

*Art History faces
a problem of
legitimacy today.*

Big Bang Art History

Ulrich Pfisterer

The History of Art is in the midst of its own big bang. Amit Sood, the head of the Google Cultural Institute and Art Project, announced such in February 2016 at the Innovation Conference TED in Vancouver. Through its “Arts & Culture” program, Google already offers virtual tours of over one thousand museums and cultural institutions throughout the world, and also provides access to more than six million high-resolution digitized works of art (it should be noted that these figures continue to rise steeply).

Sood’s visualization of this data—portrayed diachronically as a rapidly forming cloud (ideally displayed on as large a screen as possible) and anchored by an origin point represented by a single work of art, such as the *Venus of Berekath Ram* (created around 250,000 years ago)—does indeed give the impression of an explosion of artistic and cultural activity. Moreover, the visualization of this art historical big bang also marks a second, methodological big bang: the explosive growth of methods and discourse comprising Digital Art History, which has made such a visualization possible in the first place.

Google’s goal is clear: “every piece of art you’ve ever wanted to see—up close and searchable”. In the foreseeable future, all artefacts of world culture should be available virtually and (hopefully) openly accessible, and beyond that they should be arranged and categorized to allow for searching

with the utmost ease according to any conceivable criterion. Mind you, this recognition and classification according to different material and figurative qualities no longer takes place solely through human tagging, but is also facilitated by machine learning (and will continue to be). The concluding part of Sood’s presentation suggests that the sheer quantity of this art-historical data collection and its media specificity will eventually result in a new kind of Art History and new forms of art historical research—one of several net positives he predicts for humanity in the information age, along with entertainment, social justice and global exchange.

Some takeaways from the digital spectacle of Sood’s product showcase: first, the outspoken confession by Sood, an IT expert, that he has no clue about art history. As far as Google is concerned, Digital Art History does not seem to compulsorily require art historians. Second, beyond the great technical possibilities of data collection and processing, there are actually no further (art historical, image-theoretical, museological) questions built into this project. Perhaps such questions are unwanted or unwarranted.

But how should we understand it when Sood concludes by pointing to a particularly eye-catching collection of files to prove the potential possibilities of this virtual marvel, only to show that as a result of immense computing power, all the images concerned can

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be grouped together as variations of the canonical bust portrait? Even if we appreciate the innovative potential of this particular visualization, critical questions arise: how, for example, would Google's art-minded algorithms categorize Marc Quinn's *Shithead* of 1987—a classic bust format in a transparent cryocooler?

In any case, one cannot completely dismiss the suspicion that Google Cultural Institute, and related projects on Computer Vision, Image Processing and Network Science, are less concerned with a genuine interest in art, but to participate in its nobilitating aura, the social attribution of meaning and the economic potential.

Third, and most importantly: Sood gives the impression that Art History as a discipline has not managed to make a decisive contribution to these developments despite some efforts. Could be worse, one might think, if it was not about the future of the discipline as a whole.

Science of Art

First of all, policy debates about whether we really need Digital Art History have long been settled. For many years, there have been excellent Art History databases, search engines for images, publications, exhibitions and online museum presentations, since 2015 there has even been even a dedicated journal, the *International Journal for Digital Art History*. Big

players such as the Google Cultural Institute and, by comparison, small institutions such as the Getty Research Institute are facilitating development with substantial financial commitments. The reality and necessity of these digital infrastructures (and the torrent of images that circulate through them) cannot be stopped, in any case. For Art History as a discipline, this simply means keeping up, while critically developing topics, methods and theories internal to the discipline, or, alternately being phased out.

What is missing, however, is a discussion within the discipline led with self-confidence: this must not only reveal its added value in academic papers (and this text does not do anything else initially), but must also prove its point as widely as possible through concrete examples and research results. The fact that there are not many of these is due to the fact that demand is faster than research. Databases and online publications are only a first step, even if the medium of course is inseparable from its contents. Digital “context analyses”—such as the evaluation of geographical movements of artists or objects in a certain period of time or even a computer-aided identification of potential research gaps—may not be the ultimate goal. But it is not about evaluating approaches and questions in a comparative way. As long as digital analysis fails to deeply engage formal and the aesthetic principles, Digital Art History will always be subject to criticism that it does not advance the “genuine core” of the field.

