Artificial Intelligence and Surveillance Art: What to do when Conserving Problematic Artworks

Simon McNeely

After its waning popularity in the nineties, a new wave of artificial intelligence arose in the past decade, now characterized by neural networks and big data. We can best define artificial intelligence as simply a more robust and automated system of pattern recognition. These machines are trained on datasets compiled by humans, with all the biases and intricacies that come with that. Therefore, the science fiction idea of an 'evil AI' is entirely untrue.[1] A modern artificial intelligence system cannot think, nor has the capacity for harm. The concerns that humans should have with artificial intelligence systems and data collection lies in the hands of the corporations, with governments. We see with artistic responses to these technologies that many artists are wholly aware of this. Many works emulate the systems that we live under to bring widespread attention to it, breaching possible ethical boundaries and raising controversy. Artworks that either are produced through big data and money hungry corporations or fall into the category of an artistic response to growing political concerns towards digital surveillance therefore produce unique conservation concerns that this paper seeks to address.

We can categorize our chosen topic of study under the term 'data-driven artworks'. Data-driven art refers to artworks whose mediums consist, in some capacity, of a large digital collection of information on a particular topic. First, it will be necessary to explore some background to provide context. So, I will define and explore the terms 'big data' and authorial intent and why they are important to keep in mind when looking at certain contemporary and digital artworks. Our background can help us understand how exactly artworks reliant on databases and, in some cases, big data, create unique complications regarding authorship, intent,

[1] Joanna Zylinska, *AI art: machine visions and warped dreams*. Open Humanities Press, 2020. 34

and even raise questions about what the boundaries are. I will take three case studies about data-based art and use them to formulate a concrete framework to hopefully understand the complexities of conservation of these artworks. Edmund de Bellamy is an artificially generated piece, included to explore the ambiguity of data-based art and how the author and contents of a work can be complicated quite easily. My next two artworks go more hand-in-hand. Both Prism: The Beacon Frame and Street Ghosts use a smaller scaled emulation of the big data phenomena to bring to light the mechanisms that power our world. Consequently, their function and potential conservation could be problematic in nature.

For of agents of deterioration, digital artworks tend to be victims of various avenues of dissociation, including shut-down servers, loss of hardware and software, copyright, and more. With data-driven art, we encounter unique ethical concerns which can drive dissociation. A large question is whether or not instances of dissociation like this should be avoided. Many data-based works emulate harmful practices surrounding big data. The ethical concerns we are examining pertain to not only maintenance of the database, but also with the usage of the databases and the acquisition of the data.

But what is ‘Big Data’? The term is generally narrowed down under four characteristics: The volume of data and the variety of what is available, where with new technologies comes new avenues for collecting information. Then comes the range of data collection that covers across the globe, and finally bias, incompleteness, and/or inaccuracies in the dataset.[2] A primary issue with Big Data is that it portrays a very impersonal, straightforward view of the world, good for replication but not good for understanding nuances. The widescale spread of Big Data creates an

[2] Andrej Zwitter, "Big data ethics." *Big data & society* 1, no. 2 (2014): 2.

environment lacking in anonymity, where everyone exists as an actor in the data generation process. A primary ethical concern with big data is the knowledge gap between the collectors and users of big data with those being observed.[3]

But how does Big Data, and likewise the ethical concerns that come along with it, relate to art conservation? The nature of artificial intelligence as a pattern-recognition tool has significant potential in the world of conservation. Artificial intelligence can be used to 'diagnose' works of art, helping conservators more quickly determine materials or find stylistic trends. But artworks reliant on databases, and likewise Big Data to some extent, create unique complications regarding authorship, intent, and boundaries of the artwork. The sheer scale of a dataset, and likewise the sourcing of said data, complicates the authorship. If a conservator chooses to inscribe to the belief that a work should be treated as intended by the author, how should they go about doing so without knowing who the true author is? What if the intent of the artwork is to breach an ambiguous ethical boundary, is it right to document it, or should it be lost to time? When an artwork exists to replicate harmful practices in big data, it can be difficult to separate it from said existing structures. Therefore, it can be difficult to tell where the artwork begins and ends. Because of the ambiguous scale of data-driven artworks, it's more feasible to approach AI and data-driven artworks as a complicated web of actors. The ethical concerns of these artworks are incredibly nebulous, something which this essay doesn't necessarily seek to solve, but rather to address that there is not one sure-fire way to approach conservation.

[3] Andrej Zwitter, "Big data ethics." *Big data & society* 1, no. 2 (2014): 3.

