution.

Anne Helmreich. In many ways, we can argue that the digital is simply the latest step in the field's pursuit of ways to overcome the challenges of distance. The digital makes it possible – as the photograph did earlier in the nineteenth century – for scholars to closely examine

works of art for which they do not have ready access. The digital is perhaps a more seductive surrogate than the photograph, given the level of resolution that can be obtained, but it is a surrogate nonetheless.

But we can do powerful investigations with that surrogate as demonstrated by the website *Closer to Van Eyck: Rediscovering the Ghent Altarpiece* (supported by the Getty Foundation), built to accompany the examination of the structural condition of this iconic panel painting, which makes available thousands of high-resolution images of this altarpiece.²³

Building on the increasing engagement with spatial analysis, scholars are also employing digital technologies to reconstruct environments in which works of art were formerly displayed, which will inform our understanding of the relationship between these objects and their larger context. Justin Underhill, for example, has produced a virtual reconstruction of the Palace of the Jaguars, Teotihuacan, in order to study the relationship between light and color in the murals lining the walls of the Palace; the Oplontis Project Team at the University of Texas at Austin has worked with the King's Visualization Lab at King's College, London, to produce a three-dimensional model of Villa A at Oplontis that also explores lighting conditions.²⁴

Digital reconstructions, however, raise significant questions for the field. If intended as analytical tools (as opposed to video game environments), what level of presentation is regarded as acceptable? How do scholars overcome the standardization effect that can be produced by working computationally? How do we recognize or embed an object's inherent materiality? This is also a problem of scale as our interaction with digital surrogates is mediated by our screens, browsers, etc., which alter the original viewing relationship between object and beholder.

Johanna Drucker. Scanning and photographing three-dimensional works turns them into viewable models, and the scale of resolution allows us to see details often hard to perceive with the naked eye. The trade-off is that the experience of actual scale, aura, and presence, as well as the specificities of surface, placement, and viewing circumstances can be missing. Such -compromises are typical – as the digital environment removes objects from contexts and conditions of viewing or use. Reconstruction techniques using computational methods have also become extremely sophisticated. The extrapolation of the shape/form of an original pot or jar from a single bit of curved clay, shards, fragments, or other partial remains is an amazing act of computation. The use of computational methods in archaeology, field work, site analysis and recording, and speculative reconstruction is extremely useful since human behaviors and sight lines, for instance, can be tested in these models, as well as the treatments of surfaces, shapes and volumes, decorations, and so on. Likewise, the use of digital platforms for virtual restoration – non-invasive and without consequences for the object – is extremely positive since our understanding of the objects changes over time and restorations tend to bear the imprint of their own moment of execution. Leaving the artifacts untouched while projecting their possible original form is an improvement.

The dialogue between art history and material sciences (including bioinformatics, genetics, chemical analysis, and others) creates data for analysis of many patterns of human knowledge production and exchange. These are microscopic data. At the other end of the scale, big data sets, discourse analysis, text analysis, and some primitive image analysis (all we have at the moment) are useful for looking at the ways taste, styles, and values are elaborated. At the human-readable scale, the eye is still far more sophisticated than any computational tool, and likely will be for a long time. But use of computational processing in InscriptiFact, part of the West Semitic Research Project, transforms illegible remains of historical artifacts into readable images. This is a huge contribution. To be able to read fragments of the Dead Sea Scrolls that might otherwise be lost forever is a major achievement, and these techniques extend to many artifacts. In a very different way, through its massive data collection, Stephen Murray and Andrew Tallon's Mapping Gothic France could change the way we understand work patterns, training, knowledge transfer, and design trends in medieval architecture because of the links it can make between physical forms and the mapping of time and space. What are the epistemological consequences? If the real question is what new research issues have been raised by digital techniques, the answer is still very few or none at all. But as tools to extend

range and reach, digital techniques are essential for pushing traditional research processes into micro and macro scales.