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The question of the specific potential of art history as a field was most rigorously posed in the decades around 1900 in discussions about an “exact” Science of Art, a *Kunstwissenschaft*. At that time, Art History wrestled with its reputation within the circle of established humanities. Art History had to develop an independent profile somewhere between aesthetic philosophy and history, with interdisciplinary links to (perceptual) psychology. Without any historical shortcuts and traditional ideas of the center and the periphery, I want to say that under completely different circumstances, art history again faces a problem of legitimacy today.

There are two precipitants of this crisis: On one hand, the interests of the subject have expanded so rapidly under the auspices of globalization and Image Science (*Bildwissenschaft*, another big-bang phenomenon) that thinking and explaining how everything can come together now seems impossible. This creates the impression that the “competence ceiling” (*Kompetenzdecke*) of Art History is becoming increasingly thin and tearing apart.

On the other hand, so many other disciplines have gravitated to this expanding field of visual analysis, artificial analysis, and aesthetics, that entire areas of art history seem to be dealt with elsewhere. This does not only apply to photography, film and media studies, but also to ethnology and (art) pedagogy, which have long been semi-independent or entirely independent

fields. In the meantime, Literature and Theater Studies, History, History of Science, Psychology, Biology and all forms of Computer Vision, Image Processing, Big Data and Network Science have become increasingly relevant.

Art history, on the other hand, may have to cede certain research areas and questions to other fields as it continues to focus on the traditional frameworks that, allegedly, constitute its disciplinary core. Among the many opportunities missed, this would be the greatest, for the visual and its images will become even more crucial in our digital age, in which we see forms of communication that are no longer so highly constrained, as they have been in our (western) epistemes, by the primacy of text. One could imagine no greater legitimizing force for Art History. Nor a greater challenge.

The Great Divide

Digital Art History requires new skills. Art historians already navigate the interdisciplinary quicksand between Philosophy, Literary Science, Psychology, Sociology, etc. However, the digital technology presents a different kind of divide even for digital natives of the humanities.

In his study, Maximilian Schich has made a data visualization of this distance, showing how often the humanities and natural sciences quote each other. Schich speaks of a “skiing

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area” crisscrossing the disciplines and explains this configuration to a desirable new ski slope. Others might see the darkness in the chart as a great divide, and this uncertainty points to the multiple forms that an ambiguous figure may acquire. Such ambiguities or oscillations in appearance are unlikely to be resolved in the short term by computer algorithms. In any case, these new demands cannot and must not mean that only the Computer Sciences fill out missing competences within the humanities and build cross-disciplinary bridges. Conversely, it is equally important to emphasize the need for critical self-reflection on forms of representation and the conditions of visual knowledge production in the digital domain—a bridge that art history could and should help build.

The consistency of Sood’s big bang Art History as a presentation is dependent upon both the visualization arts of Google and with the audience’s understanding of the big bang (which is probably determined less by astrophysics than by the opening credits of *The Big Bang Theory*). Yet even the starting points remain problematic. For one thing, it has yet to be determined whether the *Venus of Berekath Ram* or her contemporary, the *Venus of Tan-Tan*, were intentionally made or were instead the result of geological activity.

Even if we obtained definitive proof that they were the intentional product of *Homo erectus*, the next recorded (and incontrovertibly man-made) data point, produced around 200 000 years later

in the Upper Palaeolithic, presents a significant gap. From the outset, it is also unlikely—without counting exactly—that more art was produced in Europe in the sixth century than in the first century after the beginning of Christianity, as the suggestion of a cultural explosion actually demands. Such objections could be continued for pages. The big bang analogy seems to work from a distance and in extreme time lapse, but the closer one gets, and the closer one looks at time periods, the more “anomalies” appear. And here it becomes necessary to ask how the distance generated by Big Data relates to the actual gain of knowledge about works of art and artistic ideas.

Furthermore, the question of what Google determines to be “art” has not even been asked. Sood’s main examples, the works of van Gogh and the collections of Guggenheim Museum in New York, are icons of the Western canon. Google is merely digitally spotlighting iconic works of art and institutions. Contrary to the project’s pretense of making everything accessible to all, cultures that are not “artful” in this Western sense are at least provisionally marginalized. Such objections also highlight distortions within Western art historical narratives; we might imagine how our understanding of European Renaissance art will change when hundreds of thousands of drawings, tens of thousands of prints, thousands of medals, works by goldsmiths, etc. are all digitized and the canon is no longer dominated by painting and sculpture.

