Digital Art History has a fraught relationship to history and interpretation.

Against Digital Art History

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Abstract: This article responds to two issues affecting the field of contemporary art history: digital technology and the so-called computational turn in the humanities. It is divided into two parts: the first connects problems with "digital art history," an offspring of digital humanities, to neoliberal metrics; the second suggests how digital art history's "distant reading" might nevertheless be deployed critically in the analysis of contemporary art.

Part One[1]

First, let me clarify that I am not talking about *digitized* art history (i.e., the use of online image collections) but rather *digital* art history, that is, the use of computational methodologies and analytical techniques enabled by new technology: visualization, network analysis, topic modeling, simulation, pattern recognition, aggregation of materials from disparate geographical locations, etc. Some of these techniques have been around for several decades and have proven useful, especially for scholars working on periods where there is little surviving visual evidence (e.g., reconstructing ancient sites). Yet the visual theorist Johanna Drucker, writing in 2013, states that so far none of art history's "fundamental approaches, tenets of belief, or methods are altered by digital work"—unlike in the 1980s, when "traditional art history" was upended by the incursion of semiotics, psychoanalysis, Marxism, feminism, post-colonial theory, and post-structuralism (Drucker 2013).[2]

Drucker nevertheless imagines that future digital databases will permit new questions to be asked of canonical works; she imagines, for example, a database containing the provenance history of different sources of pigments used in Western manuscript illumination and Renaissance painting, which would situate a work like Van Eyck's *Arnolfini Wedding* (1434) in relation to global systems of trade and economic value. Her vision of digital art history thus stands as a combination of digital technologies, network analysis, and connoisseurship.

Rather than thinking in terms of theoretical changes, however, we should compare the incursion of digital reproduction into art history to previous technological innovations. Prior to the late nineteenth century, art historians employed originals, casts, prints, sketches, and verbal descriptions to support and disseminate their research (Nelson 2000). The introduction of

photographic reproduction enabled wholly new methodological approaches in art history—from the formalism of Heinrich Wölfflin, who introduced the slide comparison to the art history lecture in the 1880s, to the iconographical approach of Aby Warburg in the 1920s, who drew upon a vast archive of photographic reproductions from antiquity to advertising to advance his theory of *nachleben*. The change wrought by the digitization of slide collections since 2000 is therefore not only one of size and speed (an increased quantity of images for analysis and faster search returns), but also one of method, opening the door to "distant viewing." Already well known in Comparative Literature as "distant reading," this method proceeds by subjecting vast numbers of cultural artifacts to quantitative computational analysis.

A troubling introduction to this method can be found in the first issue of the *International Journal for Digital Art History*, launched in June 2015. In the first of six articles, new media theorist Lev Manovich introduces five key terms from data science that he believes to be useful to art historians: *object, features, data, feature space*, and *dimension reduction* (Manovich 2015). His text is illustrated with examples of his own research projects that draw upon Big Data, including *Selfiecity* (visualizations of thousands of Instagram selfies in different cities around the globe, assessing the images in terms of age, gender, position, frequency of smiling, etc.) and a principle content analysis

(PCA) of over six thousand Impressionist paintings, calculating visual similarities in content and coloration.[3] Another paper, by K. Bender, analyzes 1,840 works of art from the thirteenth to the twentieth centuries showing the figure of Aphrodite or Venus, revealing that on average, artists turned to this theme 2.8 times in their lives (Bender 2015). A third article reports the results of feeding 120,000 portraits from the thirteenth to the twentieth centuries through facial-recognition software in order to establish whether the "canon of beauty" had changed over time (de la Rosa and Suárez 2015). Unsurprisingly, it had—the study concludes that there is a conspicuous decrease of "beauty" in the twentieth century. Only to someone entirely unfamiliar with modernism would this come as a surprise.

I admit that most academic papers, when boiled down to one line, risk sounding simplistic, but in this case the fatuity is extreme. Basic terms like *beauty* (and even *portraiture*) remain uninterrogated; instead, the authors observe that the "more average and symmetrical, the more beautiful a face is usually ranked," noting with approval that this criterion turns "a subjective opinion such as what face is beautiful into something measurable and objective" (ibid.). A complex human evaluation is reduced to statistical calculation. Equally blunt is the claim, found in almost every essay in this journal's inaugural issue, that "this empirical finding has never before been highlighted in art history"—as if novelty were a sufficient measure of interest and

substance. Further, the data set affirms the art historical canon ("Impressionist paintings," "figures of Aphrodite or Venus") rather than challenging it or even addressing it critically. Who decides what is understood as the canon? What is left out? On the evidence of these articles, practitioners of digital art history have a limited awareness of critical debates within art history (such as the long-standing, and some would say long-dead, question of "beauty"), but also a limited grasp on how to frame a meaningful research question. Theoretical problems are steamrollered flat by the weight of data.