Francesca Rose. *What do you think is the impact on the field and discipline of art history of empirical approaches and quantitative tools and information at the heart of digital art history projects?*

Matthew Lincoln. Explicitly quantitative approaches to art history have a long pedigree, going back as early as 1708, when Roger de Piles produced tables quantifying stylistic qualities of old masters for his treatise *Cours de peinture par principes*. In modern literature, Jules Prown's 1968 computer-aided work on patterns of patronage in the portraits of John Singleton Copley is frequently cited as one of earliest computer-aided art history projects.²⁵ Consider, too, the work of John Michael Montias, whose data-driven analyses explored the economic foundations of artistic production and stylistic innovation in seventeenth-century Dutch painting.²⁶

Even more common, however, are implicitly quantitative methods. The *catalogue raisonné* can be understood as an object of digital scholarship *avant la lettre*: a volume that structures knowledge by enumerating and categorizing artworks such that the scholar may efficiently locate single objects or gain a synthetic overview of an artist's oeuvre. Arguments for or against an attribution, or for the location of an artwork within a chronology, rely on the author's mental model of the artist's overarching career – a model based on a sense, however tacit, of the numeric distribution of certain features across that oeuvre.²⁷ In other words, we have always been counting pictures. Now we have a chance to engage with that practice more creatively. Computational methods ought to spur art historians to critically reevaluate our discipline's descriptive underpinnings. As we grapple with how to express our knowledge as structured data, we will confront both the strengths and the shortcomings of our current standards for documenting object-based evidence, and also gain new perspectives on old practices. Social art history may benefit from comparative analyses of object data such as size, subject, materials, or provenance patterns, with historical social and economic data. Likewise, we may renew attention to connoisseurship and stylistic history as we begin to engage more deeply with computational processing of images themselves.

Johanna Drucker. It always depends on specific cases. If empirical work is done well, it can be useful, but if it is used to make truth claims based on a belief that observer-independent knowledge production is possible, it is simply a pretext for ignoring the complexities of both production and reception histories and circumstances. If we are going to use quantitative methods, then art historians need to be trained in statistics, and know how to set their research problems, assess their results, read the visualizations they create, and be critical in an informed way. Using empirical methods to establish evidence seems quite useful, but asserting the authority of empirical evidence as if it were self-evident and absolute is just naïve. The question is not whether twenty per cent of illuminated manuscripts in a particular region used a specific pigment for their yellows, but what else we can learn from this fact. The "so what?" factor doesn't go away, and the question of the impact of these empirical inquiries for the field can't be answered simply by asserting the value of information or data as if it puts the questions to rest. The enthusiasm for image analysis, or for cultural analytics, for instance, seems misguided unless it can be demonstrated that the potential insight gained from such techniques makes the investment of cost, intellectual energy, and resources worthwhile. The use of virtual and visual techniques in museum display and for study/research and, soon, publishing, seems promising. Links between art history and work in material sciences, and also the kind of quantitative work developed by the once-renowned *Annales* school in history and bibliography, may also provide fruitful directions ahead.

Anne Helmreich. The *Closer to Van Eyck: Rediscovering the Ghent Altarpiece* is an excellent example through which to answer this question. Digital art history, which often involves quantitative tools and information but can be distinguished from a purely empirical approach, often forces scholars to re-examine, or examine more closely, their original source materials. The very act of transforming our primary sources into data requires us to make a variety of decisions about how we structure, organize, and present that information. Moreover, as

Miriam Posner recently pointed out in a blog post, reconstituting historical evidence into data that can be easily recognized by the computer can distort the historical record by establishing definitive categories for entities that were originally ambiguous or more fluid. How do we address missing data? she also asks.²⁸ We must constantly challenge the tools of the digital realm to better address the needs of the humanities while at the same time re-examining our historical evidence. For example, becoming aware of an absence in the historical record can lead to larger questions about the formation of the archive.