The term ‘intentional fallacy’, coined in 1946 by Wimsatt and Beardsley, refers to the idea that the authors intentions are not beneficial to the understanding of the artwork.[4] We can apply this term to conservation, in that it does not matter what the artist intended for the work to be, because no matter what, the nature of the work will shift as time goes on.[5] The debate between artistic intent can be compared to ideas on how to approach conservation. Some circles value replicating the most ‘authentic’ representation of a work, attempting to preserve a piece as it was when it was created. This idea becomes complicated when approaching works made with more ephemeral materials, however. Is it right to assume that the artist intended for the work to remain unchanged, despite the inherent nature of the material? If an artist chooses to create an artwork with an expiry date, how should it be conserved? Is it right to even try? In Time and Change: A Discussion about the Conservation of Modern and Contemporary Art, Coddington mentions the importance of documentation.[6] Despite the impermanent nature of some works, extensive documentation allows for some record of the intention and/or qualities of an artwork. It can provide as the best substitute for the experience of the artwork without disrupting the work’s authenticity.

We find complications with artworks that have ambiguous authors. Performance artworks may have a defined creator behind the ‘idea’ of the work, but the participants, in some ways, do create aspects of the work that define it. When people are the medium, we can’t easily draw lines on who is the creator and who is not. If the meaning is defined by those involved, and

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[4] Steven W. Dykstra, "The artist's intentions and the intentional fallacy in fine arts conservation." *Journal of the American Institute for Conservation* 35, no. 3 (1996): 204.

[5] Steven W. Dykstra, "The artist's intentions and the intentional fallacy in fine arts conservation." *Journal of the American Institute for Conservation* 35, no. 3 (1996): 204.

[6] J. Coddington, C. Mancusi-Ungaro and K. Varnedoe, “Time and Change: A Discussion about the Conservation of Modern and Contemporary Art,” *Conservation Perspectives,* 17.3 (Fall 2002)

participants may be unaware of their involvement, how can we define what 'counts' in the artworks meaning? Even beyond using people as the medium, if an artwork has any sort of undefined creator, whether they are missing or the lines of the artwork are ambiguous, relying on the creator as a 'word of god' is entirely unreliable. So, how can conservators work around the artists, if they choose to incorporate data practices of machine learning, predictive analysis, and data harvesting, while also keeping in mind the implications of these power dynamics and their audiences?

The first artificially generated artwork to be sold at Christie's Art Auction, Edmund de Bellamy was produced by Parisian art collective Obvious and created a bit of a stir in both the art and tech world because of its problematic origins. The team Obvious generated the work using the DCGAN, or the Deep Convolutional Generative Adversarial Network Architecture. The DCGAN was an architecture built by Alec Redford, Luke Metz, and Soumith Chintala that expanded upon the original GAN architecture by Ian Goodfellow.[7] Then-19 year old Robbie Barrat then modified Sousmith and co.'s architecture to include a wiki art scraper to generate Renaissance-like paintings. Neither the groups who created the DCGAN nor Robbie Barrat were compensated for their involvement in the creation of Edmund de Bellamy. Both the money and the credits were given to Obvious, who's furthest involvement in the process was printing the work on canvas. Edmund de Bellamy was marketed as the first portrait sold by Christie's not painted by a human hand, but rather entirely by machine.[8] When looking at this work, and other works like it, we must then ask: who made it, and at what point does the artwork end?

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[7] Ziv Epstein, Sydney Levine, David G. Rand, and Iyad Rahwan. "Who gets credit for ai-generated art?." *Iscience* 23, no. 9 (2020): 101515.

[8] Ziv Epstein, Sydney Levine, David G. Rand, and Iyad Rahwan. "Who gets credit for ai-generated art?." *Iscience* 23, no. 9 (2020): 101515.

The creation behind Edmund de Bellamy involves a collection of individuals, whose contributions may (or may not have) been made with the intent to create fine art portraits. Those producing the DCGAN were certainly actors in the process, albeit removed from the core work to some extent. However, one could argue that the tool was a piece of art itself. A large amount of the discourse surrounding the creation of Edmund de Bellamy focused on the issue of credit, where Barrat didn't receive any compensation for his involvement in the development of the tool. On the Github repository for the art-DCGAN, Barrat included a statement requesting to be credited if the outputs are used and not to sell any of the outputs even with modifications.[9] So, is it fair to consider Obvious the creator and allow the artwork to be conserved following their intentions for how it will be treated during its lifespan? Or should the work be treated with the input of the other actors in the process, no matter if they choose to destroy it or not? There is no optimal solution for taking the 'creators' intent in mind here without harming another party, so it is likely that in the theoretical conservation of this work, the conservator will have to make their own informed decision.