This silence, however, seems to be to digital art history's advantage. This new approach is already finding its way into museums, and not just conservation departments that have long had a relationship to scientific research. Consider the network map produced by the Museum of Modern Art, New York, for the exhibition "Inventing Abstraction 1910–1925" (2012–13), created by the curators in collaboration with a professor and a doctoral student at Columbia University's business school.[4] The map, an update of Barr's well-known diagram for the catalogue *Cubism and Abstract Art* (1936), covered a wall at the entrance to the exhibition. On the exhibition website, the map allows users to click on various names, mapped geospatially from the West to the East, in order to see which artists were in contact with whom during this period. One positive outcome of this mapping was that several female artists, usually relegated to the sidelines, were repositioned as key players: Sonia Delaunay and Natalia Goncharova were ranked as the "most connected" alongside Jean Arp, Guillaume Apollinaire, Pablo Picasso, Tristan Tzara, and Alfred Stieglitz. But what does it really mean to be "connected"? As art history doctoral students Jonathan Patkowski and Nicole Reiner argue in their critique of the exhibition, this map recodes the early twentieth-century artist as a contemporary networked entrepreneur whose importance is now gauged in terms of number of social connections (i.e., documentable acquaintances) rather than artistic innovations (Patkowski and Reiner 2013). Carefully reasoned historical narrative is replaced by social network (the avant-garde equivalent of LinkedIn) and has no room for non-human agents that elude quantification—such as African artifacts, which were crucial to the development of abstraction, or the imperial powers that mobilized their circulation in Europe.

My point is that subordinating art history—whether the invention of abstraction, Impressionist painting, or the new genre of the selfie—to computational analysis might well reveal "empirical findings never before highlighted in art history," but this method also perpetuates uncritical assumptions about the intrinsic value of statistics. In *Undoing the Demos* (2015), Wendy Brown argues that neoliberalism should be regarded less as a political formation than as a form of reason, a system of governance in

which "all spheres of existence are framed and measured by economic terms and metrics, even when those spheres are not directly monetized" (Brown 2015, 10). Her examples include any online activity that measures output by the number of "likes" or "followers," from Facebook and Instagram to online dating. Digital art history is just such a subordination of human activity to metric evaluation. It is inextricably linked to the ascendancy of the digital humanities, which has flourished despite financial cuts to the "analog humanities", and which is seen as a way to make humanities' outputs "useful"— like science, technology, engineering, and mathematics (i.e., industry-preferred STEM subjects).[5] In the words of new media scholar Richard Grusin, "It is no coincidence that the digital humanities has emerged as 'the next big thing' at the same moment that the neoliberalization and corporatization of higher education has intensified in the first decades of the twenty-first century" (Grusin 2013). This is not to say that the digital humanities are doomed to be the unwitting handmaidens of neoliberal imperatives, but it is important to note how its technopositivist rationality is disturbingly synchronous with the marketization of education: the promotion of MOOCs as value-for-money content delivery; the precarious position of adjunct professors; the tyranny of academic rankings; and the remaking of the university away from "quaint concerns with developing the person and citizen" and toward a model of the student as self-investing human capital (Brown 2015, 23).[6] Any

study that mobilizes Big Data needs to reflect critically on the mechanisms by which this data is gathered: corporate data mining, state surveillance, and algorithmic governance techniques.[7]

Digital art history, as the belated tail end of the digital humanities, signals a change in the character of knowledge and learning. Ideals like public service, citizenship, knowledge as an end in itself, and questions of what is just, right, and true have decreasing validity because they resist quantitative measurement, and moreover do not easily translate into information that optimizes the performance of society (i.e. generate) profit. Instead, research and knowledge are understood in terms of data and its exteriorization in computational analyses. This raises the question of whether there is a basic incompatibility between the humanities and computational metrics. Is it possible to enhance the theoretical interpretations characteristic of the humanities with positivist, empirical methods—or are they incommensurable?

We have to be careful how we phrase this dilemma. Drucker floats the possibility—although she eventually rejects the idea—that visual art might be fundamentally resistant to computational processing and analysis because it is so emphatically tied up in narratives of singularity, individuality, and exceptionality. These valorizing terms are of course not exclusive to art history and play an important role in canon formation across all of the

humanities. We know from Franco Moretti's controversial method of "distant reading"—analyzing literature not by studying particular texts, but by aggregating massive amounts of data—that singular genius is one of the first concepts to fall by the wayside when dealing with literature as an integrated system of global publishing. On the one hand, this is appealing: who among us could really argue that the canon isn't too white, male, and European? And Moretti is right to observe that close readings can become a "theological exercise—very solemn treatment of very few texts taken very seriously" (Moretti 2000).[8] When you glance at Moretti's work—such as *Graphs, Maps, Trees* (2007)—it is conspicuous that paradigmatic examples and block quotes have been replaced with diagrams, models, and schemas, but at least these graphs trigger interpretation: a social history supported by statistics rather than text mining the number of times a given word appears in Proust.[9] Moretti's earlier work, prior to setting up the Stanford Literary Lab in 2010, is especially interesting in trying to analyze all literature from a given period, both canonical and noncanonical; questions of historical causality remain central for him, in part because they are the blind spot of distant reading, the argument that statistics cannot supply.