In short, I believe the digital humanities are actually bringing us closer to our historical evidence and making us scrutinize it in new ways, even if we are struggling to marry it with digital approaches. That struggle, in other words, can tell us something productive about the nature of that evidence. At the same time, I believe digital approaches are making us seek out new forms of art-historical evidence or reinvigorating areas of art-historical inquiry. In my own area of research, the study of the art market, digital art history has truly opened up the field in new and exciting ways that promise to be very productive. Already scholars such as Christian Huemer and Maximilian Schich are discovering new patterns to explain the historical formation of the integrated, international art market.²⁹

Francesca Rose. *What is the particular role and responsibility of the art historian within the growing field of digital humanities?*

Johanna Drucker. If researchers want to use digital tools they need to know what the tools are doing, how they work, and how to make sense of the results. Probably a basic module in digital tools and methods should be available for graduate students in any humanities field so they know how to create structured data, use them, move them around, work with legacy data and metadata, and do some simple data mining and text analysis, visualization, and mapping. These are going to be part of most scholars' toolkits like reading, writing, bibliography, critical theory, formal analysis, and so on. Having knowledge of these fundamentals is important. For curators, museum professionals, and art historians working in cultural institutions, other pressures are present. Understanding content and collections management systems, using social media, and creating virtual exhibitions and online resources for research and pedagogy are increasingly part of the professional duties incumbent upon those working in the field. Are we training individuals to be able to do this work? We should be, at least at the level of basic literacy. A curator need not have the technical skills of a conservator or the practical skills of an installer/preparator, but he or she can be expected to know enough about these fields to have an informed dialogue. I am not sure that there is anything like a "digital art historian" at this point. What would that mean? That a form of art history completely reliant on digital tools is now a distinct branch of the field? It doesn't make sense. We simply all do some part of our work digitally, whether that is research, writing, publishing, teaching, fact-checking, data mining, or any of the many other aspects of our daily work as scholars and teachers.

Anne Helmreich. A brief answer to this question is: to stay informed. This is challenging because there are so many sources of information about the digital humanities, not just the traditional outlets of conferences and publications, but also blog posts, twitter feeds, etc. The emergence of a new journal, the *International Journal for Digital Art History*, promises to make this task much easier. Similarly, the field will benefit from the recent launch of digital art history as a dedicated field of coverage by *caa.reviews*. Pamela Fletcher, founding Field Editor for digital art history, has already begun to solicit projects for professional review. In order to evaluate such work, scholars will need to educate themselves in the digital humanities, a task facing both museum professionals, who are increasingly charged with developing digital projects, and faculty, who must engage with and educate the born-digital generations.

Another brief response to this question is: to contribute. If we consider the following as key modes of analysis in the digital humanities – text analysis, spatial analysis, network analysis, and visual analysis – we can make a very plausible case that image analysis lags behind the other three as measured by published, cited work that has had a decisive impact on the humanities. Digital humanities conferences are often dominated by scholars working with text – far easier to render usable for computational analysis than images. Moreover, the types of

close readings of objects and texts favored by art historians in recent decades do not demand a digital or computational approach. Thus art historians may perceive the digital humanities as lacking significance for the discipline. But, I fear that if we regard the digital humanities as irrelevant, we will overlook those questions that can be investigated in new, productive ways through digital and computational approaches. We may also miss the opportunity to connect art history to new audiences, whether they be born-digital generations or the broader public that is increasingly accustomed to engaging with the world through digital interfaces.