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It is the scientific, social and political task of Art History to fastidiously document and describe the cultural conditions of seeing, thinking and doing that comprise computer science, as well as the natural, technical and life sciences. The success of a Digital Art History, as it is understood here, is proved by the fact that its specific competence is in demand by the sciences beyond the great divide. And it is these specific competences that Digital Art History will be challenged to preserve relative to other Digital Humanities methodologies, which are primarily focused on textual analysis.

Digital Serendipity

One might claim that most of these objections will dissolve over time. “Just be patient”, one might think, “soon, Google will have digitized every artwork, along with the rest of the world”. Questions of choice and canon formation, of center and periphery, and even of the ontology of art, will then be clearly resolved: everything will be available and searchable. Indeed, this dream for an exact Science of Art mirrors the fictional version of the world described by Jorge Luis Borges in his short story *On Exactitude in Science*. The digital is conceived as an exact image of reality, much like Borges’s one-to-one map scale. And for digital documentation, this would be an ideal setup.

Of course, more data does not directly result in more knowledge; too much unstructured data may actually limit insight. In spite of this, one might hope for a serendipity effect, whereby new, unexpected results and associations arise in the process of digitization. But even so, the situation is not yet completely outlined: Even today, some computer-generated results seem to be based on such complex operations that the results are no longer exactly comprehensible even for experts. This phenomenon will become increasingly common as AI is integrated into computer programs to make them self-programming. In this foreseeable future, a circle will close for Art History: the methods-driven Science of Art had previously renounced approaches that could only cite the gut feeling of “experts” as arguments, be it on issues of attribution, quality or the aesthetic effect. If total digitization is indeed the end game of Google Art Project, one can imagine a new form of inconcreteness: search results, as particular to the layers of filtering and selection that isolated them as the gut feeling is to the connoisseur.

Nor can we ignore the problem that the phenomena of art itself will never be fully articulated as a data structure, as long as the visual and the aesthetic remain at least partially irreducible and incommensurable relative to other systems (be they numerical, textual, or linguistic), and as long as aesthetic observation is guided by the belief that “art” retains a kind of “inexhaustible surplus” of sensation

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and meaning. These incongruities and the misunderstandings that arise from them require the skills of Art History as a critical counterpart for the Computer Sciences and all other sciences concerned with images and aesthetics.

Conversely, Art History must tackle what is probably the greatest challenge and imposition of the digital in the field of images and art: sometimes quantification and mathematical methods can help us understand formal design and aesthetic phenomena, in spite of all the hype about creativity, uniqueness and novelty. Changes in proportions, color scheme or compositional structure could be analyzed much more reliably, for example on the basis of large amounts of data, than with the previous highly selective comparison. We have yet to see a lengthy, game-changing study in this emerging discipline. Only such a project could definitively demonstrate that humanities and natural sciences or technology sciences can converge in a research program. In this respect, Digital Art History has the chance to productively overcome a divide between the sciences that has seemed categorically unavoidable since at least Dilthey. In any case, Digital Humanities determines not only the disciplinary future of Art History, but also those of all the humanities.

With all the confidence in the near future, we certainly should not completely forget the very latest small art event of the present: such as *Van Gogh Alive - The Experience*. Opened in October 2016 in Rome, it is the new

tourist magnet of the Eternal City (which is claimed on the homepage of the exhibition). Not a single true van Gogh is presented, but gigantic digital, multisensorial (mood) images and spaces pay tribute to the man with the cut off ear and the open-pastose brushstroke. The scene would not be complete without the latest cinematic gimmick, a projection system that allows surround experience in high resolution. They're likely the same images that Google uses. One can only hope that such cultural and intellectual implosions will disappear in the wake of Digital Art History's big bang.

Notes

1 First published in German in *Merkur* 71 (816), 2017, 95-101. Translation by Harald Klinke and Justin Underhill.

2 Amit Sood: Every piece of art you've ever wanted to see – up close and searchable, TED2016, https://www.ted.com/talks/amit-sood_every_piece_of_art_you_ve_ever_wanted_to_see_up_close_and_searchable. At the conference *TED - Technology, Entertainment, Design - "Ideas Worth Spreading"* every speaker has maximum 18 minutes of speaking time, attendees most recently pay \$ 6000 conference fees.

3 Maximilian Schich, *Figuring out Art History*. In: *International Journal for Digital Art History*, no. 2, 2016.

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Ulrich Pfisterer teaches Art History at the Ludwig-Maximilians-Universität in Munich since 2006. Since January 2018 he is also the director of the Zentralinstitut für Kunstgeschichte (ZI) in Munich.

Correspondence e-mail: ulrich.pfisterer@lrz.uni-muenchen.de