Yet, increasingly, Moretti—like Lev Manovich—proceeds with the data set in advance of a research question, or what digital humanist Alan Liu calls "tabula rasa interpretation—the initiation of interpretation through the hypothesis-free discovery of phenomena" (Liu 2013).[10] In this model, topics are generated without an initial concept or question from an interpreter looking to confirm a theme or pattern; computers read texts/images algorithmically, with minimal human intervention. In the case of Manovich's Cultural Analytics (a hybrid new interdiscipline), data are aestheticized into patterns, but the task of interpreting these patterns is left up to others.[11] As a result, digital art history has a fraught relationship to history and interpretation. Does the data set exist in history before being sequenced digitally or is it only actualized once it has been laid out via the digital archive? Are the assembled historical "facts" found or produced? What's the relation between what's empirically observable and what's true? Technology is presumed to provide objective access to reality in a way that subjective interpretation cannot. The result is an avoidance of argumentation and interpretation, as exemplified by the articles in the *International Journal of Digital Art History*.[12] Computational metrics can help aggregate data and indicate patterns, but they struggle to explain causality, which in the humanities is always a question of interpretation. In effect, a post-historical position is assumed: the data is out there, gathered and complete; all that remains is for scholars to sequence it at will. Here, computational methods become another manifestation of the drive for mastery over history and the archive. The analog humanities, by contrast, remain outside the logic of tidy de-

liverable answers; their importance, as media theorist Gary Hall notes, lies in their ability to hold open a space for "much-needed elements of dissensus, dysfunction, ambiguity, conflict, unpredictability, inaccessibility, and inefficiency" (Hall 2013, 798).

Part Two

Contemporary art, perhaps more than any other art form, is entirely embroiled in digital technology: it permeates the production of work, its consumption and circulation. It is noticeable that artists are increasingly turning to cut-and-paste methods to create work across a wide variety of media. Pre-existing cultural artifacts are remixed and reformatted, generating a mise-en-abyme of references to previous historical eras. As part of this historical orientation, obsolete technologies have acquired a new auratic currency (8 and 16mm film, slide projectors, fax machines, even VCR players), as has the trope of the archive. We are currently in a hybrid moment where non- or pre-digital materiality is sustained alongside a digital way of thinking: an approach to information in which sources are decontextualized, remixed, reorganized, and archived. This hybridized interpenetration of digital and non-digital extends to the distribution and consumption of art. Today, most exhibitions reach their audiences as jpgs: artists increasingly mount their shows with the installation

shot in mind, and gallery lighting has become brighter so that photographs 'pop' on a back-lit plasma screen. Works of art are bought and sold as jpgs, without collectors ever having seen the original in person.

My current project, "Déjà Vu: Reformatting Modernist Architecture," has engaged in a type of distant reading—one that could only have been realized with the assistance of digital technology, but which is steered by a critical human eye. In the slideshow that accompanies the lecture version of "Déjà Vu," I replace the singular, paradigmatic example with hundreds of case studies—works of art gathered from North and South America and Eastern and Western Europe since 1989. Over three hundred images scroll before viewers, in different combinations; the aim is to move beyond the traditional illustrative slide comparison to a scenario in which the images begin to create an argument in their own right, bolstering (but also at moments contesting) my interpretation. Over the course of an hour, the audience experiences a number of déjà vus: works of art, all of which take as their starting point a pre-existing work of modernist architecture or design (including iconic structures by Le Corbusier, Oscar Niemeyer, and Vladimir Tatlin), also recur in different sequences.[13] The title refers to Paolo Virno's theory of déjà vu as a distanciation from agency: he describes it as a pathological condition of watching ourselves live and feeling that the future has been fatalistically prescribed for us, and connects this

Distant reading serves as a critique of the system in which these works thrive.

condition to the post-political consensus after 1989.[14] Something of this fatalism is conveyed in the relentlessness of my PowerPoint, which generates the feeling of scrolling through a tide of images (as when searching online), and yet each work appears before us, rather than being aggregated into a single graphic visualization. The PowerPoint partly repeats the numbing effect of the online image world, but also becomes a tool to make this available to interpretation.