Matthew Lincoln. Though the scope of “digital humanities” practice is truly wide-ranging, its core conferences and journals have centered on the encoding and analysis of texts. Art historians must draw the field’s attention to the computation of the visual object, as well. Art historians’ engagement with computer vision (CV) techniques – algorithms that range from quantifying low-level visual characteristics such as hue and value, to high-level tasks like parsing and semantically classifying objects or symbols depicted within a painting – remains limited, in part because CV research currently lacks the intellectual and technical frameworks that have enabled scholars to explore literary questions with computational text analysis. Prominent CV projects that have attempted to replicate traditional art-historical tasks, such as attributing and dating artworks, have received breathless headlines, occasionally followed by strident resistance from art historians.³⁰

However, some projects think outside of this narrow definition of what CV might accomplish. At the CulturePlex Lab at Western University Canada, Javier de la Rosa and his collaborators have tried to characterize quantitatively whether European artists in certain centuries produced more standardized or heterogeneous portraiture, and if this could inform our understanding of changing trends in Western conceptions of facial beauty throughout history.³¹ They deployed facial recognition algorithms to measure the symmetry of facial features across a database of several thousand paintings, constructing composite portraits from each century to use as comparative baselines when testing the averageness of individual portraits. This project provides a useful model for CV research that began with an art-historical question, rather than a computer scientific one. The authors identified a task that was, first, ill-suited to individual human visual analysis and, second, whose evaluation could substantively inform our understanding of an art-historical inquiry. Art historians have the prerogative to critique research that treats images in a simplistic manner, but we also have the responsibility to engage with CV research in order to aim it at useful disciplinary questions.

Francesca Rose. *In her 2012 study Transitioning to a Digital World: Art History, Its Research Centers, and Digital Scholarship, Diane M. Zorich underlines the disruption brought by the introduction of digital tools and methods in the field of art history: disruption in research, teaching, and publishing, but also in the behaviors and culture of the field.*³² *Has the situation changed in the last three years? What are the issues, opportunities and challenges that have arisen since? What do you think is needed to advance digital art history today?*

Anne Helmreich. The field has undergone substantial changes since Diane M. Zorich’s report was released. The 2014 report “Supporting the Changing Research Practices of Art Historians,” assembled by *Ithaka S+R* and supported by the Kress Foundation and the Getty Foundation, found that “digital technology has facilitated access to vast collections of resources that simply were not available before, and yet, the primacy of the actual art object has not diminished at all.”³³ Moreover, the report underscores the distance traveled since the Zorich report by stating: “Even in the core of the discipline, digital methods have started to enable researchers to substantially transform their methodologies and ask new types of research questions.”³⁴

Scholars have had the opportunity to learn more about digital art history through a series of summer institutes: in 2014, Paul Jaskot and Anne Knowles organized an Institute on Digital Mapping and Art History at Middlebury College with the support of the Kress Foundation; the Getty Foundation supported summer institutes at George Mason University (RRCHNM), Harvard University (metaLAB), and University of California Los Angeles in the summers of 2014 and 2015 through its Digital Art History initiative.³⁵ The Getty-supported institutes each produced a website that is an invaluable resource for other scholars contemplating

digital projects or wishing to integrate digital art history into their teaching practice.³⁶ The field has also benefited from the development of open-access programs by leading collecting institutions such as the Getty Research Institute, the J. Paul Getty Museum, the Los Angeles County Museum of Art, the National Gallery of Art, and Yale University. Such programs allow scholars open access to digital representations of works of art in the public domain, thus removing the barriers of securing copyright and image permission costs.

There is a slight but increasing presence of digital art history at art history conferences, particularly the annual conference of the College Art Association that has also hosted THATCamp (an informal gathering of humanists and technologists) in advance of the regular conference for the past three years. The College Art Association has also partnered with the Society of Architectural Historians to develop a set of guidelines for the evaluation of digital scholarship in art and architectural history for promotion and tenure, with the support of the Mellon Foundation.

But arguably the behavior and culture of the field will change most substantially with the production of model scholarship. While pioneering scholars have produced important interventions in the field, there is not yet a density of practice nor a profusion of highly visible and well-received projects. Moreover, many of these pioneering endeavors are “one-off” projects – the result of years of perseverance by small teams – that would be difficult for others to replicate or build upon. Persuasive examples of innovative scholarship conceived, at least in part, as models for the broader field and an articulation of best practices, developed through conversations across the discipline, would greatly help advance digital art history today.