Where applications of artificial intelligence and machine learning are introduced into our lives in a more in-your-face manner like the case of algorithmically generated art, surveillance art has an easier tendency to go over the average person's head. Data collection is more easily integrated into the average persons life, so many artists choose to defamiliarize data collection to evoke reflection and awareness. This induces some artists to choose to replicate some of the surveillance structures to create this effect. When talking about his project Prism: The Beacon

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[9] Ziv Epstein, Sydney Levine, David G. Rand, and Iyad Rahwan. "Who gets credit for ai-generated art?." *Iscience* 23, no. 9 (2020): 101515.

Frame, artist Julian Oliver explained that his work was intended to induce a healthy paranoia.[10] Artworks like this rely on the ethical boundaries that they cross to shock individuals into reconsideration and reflection.

Prism: The Beacon Frame employs similar tactics to that of the NSA, tapping into cellular devices and harvesting their data. To achieve this, the computer running the project taps into local cell towers, scans their properties, and impersonates cell providers to gain access to cellular devices. The data processed from the computer is also projected into an exhibition space, letting visitors view the location and hostname of those connected. Phones that are connected to the network and are sent strange, cryptic, and often humorous messages.[11] The uneasy feeling brought on by these messages is supposed to impart that idea of reflection through defamiliarization. Shortly after the exhibition opened, complaints were made, causing the removal of vital components of the work for fear of police intervention. Oliver and his co-artist Danja Vasiliev then published a statement explaining the situation to replace the output of the original work. In the statement, Oliver and Vasiliev explain the intentions behind their work and its provocative nature, stating that “sometimes [creation of technology-based art] means taking risks, risks without intention to harm but to engender wider critical insights.”[12] The response to this shut-down commented on the irony that artworks exhibiting surveillance-like behaviours end up lost because of their potential illegal nature, but major governments have the freedom to go

[10] Luke Stark and Kate Crawford. "The work of art in the age of artificial intelligence: What artists can teach us about the ethics of data practice." *Surveillance & Society* 17, no. 3/4 (2019): 446.

[11] Julian Oliver, 2014. Prism: The Beacon Frame. Multimedia installation. Transmediale Festival, Berlin.

[12] Julian Oliver, 2014. Prism: The Beacon Frame. Multimedia installation. Transmediale Festival, Berlin.

on ahead doing the same things. Looking upon this work with the lens of a conservator, questions about how this work could, or should, be conserved immediately arise.

Oliver argued that artists, when working with the intention to expose and question the status quo, have a responsibility to work outside of the ethical norm. When creating the work, Oliver and Vasiliev naturally didn't intend for the work to be shut down, but evidently expected it. If not for a lack of legal protection, the two would have certainly kept it running.[13] Looking back towards Time and Change, Jeffrey Levin raises a question on the ethics of preserving artworks with ephemeral materials. He questions the participants on whether or not it is even appropriate to attempt to conserve works that the artists know will not last a long time.[14] In other words, he asks if the artists intent should influence the lifecycle of a work, or should its continued existence be prioritized despite the external circumstances preventing it? Some argue that the artists do have a responsibility to confront the ethical concerns of their works, therefore conservationists should follow suit, likely meaning that there should be acceptance if the artwork is forced to change.

I investigated various other types of artworks to determine a frame of reference for how I would approach a theoretical understanding of the implications that conserving this work would entail, and one thing that caught my eye was the various controversies around graffiti conservation. Graffiti art shares two significant characteristics with that of Prism: It toys with what is legal (or illegal) and it is participatory. Conserving graffiti becomes a struggle when conservators are faced with the question of authenticity. The inherent nature of graffiti involves a

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[13] Julian Oliver, 2014. Prism: The Beacon Frame. Multimedia installation. Transmediale Festival, Berlin.

[14] J. Coddington, C. Mancusi-Ungaro and K. Varnedoe, "Time and Change: A Discussion about the Conservation of Modern and Contemporary Art," *Conservation Perspectives,* 17.3 (Fall 2002)

conversation between artists and if graffiti art is removed or suspended in a photograph or gallery space, some people believe that this conversation ends. Graffiti art falls victim to dissociation when authorities deem it 'unseemly' and clean up the vandalized space.[15] When Prism was shut down, the participatory element of the work was removed, and its conversation ended. Graffiti art gets removed because it explicitly disrupts the landscape to get its message to the common person. Prism disrupts by hijacking the passerby's cell phone. When trying to conduct an idea on how to conserve Prism, we may be able to take note from graffiti artworks. Generally, when a graffiti work cannot be conserved (meaning that it was often created under illegal means), the next best thing would be able to photograph it, sacrificing the context for its artistic value.