Given that the rise of this artistic trend is a convergence of ideological narratives about a geopolitical condition ("the end of history") encountering the proliferation of digital media, this flow of images generates an argument about repetition and banality without me having to spell it out verbally. The slideshow has occasionally infuriated audiences, who see it as leveling the specificity of artists' practices in different parts of the world, and ignoring attempts to chart gender or race through the quotation of modernist forebears (even though my text draws out these historical and ideological differences). My reason for presenting images in this "distant," non-hierarchical way is that I believe there *are* no paradigmatic examples of this trend, and that the differences between these works are less significant than their similarities. My target is the mainstream, the mediocre, the déjà vu: the work we feel like we've seen before,

the highlights of modernism already witnessed, the projects by artists that are unquotable because they are themselves so reliant upon quotation.

Distant reading serves as a critique of the system in which these works thrive: not just the rapidity of image circulation online, but also the New York art world, with its thousands of commercial galleries and their disproportionate impact upon museum practice, all of which creates an increasingly off-putting haze of hype and high finance around contemporary art. This condition is rarely resisted by artists here, who leave art schools with huge debts and need to get on the career ladder as soon as possible in order to start repaying loans. The MFA-debt/gallery-profit cycle has made it increasingly difficult to write about contemporary art without also wanting to run a mile from it. Distant viewing is my expression of this distance. The disjunctive simultaneity of proximity and distance is also the condition of consuming images in the twenty-first century and thus the subject of my paper as much as its method. As such, I hope that my project functions as a critical intervention both into a contemporary art history that seems always to bolster singular figures for the market, and into a digital art history that privileges computational over ideological analyses.

Notes

[1] This paper was written for a conference on new methods in the humanities at Duke University in November 2016 and first published on their website https://humanitiesfutures.org/papers/digital-art-history/

[2] Drucker draws the useful distinction between digitized and digital art history on page 5.

[3] Selfiecity can be found online at www.selfiecity.net. The main findings include the following: more women take selfies than men and strike more extreme poses; the average age of selfie photographers is 23.7; people in Moscow smile less than people in São Paulo and Bangkok. The project used Amazon's Mechanical Turk workers to classify 640 selfies from each city, taken from a random sample of 120,000 images from Instagram.

[4] Paul Ingram and Mitali Banerjee, www.moma.org/interactives/exhibitions/2012/inventingabstraction/?page=connections

[5] The term analog humanities is taken from Sterne 2015, 18.

[6] The Washington Post recently reported that Purdue University (Indiana) has partnered with businesses as an alternative to student loans: investors front students the money to pay for education in exchange for a share in future earnings (Douglas-Gabriel 2015).

[7] This problem is not confined to digital art history. As English/Comp Lit scholar Brian Lennon notes, ". . .the digital humanities has displayed almost no specifically political interest in the world outside the university and too little explicit interest of any kind in the broader interinstitutional politics of the world within the university in its imbrication with the institutions of security and military intelligence" (Lennon 2014, 140–41).

[8] For a concise response, see Schulz (2011).

[9] Influenced by historian Ferdinand Braudel's theory of the longue durée, Moretti argues that the novel developed as a system of its genres (in other words, we cannot speak of "the novel" but only of a whole set of forty-four genres). Looking at the publication rates for novels over periods of decades, he moves from quantitative facts to speculation and interpretation; for example, he suggests that the rise and fall of the various genres of the novel in the United Kingdom correlate to twenty-five-to thirty-five-year cycles (i.e., to generations of readers) (Moretti 2007). Earlier work, such as "Conjectures in World Literature," provocatively conclude that the modern novel first arises not as an autonomous development but as a compromise between a western formal influence (usually French or English) and local materials"; in other words, the Western European novel is an exception, not the rule (Moretti 2000).

[10] This can be seen, for example, in Moretti's quantification of the plot of Shakespeare's Hamlet (Moretti 2011).

[11] See Gary Hall's incisive critique of Manovich (Hall 2013).

[12] Likewise, the authors of the paper on beauty and portraiture conclude that "any approach to the culturomics of art history and beauty also takes into account cultural evolution and cultural history as forces that shape the results we find in the data"—without feeling any obligation to supply this (Rosa and Suárez 2015, 125).

[13] This type of work is near unsearchable on the Internet because search engines cannot cope with self-reflexivity (contemporary art quoting modern art). My examples were therefore amassed slowly, via exhibition catalogues, artists' websites, press releases, Tumblrs, and blogs.

[14] Post-politics is a term used by political philosophers—including Jacques Rancière, Chantal Mouffe, Slavoj Žižek, and Jodi Dean—to describe the post-ideological consensus that dominated global politics after the Cold War.

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