Johanna Drucker. I am not sure what Diane M. Zorich was characterizing as a disruption, but the use of digital projectors, collections, and resources is now fairly smoothly integrated into institutional and professional practice. It has been a while since someone asked me in a bewildered way how to open an attachment. But the change to presentation software and away from slides, the use of digital files for publishing/editing, with their format requirements and management issues for workflow and image quality: these are all areas where long-standing habits were challenged by new technologies. The light tables for arranging slides were places of fertile and thoughtful engagement, and they generated a community presence that personal computer workspaces do not. The constraints of presentation software still feel more limiting than some analogue methods.

The biggest challenge for all humanities disciplines is the lack of solid infrastructure at the local, institutional level and at any national level. To make serious use of aggregated collections, to exchange (and preserve) legacy data and metadata while facilitating interoperability across corpora, to address intellectual property issues for research and publication, to figure out publication formats that will be citable and sustainable for more than a decade or so, and to have the institutional support to bring small collections, archives, museums, and other materials into a networked environment where they can be shared and used effectively requires infrastructure coordination. We are a very long way from that. Most institutions of higher education or art museums and collections are still scrambling to get collections online, figure out their use, and try to network them with local partners (many campuses, for instance, have museums and libraries that are each creating their own systems and platforms and therefore can't talk with each other or share information, which is crazy). Resources are scarce, and access to training in basic digital asset management is still a challenge.

I'm not convinced that “digital art history” or “digital humanities” exist in the same way that bioinformatics or computational economics do. The humanities, and art history, may not be changed substantially at this point by being “digital” – and maybe that is just fine.

Matthew Lincoln. Interest in digital scholarship in art history has flourished in the past few years, as evidenced in the United States by the Getty Foundation's and the Kress Foundations' funding of digital art history institutes, and the joint project between the College Art Association and the Society for Architectural Historians to generate guidelines for the evaluation of digital scholarship in art and architectural history for promotion and tenure.³⁷

Yet we still face key challenges. First, graduate programs in art history must chart a path towards integrating digital art history into their curricula. Departments can go a long way towards helping interested students pursue digital methods by partnering with institutional digital humanities centers, or even establishing their own dedicated centers within the department.³⁸ However, these training efforts will be in vain without significant scholarly support from faculty who will need to engage critically with digital methods as graduate students begin to incorporate them into their dissertation research.

Second, there remains a rift between academic art historians' understanding of the digital future of our field, and the digitally-inflected work that museums have pursued for decades.³⁹ Thus, the specter of the "two art histories" is newly relevant today.⁴⁰ Digital methods offer an opportunity for bridge-building between academic art historians using computational methods, and museum staff (including not only curators, but also registrars, archivists, and technologists) who have built rich repositories of collections data. Yet digital efforts in museums have generally been turned towards visitor services and outreach needs, rather than producing or supporting original research. Recent efforts such as the Online Scholarly Catalog Initiative and the digital "labs" at the Cooper-Hewitt Museum and the Metropolitan Museum of Art suggest a sea change in museums' perspective on this question. However, it will take continued pressure from both sides of our field to ensure that these experiments gain a permanent place at the table.

Notes

1 Johanna Drucker distinguishes between "digitized" art history and "digital" art history, signalling an essential distinction between the practice of the discipline as facilitated by digitally optimised methods and resources, and the practice of the discipline through the medium of new technologies and analytical techniques made possible by computational technology. Drucker's distinction separates out the optimisation of existing methods and resources from developments affecting the evolution and fundamental approaches of the discipline as a whole Johanna Drucker, "Doing Art History Digitally/Doing Digital Art History", Digital Art History Lab, Getty Research Institute, 5 March 2013, http://digitalarthistory.weebly.com/uploads/6/9/4/3/6943163/johannadrucker_remarks_gettydah-lab_2013.pdf (viewed October 19, 2015).