Another artwork, Street Ghosts by Paolo Cirio, is essentially both Graffiti art and data-based art. The work consisted of printed out images of individuals found from Google Street View pasted in the real-life locations where the original photo was taken. Cirio explained the reasoning for his controversial work by stating that he sought to bring attention to how strange it was that people were willing to let their private information be taken and publicized.[16] Conserving this work would face similar issues to Graffiti art, where the sudden provocation of seeing these images – and possibly even yourself – on the street incites a conversation. Therefore, though putting this work in a museum context removes a significant portion of the experience, it may likely be the best solution to conserve the work, at least when looking at it in a vacuum.

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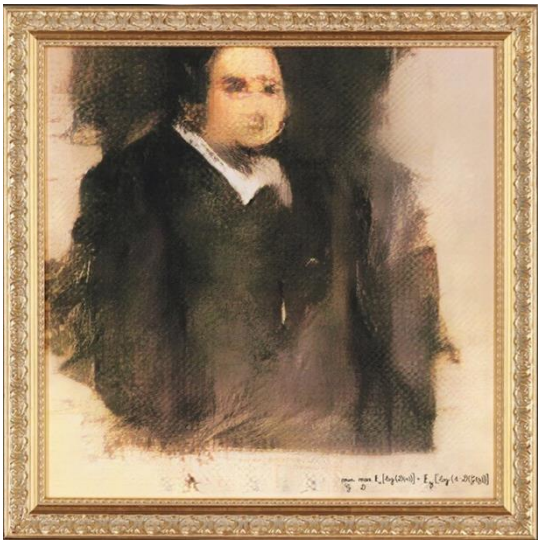
[15] Enrico Bonadio. "Does Preserving Street Art Destroy its 'Authenticity'?." *NUART Journal* 1, no. 2 (2019): 37.

[16] Luke Stark and Kate Crawford. "The work of art in the age of artificial intelligence: What artists can teach us about the ethics of data practice." *Surveillance & Society* 17, no. 3/4 (2019): 447.

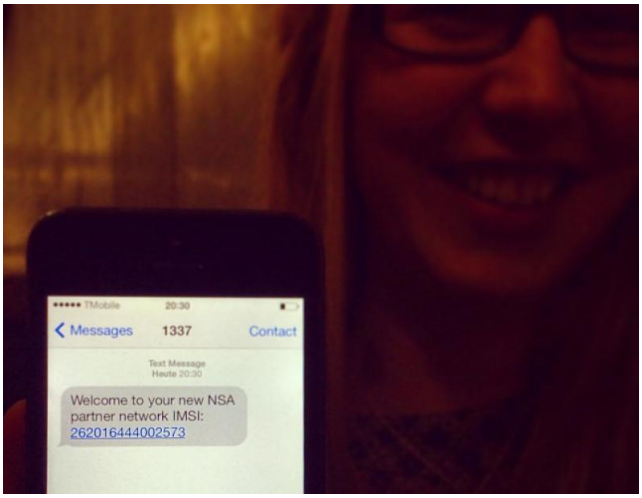
Both with Prism and Street Ghosts, the artworks rely on their physical context. It may be fine to conserve them through extensive documentation and photography of their brief lifetime as they were originally, but could there be a better way? If artistic choices should be respected, then conservationists have a moral responsibility to upkeep a work as best as possible despite its ethical implications. Though, one can argue that the shut-down of Prism was, in some ways, an element of the work. It was an expected outcome and a risk that the artists were willing to take. Like with Cirio's choice to allow participants to opt out, the individuals who influenced the shutdown of Prism were actors in the lifecycle of the work and their contributions altered the meaning.

There is no perfect solution to the conservation of data-driven artworks. These works carry many problematic characteristics of other forms of art, like Performance or Graffiti works, and require very specific needs. We have seen both issues with the inherent nature of some of the works and the audience response to these works complicating their authenticity. In some cases, even taking the desires of the artist into account seem questionable, as works like Prism and Street Ghosts may encroach beyond boundaries that some deem acceptable. Even issues with the concept of the author arise, where in works like Edmund de Bellamy, far too many actors are directly involved in the process to pin down just one. Therefore, in many cases, data-driven artworks make authorial intent a moot point. It is best to approach conservation when dealing with data-driven art as a case-by-case basis, doing what is best at the time and understanding when losing elements of the works are a necessity.

Images



Obvious,"Edmund de Bellamy", Ink, 2018



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