2 For a good introduction to the literature on digital art history, see Murtha Baca, Anne Helmreich, Nuria Rodríguez Ortega eds., special issue "Digital Art History", *Visual Resources: An International Journal of Documentation*, 29/2, March-June 2013. See also Michelle Millar Fisher, Anne Swartz, "Why Digital Art History?" in *Visual Resources: An International Journal of Documentation*, 30/2, 2014, p. 125-37, www.academia.edu/7339137/Michelle_Millar_Fisher_and_Anne_Swartz_Why_Digital_Art_History (viewed 19, October 2015). Another important bibliographical resource is Diane M. Zorich's study *Transitioning to a Digital World: Art History, Its Research Centers, and Digital Scholarship*, The Samuel H. Kress Foundation and the Roy Rosenzweig Center for History and New Media, George Mason University, 2012, www.kressfoundation.org/research/transitioning_to_a_digital_world (viewed October 19, 2015).

3 These four broad categories are defined by Elijah Meeks in "More Networks in the Humanities, or Did Books Have DNA?", Digital Humanities Specialist, Stanford University, 6 December 2011 <https://dhs.stanford.edu/visualizations/more-networks> (viewed October 19, 2015)

4 Pamela Fletcher, Anne Helmreich, "Local/Global: Mapping Nineteenth-Century London's Art Market," in *Nineteenth-Century Art Worldwide*, 11/3, autumn 2012, www.19thc-artworldwide.org/index.php/autumn12/fletcher-helmreich-mapping-the-london-art-market (viewed October 19, 2015).

5 Stephen Murray, Andrew Tallon, Rory O'Neill, *Mapping Gothic France*, Media Center for Art History, Columbia University and Art Department, Vassar College, <http://mappinggothic.org> (viewed October 19, 2015).

6 Murtha Baca, Nuria Rodríguez Ortega, *Digital Mellini*, Getty Research Institute, <http://www.getty.edu/research/mellini> (viewed October 19, 2015).

7 Laura Wexler, Lauren Tilton et Taylor Arnold, *Photogrammar*, Yale University, <http://photogrammar.yale.edu> (viewed March 31, 2015).

8 Blog post by Linda Downs, "Mellon Foundation Awards Grant to CAA to Partner with SAH on Digital Scholarship Guidelines," in *CAA News*, 29 October 2014, www.collegeart.org/news/2014/10/29/mellon-foundation-awards-grant-to-caa-to-partner-with-sah-on-digital-scholarship-guidelines (viewed October 19, 2015).

- 9 Pamela Fletcher, "Reflections on Digital Art History, 'Re-Views: Field Editors' Reflections," in *caa.reviews*, June 18, 2015, www.caareviews.org/reviews/2726 (viewed October 19, 2015).
- 10 Johanna Drucker stresses this point, in particular, in "Is There a Digital Art History?," in *Visual Resources: An International Journal of Documentation*, 29/1-2, 2013, p. 5-13. A blog post by Matthew Lincoln on the annual conference of the College Art Association is also revealing in this regard ("Digital Dimensions at CAA 2015", <http://matthewlincoln.net/2014/11/28/digital-dimensions-at-caa-2015.html>; viewed October 19, 2015).
- 11 Pamela Fletcher, "Reflections on Digital Art History," in *caa.reviews*, June 18, 2015, www.caareviews.org/reviews/2726 (viewed September 12, 2015); Drucker, 2013, cited n. 10.
- 12 Marlo Welshons ed., *Our Cultural Commonwealth: The Report of the American Council of Learned Societies Commission on Cyberinfrastructure for the Humanities and Social Sciences*, American Council of Learned Societies, 2006, p. 7.
- 13 Margaret F. MacDonald, Patricia de Montfort, Nigel Thorp eds., *The Correspondence of James McNeill Whistler, 1855-1903*, including Georgia Toutziari, ed., *The Correspondence of Anna McNeill Whistler, 1855-1880*, www.whistler.arts.gla.ac.uk/correspondence (viewed September 12, 2015); Leo Jansen, Hans Luijten, Nienke Bakker eds., *Vincent van Gogh: The Letters*, Amsterdam/The Hague, December 2010, <http://vangoghletters.org> (viewed September 12, 2015).
- 14 See <http://omeka.org> (viewed September 12, 2015).
- 15 See www.oscitolkit.org; www.getty.edu/foundation/initiatives/current/osci and <https://publications.artic.edu/monet/reader/paintingsanddrawings/section/135470> (viewed September 12, 2015).
- 16 See <http://linkedvisions.artic.edu> (viewed September 12, 2015).
- 17 Paul B. Jaskot et al., "A Research-Based Model for Digital Mapping and Art History: Notes from the Field," in *Art@s Bulletin*, 4/1, 2015, Article 5, <http://docs.lib.purdue.edu/artlas/vol4/iss1/5> (viewed September 12, 2015).
- 18 See <http://advancedchallenges.com/> (viewed September 12, 2015).
- 19 Pamela M. Fletcher, Anne Helmreich, "Local/Global: Mapping nineteenth-century London's art market," in *Nineteenth-Century Art Worldwide*, 11/3, 2012, www.19thc-artworldwide.org/autumn12/fletcher-helmreich-mapping-the-london-art-market (viewed September 10, 2015)
- 20 Dominic Oldman et al., "Realizing Lessons of the Last 20 Years: A Manifesto for Data Provisioning and Aggregation Services for the Digital Humanities (A Position Paper)," in *D-Lib Magazine*, 20/7-8, July-August 2014, www.dlib.org/dlib/july14/oldman/07oldman.html (viewed September 10, 2015).
- 21 Diane M. Zorich, "Library and Museum Information: Beauty and the Beast," in *Spectra*, 18/4, 1991, p. 2-8.
- 22 This is not to overlook digitally-aided research into the history of the book and other textual technologies. See Matthew Kirschenbaum and Sarah Werner, "Digital Scholarship and Digital Studies: The State of the Discipline," in *Book History*, 17/1, 2014, p. 406-458.
- 23 See <http://closertovaneyck.kikirpa.be> (viewed September 12, 2015).
- 24 Justin Underhill, "The Phenomenology of Sunset at the Palace of the Jaguars, Teotihuacan," in *World Art*, 4/2, 2014, p. 157-173 (www.tandfonline.com/doi/abs/10.1080/21500894.2014.935951, viewed September 12, 2015). On the Oplontis Project, see www.oplontisproject.org/index.php/visualization/ (viewed September 12, 2015).
- 25 Jules David Prown, *John Singleton Copley*, Cambridge, 1966, I, p. 97-137.
- 26 See for example John Michael Montias, "Cost and Value in Seventeenth-century Dutch Art," in *Art History*, 10/4, December 1987, p. 455.
- 27 On this tendency in literary studies, see Matthew Wilkens, "Digital Humanities and its Application in the Study of Literature and Culture," in *Comparative Literature*, 67/1, March 2015, p. 11-20.
- 28 Miriam Posner, "What's Next: The Radical, Unrealized Potential of Digital Humanities," in *Miriam Posner's Blog*, 27 July, 2015, <http://miriamposner.com/blog/whats-next-the-radical-unrealized-potential-of-digital-humanities> (viewed September 12, 2015).
- 29 See www.getty.edu/research/tools/provenance/zoomify/index.html (viewed September 12, 2015).
- 30 See for example Babak Saleh et al., "Toward Automated Discovery of Artistic Influence," in *arXiv*, August 14, 2014, DOI: arXiv:1408.3218 (viewed September 10, 2015) and the response by Griselda Pollock, "Computers Can Find Similarities Between Paintings – But Art History is About so Much More," in *The Conversation*, August 22, 2014, <http://theconversation.com/computers-can-find-similarities-between-paintings-but-art-history-is-about-so-much-more-30752> (viewed May 29, 2015).
- 31 Javier de la Rosa, Juan-Luis Suárez, "A Quantitative Approach to Beauty: Perceived Attractiveness of Human Faces in World Painting," in *International Journal for Digital Art History*, 1, June 26, 2015, doi:10.11588/dah.2015.1.21640 (viewed September 10, 2015).

32 Zorich, 2012, cited n. 3.

33 Matthew P. Long, Roger C. Schonfeld, "Supporting the Changing Research Practices of Art Historians," in *Ithaka S+R*, April 30, 2014, p. 4, www.sr.ithaka.org/research-publications/supporting-changing-research-practices-art-historians (viewed September 12, 2015).

34 Long, Schonfeld, 2014, cited n. 33, p. 15.

35 See www.getty.edu/foundation/initiatives/current/dah/index.html (viewed September 12, 2015).

36 George Mason University: <http://arthistory2014.doingdh.org> (2014) and <http://arthistory2015.doingdh.org> (2015); Harvard University: <http://beautifuldata.metalab.harvard.edu>; UCLA, www.humanities.ucla.edu/getty (viewed September 12, 2015).

37 Linda Downs, "Mellon Foundation Awards Grant to CAA to Partner With SAH on Digital Scholarship Guidelines," in *CAA News*, October 29, 2014, www.collegeart.org/news/2014/10/29/mellon-foundation-awards-grant-to-caa-to-partner-with-sah-on-digital-scholarship-guidelines/ (viewed June 3, 2015).

38 For example the University of Maryland's Michelle Smith Collaboratory for Visual Culture, which supports several graduate assistants each year: <http://michellesmithcollaboratory.umd.edu> (viewed September 10, 2015).

39 Sheila Brennan, "DH centered in museums?" in *Lot 49*, March 16, 2015, www.lotfortynine.org/2015/03/dh-centered-in-museums (viewed September 30, 2015).

40 Charles W. Haxthausen ed., *The Two Art Histories: The Museum and the University*, Williamstown, 2002.

Pour citer cet article

Référence électronique

Johanna Drucker, Anne Helmreich, Matthew Lincoln et Francesca Rose, « Digital art history: the American scene », *Perspective* [En ligne], 2 | 2015, mis en ligne le 07 décembre 2015, consulté le 21 janvier 2016. URL : <http://perspective.revues.org/6021> ; DOI : 10.4000/perspective.6021

À propos des auteurs

Johanna Drucker

Johanna Drucker is the Breslauer Professor of Bibliographical Studies at UCLA. She has published on topics related to digital humanities, book history, graphic design, historiography of the alphabet and writing, and contemporary art.

Anne Helmreich

Anne Helmreich is Dean, College of Fine Arts, Texas Christian University. Formerly, she was a Senior Program Officer at the Getty Foundation where she oversaw the initiative in Digital Art History among other projects.

Matthew Lincoln

Matthew Lincoln is a PhD candidate in art history at the University of Maryland, College Park. His dissertation uses computational network analysis to explore long-term changes in the organization of print designers, engravers, and publishers in the Netherlands between 1500-1750. During the 2014-2015 academic year, Matthew held the University of Maryland Museum Fellowship at the National Gallery of Art, Washington, D.C.

Francesca Rose

Francesca Rose is Program Director, Publications & Manager of Communications at the Terra Foundation for American Art.

Index

Mots-clés : humanités numériques, histoire de l'art numérique, technologies numériques, ressources numériques

Keywords : digital humanities, digital art history, digital technologies

Noms de lieux : États-Unis

Personnes citées : Helmreich (Anne), Fletcher (Pamela)